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Introduction

This document is intended for use with IBM® Cognos® software.

This document contains step-by-step procedures and background information to help you administer IBM Cognos software.

Audience
To use this guide, you should be familiar with reporting and security concepts, and have experience using a Web browser.

Finding information
To find IBM® Cognos® product documentation on the web, including all translated documentation, access one of the IBM Cognos Information Centers at http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp. Updates to Release Notes are published directly to Information Centers. You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

Using quick tours
Quick tours are short online tutorials that illustrate key features in IBM Cognos product components. To view a quick tour, start IBM Cognos Connection and click the Quick Tour link in the lower-right corner of the Welcome page. Quick Tours are also available in IBM Cognos Information Centers.

Forward-looking statements
This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

Samples disclaimer
The Great Outdoors Company, GO Sales, any variation of the Great Outdoors name, and Planning Sample depict fictitious business operations with sample data used to develop sample applications for IBM and IBM customers. These fictitious records include sample data for sales transactions, product distribution, finance, and human resources. Any resemblance to actual names, addresses, contact numbers, or transaction values is coincidental. Other sample files may contain fictional data manually or machine generated, factual data compiled from academic or public sources, or data used with permission of the copyright holder, for use as sample data to develop sample applications. Product names referenced may be the trademarks of their respective owners. Unauthorized duplication is prohibited.
Accessibility Features

Accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products. Because the IBM Cognos Administration component supports a wide range of IBM Cognos components, the availability of accessibility features varies by component within IBM Cognos Administration.
Chapter 1: What’s New?

This section contains a list of new, changed, and deprecated features for this release. It also contains a cumulative list of similar information for previous releases. It will help you plan your upgrade and application deployment strategies and the training requirements for your users.

For information about upgrading, see the Installation and Configuration Guide for your product.

For information about other new features for this release, see the New Features Guide.

For changes to previous versions, see:

- New Features in Version 8.4
- Changed Features in 8.4
- New Features in Version 8.3
- Changed Features in Version 8.3

To review an up-to-date list of environments supported by IBM® Cognos® products, including operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, access one of the IBM Cognos Information Centers at http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp.

New Features in Version 10.1.0

Listed below are new features since the last release. Links to directly-related topics are included.

Dynamic Query Mode

IBM® Cognos® BI Server offers improved query functionality and performance with a dynamic query mode that you can use with supported data sources.

Dynamic query mode provides communication to data sources using Java/XMLA connections. For more information, see "Data Sources and Connections" (p. 197).

The query service supports the dynamic query mode. Using Cognos Administration, you can set query service properties and manage query service caching. For more information, see "Query Service Administration" (p. 251).

More Information about Dynamic Query Mode

For more information about dynamic query mode, see the documents listed in the following table.

<table>
<thead>
<tr>
<th>What are you looking for?</th>
<th>Where to find the information</th>
</tr>
</thead>
<tbody>
<tr>
<td>An overview of the dynamic query mode, its benefits, and considerations when using it.</td>
<td>Dynamic Query Guide</td>
</tr>
</tbody>
</table>
Chapter 1: What’s New?

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Detailed information about techniques and product behaviors of the dynamic query mode.</td>
<td>IBM Cognos 10 <em>Dynamic Query Cookbook</em></td>
</tr>
<tr>
<td>Information about enabling connectivity for data sources supported by the dynamic query mode.</td>
<td><em>Installation and Configuration Guide</em></td>
</tr>
<tr>
<td>Information about query service administration, including caching and query service properties.</td>
<td><em>Administration and Security Guide</em></td>
</tr>
<tr>
<td>Information about publishing packages for the dynamic query mode.</td>
<td><em>Framework Manager User Guide</em></td>
</tr>
<tr>
<td>Information about testing reports in the dynamic query mode prior to upgrade.</td>
<td><em>Lifecycle Manager User Guide</em></td>
</tr>
<tr>
<td>Information about using the IBM Cognos Software Development Kit to administer query service properties and develop client applications to use dynamic query mode.</td>
<td><em>IBM Cognos Software Development Kit Developer Guide</em></td>
</tr>
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</table>

**IBM Cognos Active Reports**

IBM® Cognos® Report Studio now has an active report output type that provides a highly interactive and easy-to-use managed report. For more information, see "IBM Cognos Active Reports" (p. 420).

**IBM Cognos Business Insight**

IBM® Cognos® Business Insight is a new report consumption environment that provides an integrated Business Intelligence experience for business users. This Web-based tool allows you to use IBM Cognos content and external data sources to build sophisticated, interactive dashboards. For a more detailed description of IBM Cognos Business Insight, see the IBM Cognos Business Intelligence New Features.

IBM Cognos Connection users can launch IBM Cognos Business Insight from within IBM Cognos Connection, however, they must have the appropriate licence. For information about launching IBM Cognos Business Insight in IBM Cognos Connection, see "Launching IBM Cognos Business Insight" (p. 348). For information about using IBM Cognos Business Insight, see the IBM Cognos Business Insight User Guide.

**Collaboration Using IBM Cognos Business Insight**

Collaboration capabilities in IBM® Cognos® Business Insight provide a bridge between using IBM Cognos Business Intelligence to discover a business problem and using available social software resources to track and resolve the problem.
Business Insight users can create activities in IBM Lotus® Connections and share them with other users who collaborate in decision-making and problem-solving processes. To take advantage of this capability, after installing and configuring the required software, you must configure the Collaboration discover URI setting. For more information, see "Configuring the Collaboration Discovery URI" (p. 192).

**My Inbox**

In this release, there is a new task inbox that contains the following human tasks: secure approval requests, ad-hoc tasks, and notification requests. For more information, see "Managing Human Tasks" (p. 469).

**IBM Cognos Connection Login Page Customization**

You can now customize the IBM® Cognos® Connection login page using a login template. For more information, see "Customizing the IBM Cognos Connection Login Page" (p. 652).

**New Services**

The following new services "IBM Cognos services" (p. 136) have been added to IBM® Cognos®:

- Annotation service
- Content Manager cache service
- Graphics service
- Human task service

**New Properties**

The following new properties have been added to IBM® Cognos®:

- lifetime of completed human tasks and annotations "Set Lifetime of Completed Human Tasks and Annotations (Comments)" (p. 194)
- balancing dispatcher load with in-progress request factor (p. 162)
- cache size limit for the Content Manager cache service (p. 154)
- Metric Studio parameters that control the number of connections that are established to the database server and how long they are left open if they are unused (p. 177)
- dynamic drill-through filter behaviour that controls whether filters use the Member Business Key or Member Caption "Changing Drill-Through Filter Behavior" (p. 194)

**Support for Data Sources**

You can now use the following data source in IBM® Cognos®:

- Microsoft® Analysis Services 2008 (p. 210)
You can now create packages for SAP BW data sources in IBM Cognos (p. 404). You can also edit the packages in IBM Cognos. You can also set the maximum number of objects that can be used in a SAP BW package (p. 405).

For data sources that can have packages created in IBM Cognos, you can select which data sources can be used to create a package (p. 408). You can also control which users can create packages. See "Set Entry-Specific Capabilities " (p. 289).

Users can now manage their own data source credentials. They can also choose to have their data source credentials remembered so they don’t have to be entered every time. For more information, see "Manage Your Own Data Source Credentials" (p. 281).

You can now view the data sources used by a package (p. 401)

**Style Management Utility**

The style management utility (p. 600) lets you create, delete, deploy, and publish custom styles to change the appearance of IBM® Cognos® Connection, IBM Cognos Administration, and other Cognos components.

**Support for New Scheduling Options**

There are several new scheduling options. They include

- the ability to specify a daily frequency for a schedule, by hour or by minute, and limit the running of scheduled entries to a certain period of the day.
- the ability to change the owner credentials for a schedule.
- the ability to suspend scheduled activities.
- the ability for administrators to limit scheduling using the new scheduling capabilities. For example, an administrator can restrict by minute scheduling.

**Accessible Report Output**

In this release, you can create accessible report output. Accessible reports contain features, such as alternate text, that allow users with disabilities to access report content using assistive technologies, such as screen readers. For more information about enabling accessible reports in IBM® Cognos® Connection, see "Enable Accessible Report Output" (p. 437).

In IBM Cognos Administration, you can enable system-wide accessibility support. For more information, see "Enable Accessible Report Output Using System-wide Settings" (p. 189).

**Report Name Used for the Exported Output File Name**

When you run a report in an export format such as PDF, delimited text (CSV), Microsoft® Excel spreadsheet software (XLS), the IBM® Cognos® report name is now used as the exported file name. This allows you to save the report output using the same name as the original report. For more information, see "View, Run, or Open a Report" (p. 420).
New for Metric Studio

In this release, there is a new check box that lets you clear the metric studio audit history. For more information, see "Metric Maintenance Tasks" (p. 487).

New Deployment for Human Tasks and Annotations

In this release, there is a new deployment procedure for human task and annotations services. For more information, see "Deploy Human Task and Annotation Services" (p. 397).

New Data Schema Tables for Logging for Human Task and Annotation Services

In this release, there are new data schema tables for logging for human task and annotation services. For more information, see "Data Schema for Log Messages" (p. 919).

New for Data Movement

In this release, you can create views of data movement tasks which uses the same specifications as the source data movement entry, but has different properties. You can also provide variables in data movement tasks. For more information, see "Data Movement Entries" (p. 259).

You can also balance data movement task execution load. For more information, see "Balance the Data Movement Task Execution Load" (p. 164).

New for Content Manager Load Management

You can reduce the processing load on the Content Manager by storing user session files on the report server local file system. You can also set the lifetime that temporary user session cache files are kept. For more information see "Reduce the Content Manager Load by Storing User Session Files Locally" (p. 155).

New Logging

You can use logging to diagnose user-specific problems. For more information see "Use Logging to Diagnose a Problem for a Specific User" (p. 114).

Convert Numeric Search Keys to Strings in Queries

You can now enable conversion of numeric search keys to strings in queries for some data sources, such as Teradata, that do not make the conversion, which causes an error. For more information, see "Enable Conversion of Numeric Search Keys to Strings in Queries " (p. 183).

Group 1 Language Support in IBM Cognos Business Intelligence

With this release of IBM® Cognos® Business Intelligence, the following Group 1 languages are supported in the product user interface, the search functionality, and the indexed search functionality: English, Chinese (simplified and traditional), Japanese, Korean, French, German, Italian, Spanish, and Portuguese (Brazil).

For information about setting the product language, see "Personalize the Portal" (p. 325).
Chapter 1: What’s New?

For information about how to perform a search, see "Search for an Entry" (p. 323) and "Search for an Entry in Multiple Languages" (p. 324).

For information about specifying the languages for indexed search, see "Limit Index by Language" (p. 498).

Curly Brackets and Parentheses are Breakable

When you run a report in PDF format, curly brackets {} and parentheses () no longer stay on the same line as the text before them. For example, Products(2004) may now break to a new line between Products and (2004).

Changed Features in Version 10.1.0

Listed below are changes to features since the last release. Links to directly-related topics are included.

Changes to Portlet and Portlet Group Names

The following is a list of the portlet and portlet group names that have changed in this release of IBM® Cognos® Business Intelligence.

<table>
<thead>
<tr>
<th>Previous Name</th>
<th>Current Name</th>
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</thead>
<tbody>
<tr>
<td>Cognos Content</td>
<td>IBM Cognos Content</td>
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<tr>
<td>Cognos Extended Applications</td>
<td>IBM Cognos Extended Applications</td>
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<tr>
<td>Cognos Metrics</td>
<td>IBM Cognos Metric Studio</td>
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<tr>
<td>Cognos Navigator</td>
<td>IBM Cognos Navigator</td>
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<tr>
<td>Cognos Search</td>
<td>IBM Cognos Search</td>
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<td>Cognos Utility</td>
<td>IBM Cognos Utility</td>
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<td>Cognos Viewer</td>
<td>IBM Cognos Viewer</td>
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<tr>
<td>Metrics Custom Diagram</td>
<td>IBM Cognos Custom Diagram</td>
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<tr>
<td>Metric History Chart</td>
<td>IBM Cognos History Chart</td>
</tr>
<tr>
<td>Metrics Impact Diagram</td>
<td>IBM Cognos Impact Diagram</td>
</tr>
<tr>
<td>Metric List</td>
<td>IBM Cognos Metric List</td>
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</tbody>
</table>
Watch Rules

You can now use a new watch rule for saved reports that sends alerts depending on a metric-like change in the performance status of a condition (good, average, or poor).

In addition, you can now alert other report users by sending a notification to their task inbox when an event condition is satisfied.

For more information, see "Watch Rules in Saved Reports" (p. 442).

IBM Cognos Report Studio Professional and Express Authoring Modes

In this release, Professional authoring mode is available in Report Studio and Express® Authoring mode is available in IBM® Cognos® Business Insight Advanced. In previous releases, Professional authoring mode and Express authoring mode were available in Report Studio.

For more information, see "Set Access to User Interface Profiles for Report Authors" (p. 291).

Enhanced Search Capability

In earlier releases, enhanced search was available by installing IBM® Cognos® Go! Search as a separate component. Now, enhanced search is the default mode in IBM Cognos Business Intelligence.

For information about searching for an entry, see "Search for an Entry" (p. 323).

For information about creating a search index and configuring permissions for enhanced search, see "Managing Index Search" (p. 493).

For information about how to set up and configure enhanced search, see the Installation and Configuration Guide.

Change of Name for IBM Metadata Workbench

The name IBM® Metadata Workbench has changed to IBM Metadata InfoSphere™ Workbench.

IBM Cognos Now! Name Has Changed

IBM® Cognos® Now! has been renamed and is now called IBM Cognos Real-Time Monitoring. In Cognos Administration, when selecting a data source, choose IBM Cognos Now!- Real-time Monitoring Cube. For more information, see "IBM Cognos Now! - Real-time Monitoring Cube" (p. 200).

IBM Cognos 8 Portal Services

BEA AquaLogic User Interaction 6.1 (ALUI 6.1) portal is replaced by Oracle WebCenter Interaction Portal 10.3. For more information, see Oracle WebCenter Integration Portal.

Deprecated Features in Version 10.1.0

A deprecated feature is one that is being replaced by a newer version or a better implementation. The intention is to discontinue the use of the feature and provide recommendations for adapting to this change over multiple releases.
Listed below are deprecated features, including links to related topics.

**Support for Excel 2000 and Excel 2000 Single Sheet Formats**

In this release, support for Microsoft® Excel spreadsheet software 2000 and Excel 2000 single sheet output formats has been deprecated. For information about the currently supported Excel formats, see "Microsoft Excel Formats" (p. 432).

**IBM Cognos PowerCube Connection Utility and cubeswap**

In this release of IBM® Cognos® Transformer, the PowerCube Connection Utility and cubeswap has been deprecated. The functionality provided by these utilities is no longer required when using the automated copy and activate options on the Deployment tab of the PowerCube properties dialog box.

For more information about the PowerCube copy and activate options, see "Deploy Updated PowerCubes" (p. 230) or the Transformer User Guide.

**New Features in Version 8.4**

Listed below are new features since the last release. Links to directly-related topics are included.

**Additional Language Support**

In addition to Japanese, German, and French, the installation documentation and the user interface for the installation program and IBM® Cognos® Configuration are available in the following languages:

- Chinese (simplified)
- Chinese (traditional)
- Korean
- Italian
- Spanish
- Portuguese (Brazilian)

You can use the new product languages when personalizing your user interface in IBM Cognos 8 (p. 325).

English product documentation is installed when you install the IBM Cognos 8 gateway component. The *IBM Cognos Installation and Configuration Guide*, the *Quick Start Installation and Configuration Guide*, and the *Readme* are the exceptions, and are available in all supported languages. To access all other translated documentation, you must install the Supplementary Languages Documentation.
Support for IBM Metadata Workbench as a Lineage Solution
You can now configure IBM® Metadata Workbench as a lineage solution in IBM Cognos® 8. For more information, see "View Lineage Information for a Data Item" (p. 429).
Administrators can configure the lineage solution by specifying the lineage URI in IBM Cognos Administration (p. 190).

Access to IBM InfoSphere Business Glossary
If you use the IBM® InfoSphere™ Business Glossary, you can now access the glossary from Cognos Viewer (p. 430).
You can configure the IBM InfoSphere Business Glossary URL in IBM Cognos® Administration (p. 191).

Managing Comments Using Cognos Viewer
You can now add user-defined comments to saved HTML, PDF and XML reports using Cognos® Viewer.
For more information, see (p. 445).

Adding Application Context to Dynamic SQL
An administrator can now define a custom string including application context that is added as a comment marker within SQL generated by the application.
For more information, see "Comments in Saved Reports" (p. 445).

Support for New Data Sources
You can now use the following data sources in IBM® Cognos® 8:
- IBM Cognos Now! Cube (p. 200)
- IBM InfoSphere™ Warehouse Cubing Services (p. 208)
- TM1®(p. 224)
- Microsoft® Analysis Services 2008 (p. 210)

Support for New Portal Versions
IBM® Cognos® 8 Portal Services now provide extended support IBM WebSphere® 6.0 and 6.1, and BEA AquaLogic User Interaction 6.5 (ALUI 6.5)
For more information, see "Deploying Cognos Portlets to Other Portals" (p. 555).

Hiding Entries
You can hide entries in IBM® Cognos® Connection and IBM Cognos Administration, such as reports, packages, pages, folders, jobs, data sources, portlets, and so on. This functionality is most often used with drill-through reports.
Chapter 1: What's New?

Hiding an entry does not affect its security policies.
For more information, see "Hide an Entry" (p. 318).

**Updating Published PowerCubes**
You can now use the `pcactivate` command to make new versions of published PowerCubes available to users.
For more information, see "Deploy Updated PowerCubes" (p. 230).

**Object Capabilities**
You can now specify capabilities for individual packages.
For more information, see "Object Capabilities" (p. 293).

**Schedule Credentials**
When you choose to import schedules in the deployment, you can change the imported schedule credentials to your credentials.
For more information, see "Including Schedules" (p. 381).

**Save History Details for Job Steps**
You can save history details for job steps when the run activity completes successfully.
For more information, see "Job Properties" (p. 312).

**Viewing Lineage Information**
A data item's lineage information traces the item's metadata back through the package and the package's data sources. Viewing lineage information ensures that you add the correct data items to a report.
For more information, see "View Lineage Information for a Data Item" (p. 429).

**Enhanced Drill-through Capabilities**
In earlier versions of IBM® Cognos® 8, model-based drill-through supported only reports created in Analysis Studio, Query Studio, or Report Studio as targets. Other types of drill-through targets are now supported. For example, you can drill through to PowerPlay® Studio reports saved in the content store, or to a package that contains a PowerCube.
In earlier versions of IBM Cognos 8, drill-through access required the existence of parameters in the target. IBM Cognos 8 now allows dynamic filtering of the data. In cases where more control is needed, you can continue to use the existing parameterized drill-through.
You now also can restrict the availability of package drill-through definitions to measures as well as other data when you set the scope.
If the source is based on a dimensional package, you can choose what property of the source metadata item to map to the target. For example, you can map the member caption of the source
metadata item to a relational value in the target instead of using the business key. For more information, see "Drill-through Access" (p. 511).

The drill-through assistant contains improved debugging information (p. 529).

**Metric Studio Content in Portal Pages**

An IBM® Cognos® Connection page or a dashboard can now display metric impact diagrams and custom diagrams. This new content can be added by using the following new portlets:

- **Metrics Impact Diagram**
  
  Use to display impact diagrams associated with a metric.

- **Metrics Custom Diagram**

  Use to display custom diagrams associated with a scorecard.

For more information, see "Pages and Dashboards" (p. 331).

**Changed Features in Version 8.4**

Listed below are changes to features since the last release. Links to directly-related topics are included.

**Composite Information Server is Replaced By IBM Cognos 8 Virtual View Manager**

Composite Information Server was available with earlier releases of IBM® Cognos® 8. In the current release, Composite Information Server is replaced by IBM Cognos 8 Virtual View Manager, which is an IBM proprietary product that is based on a new version of Composite Information Server. In this release, the default repository is changed, from Microsoft® SQL Server to IBM Informix®. If you have Composite data sources defined in IBM Cognos Connection, you must migrate the existing repository to the new default repository.

For more information, see "ODBC Data Source Connections" (p. 216). For more information about migrating the repository, see the IBM Cognos 8 Virtual View Manager User Guide.

**IBM Cognos 8 Portal Services**

Plumtree portal is replaced by BEA AquaLogic User Interaction 6.1 (ALUI 6.1) portal.

**Deprecated Features in Version 8.4**

A deprecated feature is one that is being replaced by a newer version or a better implementation. The intention is to discontinue the use of the feature and provide recommendations for adapting to this change over multiple releases.

Listed below are deprecated features, including links to related topics.
IBM Cognos 8 PowerCube Connection Utility and cubeswap

In the next release of IBM® Cognos® 8 Transformer, the PowerCube Connection Utility and cubeswap will be deprecated. The functionality provided by these utilities is no longer required when using the automated copy and activate options on the Deployment tab of the PowerCube properties dialog box.

For more information about the PowerCube copy and activate options, see "Deploy Updated PowerCubes" (p. 230) or the Transformer User Guide.

New Features in Version 8.3

Listed below are new features since the last release. Links to directly-related topics are included.

Improved User Interface for Administrators

Administrative tasks are now located in one central management interface named IBM Cognos Administration. The new interface will help you make quicker, more informed decisions, and simplify the overall management of the IBM Cognos environment.

Access to More Documentation

You can access supplementary documentation from More Documentation on the Help menu of IBM Cognos Connection. This new link opens a dynamic IBM Cognos Documentation page that contains one or more readme files and additional guides, depending on the products you have installed and the language in which you installed them.

More Granular Administrative Capabilities

A more granular approach to securing administrative functions is now available. Administrators can be granted some administrative permissions, but not others. For example, an administrator can have access to tasks associated with managing data sources, but not to the tasks associated with maintaining the security namespaces.

For more information, see "Secured Functions and Features" (p. 283).

Access to System Statistics

You can view metrics related to different servers, dispatchers, and services. The metrics provide you with insight into the status of the environment.

For more information, see "System Performance Metrics" (p. 117).

Snapshot of System Health

You can get a snapshot of the status of all servers, server groups, dispatchers, and services in the IBM® Cognos® topology. All system metrics are found on the System tab in IBM Cognos Administration. When you see statistics in their proper context, you can make better decisions regarding performance, scheduling, and capacity planning.

For more information, see "System Performance Metrics" (p. 117).
Managing Queues

IBM® Cognos® Administration provides specific views and tools to identify the report, job, or application currently in the queue or being processed. These views also reveal who is running the item, regardless of whether it is a background or interactive task. You can better understand what is happening in your environment and take action to resolve issues. For example, you can cancel a job for a user.

For more information, see "Activities Management" (p. 351).

Reducing Deployment Details

An administrator can specify the level of deployment details logged to the content store. By default, the deployment history will contain only summarized information. This will save memory space, improve performance, and require less maintenance. For more information, see "Packages" (p. 401).

You can learn the current status of a deployment by viewing periodic updates in the Monitor Service (p. 351).

Setting Priority on Schedules

You can set a priority, from 1 to 5, on a schedule. Setting a priority ensures that if two reports are waiting in the queue to be run, the report with the higher priority is run first. You can override and reset the priority on any schedule.

For more information, see "Manage Entry Run Priority" (p. 358).

Better Control of Interactive Features in Reports

You can now disable interactive features in addition to drill-up, drill-down, and package drill report options. Administrators can control access to all interactive features, including drill-up and drill-down, package drill, authored drill, Go! Search, and notifications.

This feature gives you more control of interactive activities. Hiding these functions may reduce the need for user training in large deployments.

The new capabilities are exposed as run options in IBM® Cognos® Connection (p. 421).

New Sample Audit Reports

Sample audit reports have been added for metric threshold exceptions, agents, failed reports, and presentation service.

For more information, see "Setting up Logging" (p. 103).

Publishing and Managing Packages in Non-root Folders

You can now publish packages from Framework Manager into any folder in IBM® Cognos® Connection. In previous versions, packages could be published and maintained only in the single root folder. These packages can also be moved from the root folder to any folder in IBM Cognos Connection. In Framework Manager, any target folder can be used for publishing.

For more information, see "Packages" (p. 401).
Chapter 1: What’s New?

Enabling Report Studio Authoring Modes

Report Studio now accommodates two distinct types of report authors:

- **Express**
  This user can access the Report Studio Professional authoring mode and the Express® authoring mode.

- **Professional**
  This user can access the Report Studio Express authoring mode for financial report authoring to create and maintain statement style reports. Financial authoring requires many, but not all, of the features that exist in Report Studio and interaction with live data.

In IBM® Cognos® Administration, you can restrict users to have access to only the Express authoring mode in Report Studio. For more information, see "Set Access to User Interface Profiles for Report Authors" (p. 291).

Server Administration

Server administration is enhanced with new capabilities. You can now:

- set PDF file character encoding, font embedding, and compression types and levels
- set the maximum execution time
- limit hotspots that are generated in an Analysis Studio or Report Studio chart
- set watch list output retention time

Settings for the maximum number of processes and connections has been improved. For some services, you can now set the maximum number of processes and the maximum number of high affinity and low affinity connections that the dispatcher can open to handle requests. For other services, you can set the maximum number of connections.

For more information, see "Server Administration" (p. 135).

Transformer Integrated into IBM Cognos 8

Transformer is now fully integrated into IBM® Cognos® 8 Business Intelligence. This includes the ability to leverage IBM Cognos 8 metadata, support for cube building on IBM Cognos 8 platforms, and integration with IBM Cognos 8 security.

For more information, see the Transformer User Guide.

My Activities and Schedules

You can now manage IBM® Cognos® 8 activities from My Activities and Schedules in IBM Cognos Connection.

You can view a list of your activities that are current, past, upcoming on a specific day, or scheduled. You can filter the list so that only the entries that you want appear. A bar chart shows you an overview of activities.
You can set run priority for entries. You can also view the run history for entries, specify how long to keep run histories, and rerun failed entries.

For more information, see "Activities Management" (p. 351)

**My Watch Items**

Use the **My Watch Items** area of the portal to view and manage alerts for new report versions and rules that you have set for conditional report delivery (p. 328). The **My Watch Items** functionality enables end users to monitor and manage business information that is critical to them from a single location.

As a report owner, you must allow report users to receive alerts and create watch rules for the reports. For information about how to enable these features for reports, see "Enable Watch Rules for a Report" (p. 442).

**Report Alerts**

By enabling an alert on a report, you can now be notified when a new version is available. Whenever a report is run and saved due to a scheduled or manual run, all subscribers receive an email that a new version is available.

Subscriptions are saved to the **Alerts** tab of **My Watch Items** (p. 328) and can be maintained from that location.

For information about how to subscribe to a report, see "Add Yourself to or Remove Yourself from the Alert List for a Report" (p. 440).

**Watch Rules**

A new watch rule action is available in Cognos® Viewer. You can use watch rules to control when users are notified about the availability of new report versions. When a report is run and saved, a user-defined threshold condition is checked. If this condition satisfies a user's criteria, the report can be e-mailed.

To create a watch rule (p. 443), a saved report must be viewable in HTML format. You can select the data to be monitored and enter the threshold condition that will trigger the delivery of the report. Watch rules are saved to the **Rules** tab of **My Watch Items** (p. 328), and can be maintained from that location.

This feature lets users maintain their own report distribution preferences and avoid information overload.

**Drilling Through on Multiple Values**

Drilling through is now more powerful and flexible. You can pass multiple items, such as products or countries, to a target report (p. 454). You can now use this feature regardless of the type of drill-through path that was created. Drilling through is automatically enabled when you select multiple values.

In previous versions, passing multiple values was available only within drill-through paths created in IBM® Cognos® Connection.
Go Directly to Target Report When Only One Target Report Exists

When there is only one target report available, you can now go directly to the target report when you click the drill-through link in Cognos® Viewer. If there are multiple target reports available, you see the Go To page, which allows you to select the target report that you want. This behavior is automatic and works the same way whether the drill-through is defined in Report Studio or in a drill-through definition in IBM Cognos Connection.

For package-based drill-through, if there is only one target report, you click on the Go To link in the right-click menu to go directly to the target report (not Related Links that you see when you hover your mouse over the Go To menu). If there is more than one target report, clicking on Go To has the same effect as clicking on Related Links. In both cases, you see the Go To page, which allows you to select the target report that you want.

For more information, see "Drill Through to Another Target" (p. 453).

Support for Microsoft Excel 2007

IBM® Cognos® 8 supports Microsoft® Excel spreadsheet software 2007 native spreadsheets as a report format, in addition to the existing Microsoft Excel HTML formats. The Microsoft Excel 2007 XML format, also known as XLSX, provides a fast way to deliver native Excel spreadsheets to Microsoft Excel XP, Microsoft Excel 2003, and Microsoft Excel 2007.

The use of a native Microsoft Excel format means that the spreadsheets are smaller and more usable. Because the new Office Open XML format is a recognized industry standard supported by ECMA International, the new format provides the added benefit of an open, documented integration format that extends an open systems solution.

The new format appears in the run report user interface. Users of Microsoft Excel XP and Microsoft Excel 2003 must install the Microsoft Office Compatibility Pack, which provides file open and save capabilities for the new format.

For more information about Excel format support, see "Microsoft Excel Formats" (p. 432).

Saving Report Outputs to a File System

You can now export report results directly to a server file system using IBM® Cognos® Connection. You decide which formats to export, and select from a predefined set of directory locations. This feature makes it easy to integrate IBM Cognos content into other external applications.

IBM Cognos 8 does not keep a record of the exported reports, but does prevent and resolve name conflicts that arise when the same file is saved multiple times to the same directory. You are responsible for managing the reports after export. An XML descriptor file with the same file name prefix is created, which can be used by an external application to locate and manage the exported reports.

The export options appear as run options for a report, provided you were granted access to this feature. For more information, see "Save Report Output" (p. 436).
Resubmitting Failed Jobs and Reports

You can resubmit a failed job or report (p. 362). For example, you discover that 20 reports in a job containing 1,000 reports fail due to an invalid signon. The problem is corrected and the job is resubmitted so that only the 20 failed reports are rerun.

In previous versions, if you submitted a report and it failed, the run options associated with the report were lost. Now the report can be resubmitted without having to reset the run options.

Failed reports, jobs, and agent tasks can be resubmitted from the run history, accessed from the Past activities page of IBM Cognos Administration, or accessed from the Actions page of the item.

Resubmitting Failed Agent Tasks

Failed agent tasks can now be resubmitted with their original data values (p. 362). In previous versions, if a task failed, the data passed to the task was lost. Rerunning the agent may not solve this problem if the task is set to process new events only.

Default Actions for Agent Items

You can now choose a default action to use when an agent item is selected in IBM® Cognos® Connection, rather than automatically opening the agent in Event Studio (p. 462). The new choices are:

- show the most recent event list
- run the agent
- open the agent in Event Studio

The default action is defined on the Agent tab of the item properties in IBM Cognos Connection.

Tabbed Portal Pages

You can now create pages with multiple tabs that are easy to navigate. The new type of pages is also referred to as dashboards. Dashboards are created by using a new portlet named Multi-page. For more information, "Create a Dashboard with Multiple Tabs" (p. 339).

Global Filters and Enhanced Portal Interactivity

You can select the dashboard context in the portal with one or more global filters. A global filter may be a prompt, a drill-up or drill-down action, or a report that is based on drill-through content. For example, you can add a prompt control to a portal page to automatically pass the selection to all reports on the page. When a prompt answer is changed, all related reports will refresh accordingly. So, if you answer a country prompt with Brazil, all related reports on the page will be filtered to show the data for Brazil.

When these techniques are used on a tabbed dashboard, the context is passed to all corresponding sections of the dashboard. This functionality allows for a single selection to drive a number of reports at once.

For more information, see "Adding Interactivity to Pages and Dashboards" (p. 342).
Chapter 1: What’s New?

**Metric Studio Content in Portal Pages**

An IBM® Cognos® Connection page or a dashboard can now display more types of Metric Studio metrics and a history chart. This new content can be added by using the following new portlets:

- **Metric List**
  
  Use to add a watchlist, an accountability list, a scorecard metric list, or a strategy metric list to the page.

- **Metric History Chart**
  
  Use to add a graphical chart that illustrates the historical performance of a metric to the page.

For more information, see "Pages and Dashboards" (p. 331).

**Support for Microsoft SharePoint Portal 2003 and 2007**

Microsoft® SharePoint Portal 2003 and 2007 is now supported in IBM® Cognos® 8. You can use this portal with the Cognos Navigator, Cognos Search, Cognos Viewer, Metric List, Metric History Chart, and Cognos Extended Applications portlets.

For more information, see "Deploying Cognos Portlets to Microsoft SharePoint Portal Server 2003” (p. 569).

**Changed Features in Version 8.3**

Listed below are changes to features since the last release. Links to directly-related topics are included.

**Updated IBM Cognos Connection Look**

The IBM® Cognos® Connection user interface was changed to provide more space for reports and information that you care about, and use less space for toolbars and functions. The new features include:

- The **Launch** menu, which replaces the **Tools** menu.

  This menu lets you access the IBM Cognos 8 studios, Drill-through Definitions, and IBM Cognos Administration.

- The my area icon, which lets you access the My Watch Items, My Preferences, and My Activities and Schedules areas in IBM Cognos Connection.

- The portal style named Business.

- The updated Welcome to IBM Cognos 8 page.

For more information, see "Personalize the Portal” (p. 325).

**More Information in the Go To Page**

Additional information was added to the Related Links page. Related Links, also known as the Go To page, is used to show users all of the drill-through paths available from a source report. The
page now automatically shows more information, such as the target report and its location. This information helps you choose which drill-through path to use.

**Cognos Watchlist Portlet**

The Cognos® Watchlist Portlet was replaced by the Metric List portlet. In the new portlet, the watchlist is now one of the selectable options. For more information, see "Pages and Dashboards" (p. 331).

**Replaced Capability**

The capability known as Directory in previous releases of IBM® Cognos® 8 was replaced by the following, more granular capabilities:

- Data Source Connections
- Set capabilities and manage UI profiles
- Users, Groups, and Roles

For more information, see "Secured Functions and Features" (p. 283).
Chapter 1: What's New?
Chapter 2: IBM Cognos Software Administration

After IBM® Cognos® software is installed and configured, you can perform server administration, data management, security and content administration, activities management, and portal services administration.

You can also perform the following administrative tasks:

- automating tasks (p. 54)
- setting up your environment (p. 56) and configuring your database (p. 57) for multilingual reporting
- installing fonts (p. 58)
- setting up printers (p. 59)
- configuring web browsers (p. 60)
- allowing user access to Series 7 reports from IBM Cognos Connection (p. 62)
- restricting access to IBM Cognos software (p. 64)

Aside from the typical administrative tasks, you can also customize the appearance (p. 599) and functionality (p. 631) of different IBM Cognos components.

For information about potential problems, see the Troubleshooting section in this guide.

IBM Cognos Administration

You access IBM Cognos Administration from the Launch menu in IBM® Cognos® Connection. You must have the required permissions to access IBM Cognos Administration. For more information, see "Secured Functions and Features" (p. 283).

<table>
<thead>
<tr>
<th>Administrative Area</th>
<th>Tab</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
<td>Status</td>
<td>To manage current, past, upcoming, and scheduled IBM Cognos entries.</td>
</tr>
<tr>
<td>Content Manager computers</td>
<td>Status</td>
<td>To manage Content Manager computers.</td>
</tr>
<tr>
<td>Content store</td>
<td>Configuration</td>
<td>To perform content store maintenance tasks.</td>
</tr>
<tr>
<td>Data sources</td>
<td>Configuration</td>
<td>To create and manage data sources connections.</td>
</tr>
</tbody>
</table>
Chapter 2: IBM Cognos Software Administration

<table>
<thead>
<tr>
<th>Administrative Area</th>
<th>Tab</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deployment</td>
<td>Configuration</td>
<td>To deploy IBM Cognos, to export from a source environment and then import in a target environment.</td>
</tr>
<tr>
<td>Dispatchers and Services</td>
<td>Status</td>
<td>To manage dispatchers and services</td>
</tr>
<tr>
<td>Distribution lists and contacts</td>
<td>Configuration</td>
<td>To create and manage distribution lists and contacts.</td>
</tr>
<tr>
<td>Portals</td>
<td>Configuration</td>
<td>To manage styles, Cognos portlets, and other portlets in IBM Cognos Connection.</td>
</tr>
<tr>
<td>Printers</td>
<td>Configuration</td>
<td>To create and manage printers.</td>
</tr>
<tr>
<td>Security</td>
<td>Security</td>
<td>To control access to specific product functions, such as administration and reporting, and features within the functions, such as bursting and user defined SQL.</td>
</tr>
<tr>
<td>System, dispatcher, server, and service administration</td>
<td>Status</td>
<td>To monitor system performance using system metrics and administer servers.</td>
</tr>
<tr>
<td>Server tuning</td>
<td>Status</td>
<td>To tune server performance.</td>
</tr>
<tr>
<td>Users, groups, and roles</td>
<td>Security</td>
<td>To create and manage users, groups, and roles.</td>
</tr>
</tbody>
</table>

### Automating Tasks

Virtually everything you can do with the product, you can achieve using the appropriate API, URL interface, or command line tool, as illustrated in the table below.

<table>
<thead>
<tr>
<th>Goal and document</th>
<th>Automation interface</th>
<th>User interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begin basic reporting with the IBM® Cognos® Software Development Kit.</td>
<td>BI Bus API</td>
<td>Report Studio</td>
</tr>
<tr>
<td>For information, see the IBM Cognos Business Intelligence Getting Started Guide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal and document</td>
<td>Automation interface</td>
<td>User interface</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Modify a model, or republish it to UNIX® or Microsoft® Windows® operating systems.</td>
<td>Script Player tool</td>
<td>Framework Manager</td>
</tr>
<tr>
<td>For information, see the Framework Manager Developer Guide and Framework Manager User Guide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modify an unpublished model using the updateMetadata and queryMetadata methods.</td>
<td>BI Bus API</td>
<td>Framework Manager</td>
</tr>
<tr>
<td>For information, see the IBM Cognos Software Development Kit Developer Guide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retrieve the query items available in the published package using the getMetadata method.</td>
<td>BI Bus API</td>
<td>IBM Cognos Connection</td>
</tr>
<tr>
<td>For information, see the IBM Cognos Software Development Kit Developer Guide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grant capabilities to users.</td>
<td>BI Bus API</td>
<td>IBM Cognos Connection</td>
</tr>
<tr>
<td>For information, see the IBM Cognos Software Development Kit Developer Guide.</td>
<td></td>
<td>Server Administration</td>
</tr>
<tr>
<td>Administer and implement security.</td>
<td>BI Bus API</td>
<td>IBM Cognos Connection</td>
</tr>
<tr>
<td>For information, see the IBM Cognos Software Development Kit Developer Guide.</td>
<td></td>
<td>Server Administration</td>
</tr>
<tr>
<td>Run, view, and edit reports through a hyperlink in an HTML page.</td>
<td>URL Interface</td>
<td>IBM Cognos Viewer</td>
</tr>
<tr>
<td>Use URLs to View, Edit, and Run Reports.</td>
<td></td>
<td>Query Studio</td>
</tr>
<tr>
<td>For information, see the IBM Cognos Software Development Kit Developer Guide.</td>
<td></td>
<td>Report Studio</td>
</tr>
<tr>
<td>Manipulate objects in the content store.</td>
<td>BI Bus API</td>
<td>IBM Cognos Connection</td>
</tr>
<tr>
<td>Manage content manager.</td>
<td></td>
<td>Query Studio</td>
</tr>
<tr>
<td>For information, see the IBM Cognos Software Development Kit Developer Guide.</td>
<td></td>
<td>Report Studio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Framework Manager</td>
</tr>
</tbody>
</table>
## Setting up a Multilingual Reporting Environment

You can create reports that show data in more than one language and use different regional settings. This means that you can create a single report that can be used by report consumers anywhere in the world.

The samples databases provided with IBM® Cognos® software store a selection of text fields, such as names and descriptions, in more than 25 languages to demonstrate a multilingual reporting environment.

Here is the process for creating a multilingual reporting environment:

- Use multilingual metadata.
  
  The data source administrator can store multilingual data in either individual tables, rows, or columns.

- Create a multilingual model.
  
  Modelers use Framework Manager to add multilingual metadata to the model from any data source type except OLAP. They add multilingual metadata by defining which languages the model supports, translating text strings in the model for things such as object names and descriptions, and defining which languages are exported in each package. If the data source contains multilingual data, modelers can define queries that retrieve data in the default language for the report user.

  For more information, see the Framework Manager User Guide.

- Create multilingual maps.
Administrators and modelers use a Microsoft® Windows® operating system utility named Map Manager to import maps and update labels for maps in Report Studio. For map features such as country and city names, administrators and modelers can define alternative names to provide multilingual versions of text that appears on the map.

For more information, see the Map Manager Installation and User Guide.

❑ Create a multilingual report.

The report author uses Report Studio to create a report that can be viewed in different languages. For example, you can specify that text, such as the title, appears in German when the report is opened by a German user. You can also add translations for text objects, and create other language-dependent objects.

For more information, see the IBM Cognos Report Studio User Guide.

❑ Specify the language in which a report is viewed.

You can use IBM Cognos Connection to do the following:

• Define multilingual properties, such as a name, screen tip, and description, for each entry in the portal.

• Specify the default language to be used when a report is run.

  Tip: You can specify the default language on the run options page, in the report properties, or in your preferences.

• Specify a language, other than the default, to be used when a report is run.

For more information, see the IBM Cognos Connection User Guide.

The data then appears in the language and with the regional settings specified in

• the user’s Web browser options

• the run options

• the IBM Cognos Connection preferences

Any text that users or authors add appears in the language in which they typed it.

Configuring Your Database For Multilingual Reporting

IBM® Cognos® Business Intelligence is a Unicode product capable of querying data in many languages and encoding. IBM Cognos BI typically queries the database using the native data encoding of the database (Latin-1, Shift-JIS, Unicode, and so on). IBM Cognos BI translates this data to Unicode as required.

When querying databases with two or more data encodings, Report Studio requests the data in Unicode. Certain databases require specific configuration of the client or server software to enable this capability. For more information, see your database vendor documentation.
Note: For information on round trip safety issues when characters are converted from Unicode to Shift-JIS and back, see the information on the Round Trip Safety Configuration utility in "Round Trip Safety Configuration of Shift-JIS Characters" (p. 845).

Installing Fonts

IBM® Cognos® software uses fonts
- to display HTML reports and pages in browsers
- to render PDF reports on the IBM Cognos server
- to render charts used in PDF and HTML reports

To display output correctly, fonts must be available where the report or chart is rendered. In the case of charts and PDF reports, the fonts must be installed on the IBM Cognos server. For example, if a Report Studio user selects the Arial font for a report, Arial must be installed on the IBM Cognos server to properly render charts and PDF files. If a requested font is not available, IBM Cognos software substitutes a different font.

Because HTML reports are rendered on a browser, the required fonts must be installed on the personal computer of each IBM Cognos software user who will read the HTML report. If a requested font is not available, the browser substitutes a different font.

When creating reports, you must select fonts that your IBM Cognos server or users have installed. Microsoft® delivers a broad selection of fonts with different language packs, so this will likely not be an issue in Microsoft Windows® operating system. However, UNIX® servers rarely have fonts installed. You should be prepared to purchase and install the fonts you need on both the server and browser clients.

For information about PDF file settings, see "PDF File Settings" (p. 168). For information on using PDF format in reports, see "Report Formats" (p. 431). For information about configuring fonts and about mapping substitute fonts, see the IBM Cognos Configuration User Guide.

IBM Cognos Default Font

If a requested font is not found, the IBM® Cognos® server renders PDF files and charts using a default font. Andale WT, part of the sans serif font family, is the default font because of its wide support of Unicode characters. However, it is not necessarily complete for all languages and may not be considered as attractive as purchased fonts. Also, this font has no Glyph Substitution (GSUB) and Ligature support in most languages.

Report Studio Fonts

Report Studio is an HTML and JavaScript ™ application that runs in a browser. Because of the browser design, Report Studio operates within the browser security sandbox and has no access to the list of fonts installed on the local computer. Instead, Report Studio uses fonts configured in the IBM® Cognos® global configuration.

For more information, see the IBM Cognos Configuration User Guide.
Set Up Printers

To make printers available to users when they distribute reports, you can create entries for printers and save them in the IBM® Cognos® content store. When users want to print a report, they can select a printer that you set up without needing to know its network address details.

When you create a printer entry, ensure that the printer you define is set up on the computer where IBM Cognos is installed. If the printer is not set up, the users cannot use it.

To set up printers, you must have the required capabilities to access IBM Cognos Administration functionality. You must have write permissions for the Cognos namespace. See "Secured Functions and Features" (p. 283).

Printing Considerations

To avoid possible errors, ensure that the following conditions are met before you try printing:

- Ensure that Adobe® Reader version 5.0.5 or later is installed on each computer where IBM Cognos servers are installed.

- Ensure that the IBM Cognos server is started using an account that has access to the network printer.

  Sometimes, system accounts may not have access to network printers.

- If IBM Cognos is installed on UNIX® operating system, ensure that Adobe Reader is installed in the path of the user that starts IBM Cognos.

- If IBM Cognos is installed on UNIX, ensure that the command `ipstat -v`, returns a configured printer and that a printer variable is defined.

- When you define the network address for the printer in IBM Cognos Connection, use the following syntax:
  
  For Microsoft® Windows® operating system, use `\server_name\printer_name`.
  
  For UNIX, use `printer_name`.

- When you define the network address for the printer, try using the IP address of the printer instead of the computer name.

- Ensure that IBM Cognos users have the correct access permissions to the printer.

  The role Directory Administrators must have all access permissions granted, and the group Everyone must have read, execute, and traverse permissions granted.

Steps

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Printers.

   A list of printers appears.

   Tip: To remove a printer, select the check box for the printer and click the delete button.
3. On the toolbar, click the new printer button.

4. Type a name and, if you want, a description for the printer.
   Tip: Use a name that provides details about the printer, such as Color Printer - 4th Floor

5. Type the network address of the printer by using the format server_name\printer_name for a network printer on a Windows installation and printer_name for a UNIX installation or for a local printer on Windows.

6. Click Finish.
   Tip: To check or assign access permissions for a printer, in the Actions column, click the set properties button for the printer, and then click the Permissions tab.

**Configure Web Browsers**

IBM® Cognos® Business Intelligence products use default browser configurations. Additional required settings are specific to the browser.

The following table shows the settings that must be enabled.

**Browser Settings Required for IBM Cognos BI Portal**

<table>
<thead>
<tr>
<th>Browser</th>
<th>Setting</th>
<th>IBM Cognos component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Explorer® (settings for studios and portals)</td>
<td>Allow Cookies</td>
<td>IBM Cognos Connection</td>
</tr>
<tr>
<td></td>
<td>Active Scripting</td>
<td>IBM Cognos Administration</td>
</tr>
<tr>
<td></td>
<td>Allow META REFRESH</td>
<td>Cognos Viewer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Report Studio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Query Studio</td>
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<tr>
<td></td>
<td></td>
<td>Analysis Studio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Event Studio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Metric Studio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PowerPlay® Studio</td>
</tr>
<tr>
<td>Internet Explorer (settings for some studios)</td>
<td>Run ActiveX controls and plugins</td>
<td>Report Studio</td>
</tr>
<tr>
<td></td>
<td>Script ActiveX controls marked safe for scripting</td>
<td>Query Studio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analysis Studio</td>
</tr>
<tr>
<td>Internet Explorer (settings for a single studio)</td>
<td>Binary and script behaviors</td>
<td>Report Studio</td>
</tr>
<tr>
<td></td>
<td>Allow programmatic clipboard access</td>
<td></td>
</tr>
</tbody>
</table>
Report Studio and Query Studio use the native Microsoft® Internet Explorer XML support, which is a component of the browser. ActiveX® support must be enabled because Microsoft applications implement XML using ActiveX. IBM Cognos BI does not provide or download ActiveX controls. Only the ActiveX controls that are installed as part of Internet Explorer are enabled through this configuration.

If you use Microsoft Internet Explorer Version 8, you may receive Adobe™ link errors when you open PDF documents in the IBM Cognos portal. To prevent these errors, in Internet Explorer, from the Tools menu, select Manage Add-ons, and disable Adobe PDF Reader Link Helper.

If you use a Microsoft Internet Explorer Web browser, then you can add the URL for your gateway(s) to the list of Trusted sites. For example, http://<server_name>:<port_number>/ibmcognos. This enables automatic prompting for file downloads.

For more information, see the topic about configuring IBM Cognos Application Firewall in the Installation and Configuration Guide.

IBM Cognos BI uses the following cookies to store user information.

### Cookies Used by IBM Cognos BI Components

<table>
<thead>
<tr>
<th>Cookie</th>
<th>Type</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS_TICKET</td>
<td>Session temporary</td>
<td>Created if IBM Cognos BI is configured to use an IBM Cognos Series 7 namespace</td>
</tr>
<tr>
<td>caf</td>
<td>Session temporary</td>
<td>Contains security state information</td>
</tr>
<tr>
<td>Cam_passport</td>
<td>Session temporary</td>
<td>Stores a reference to a user session stored on the Content Manager server</td>
</tr>
<tr>
<td>cc_session</td>
<td>Session temporary</td>
<td>Holds session information that is specific to IBM Cognos Connection</td>
</tr>
<tr>
<td>cc_state</td>
<td>Session temporary</td>
<td>Holds information during edit operations, such as cut, copy, and paste</td>
</tr>
<tr>
<td>CRN</td>
<td>Session temporary</td>
<td>Contains the content and product locale information, and is set for all IBM Cognos users</td>
</tr>
<tr>
<td>CRN_RS</td>
<td>Persistent</td>
<td>Stores the choice that the user makes for the &quot;view members folder&quot; in Report Studio</td>
</tr>
<tr>
<td>PAT_CURRENT_ FOLDER</td>
<td>Persistent</td>
<td>Stores the current folder path if local file access is used, and is updated after the Open or Save dialog box is used</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Cookie</th>
<th>Type</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>pp_session</td>
<td>Session temporary</td>
<td>Stores session information that is specific to PowerPlay Studio</td>
</tr>
<tr>
<td>qs</td>
<td>Persistent</td>
<td>Stores the settings that the user makes for user interface elements such as menus and toolbars</td>
</tr>
<tr>
<td>userCapabilities</td>
<td>Session temporary</td>
<td>Contains all capabilities and the signature for the current user</td>
</tr>
<tr>
<td>usersessionid</td>
<td>Session temporary</td>
<td>Contains a unique user session identifier, valid for the duration of the browser session.</td>
</tr>
<tr>
<td>FrameBorder</td>
<td>Session temporary</td>
<td>These cookies store the preferences for export to PDF.</td>
</tr>
<tr>
<td>PageOrientation</td>
<td>Session temporary</td>
<td></td>
</tr>
<tr>
<td>PageSize</td>
<td>Session temporary</td>
<td></td>
</tr>
<tr>
<td>PDFLayerDimension</td>
<td>Session temporary</td>
<td></td>
</tr>
<tr>
<td>PDFOPTS</td>
<td>Session temporary</td>
<td></td>
</tr>
<tr>
<td>DimTreeToolbarVisible</td>
<td>Persistent</td>
<td>Stores the setting that determines whether to show or hide the dimension viewer toolbar.</td>
</tr>
<tr>
<td>cea-ssa</td>
<td>Session temporary</td>
<td>Stores the setting that determines whether the user session information is shared with other IBM Cognos BI components.</td>
</tr>
<tr>
<td>BRes</td>
<td>Session temporary</td>
<td>Stores information used to determine the screen resolution to use to render charts.</td>
</tr>
</tbody>
</table>

After upgrading or installing new software, restart the Web browser and advise users to clear their browser cache.

**Allow User Access to Series 7 Reports from IBM Cognos Connection**

If IBM® Cognos® software is configured properly to use the IBM Cognos Series 7 namespace, you can allow users to access NewsIndexes and NewsBoxes of the Series 7 version of IBM Cognos Upfront from IBM Cognos Connection.
We recommend that IBM Cognos Connection and Upfront use the same Web server if Upfront is set up to use relative URLs. If IBM Cognos Connection and Upfront use different Web servers, configure Series 7 to use fully qualified URL. This allows users to use the Web browser back button to navigate from Upfront back to IBM Cognos Connection.

For information about configuring Series 7, see IBM Cognos Series 7 Configuration Manager User Guide. For information about running Series 7 reports, see "Series 7 Reports in IBM Cognos Connection" (p. 455).

**Steps**

1. In IBM Cognos Configuration, configure IBM Cognos to use your IBM Cognos Series 7 namespace. For more information, see the Installation and Configuration Guide.

2. In the Properties window, under Cookie Settings, ensure that the Secure Flag Enabled property is set to false.

3. From the File menu, click Save and close IBM Cognos Configuration.

4. Ensure that the ticket server for IBM Cognos Series 7 namespace is running.

5. Ensure that the timeout value of the Series 7 ticket server is set to the same value or to a higher value than the IBM Cognos passport timeout value.

6. On the computer where IBM Cognos software is installed, open the $c10_location/templates/ps/system.xml file in an editor.

   Ensure that your editor supports saving files in UTF-8 format.

7. Find and edit (with an XML editor) the series7 parameter as follows:

   ```xml
   <!-- Series 7 Integration parameters -->
   <param name="series7">
   <enabled>true</enabled>
   <!-- character encoding used by series7 -->
   <encoding>series7_character_encoding</encoding>
   <!-- host and port to connect to Upfront server -->
   <host>Upfront_host_name</host>
   <port>Upfront_dispatcher_port_number</port>
   <!-- Upfront gateway location -->
   <gateway>Upfront_gateway_location</gateway>
   <!-- If required, specify the prefix for IBM Cognos back URLs when linking to Series 7 content. (eg. http://ibmcognos_computer) otherwise relative URL's will be used -->
   <back-prefix>http://Series 7_server</back-prefix>
   </param>
   
   To view the character encoding used by Series 7, in Series 7 Configuration Manager, on the Properties tab, click IBM Cognos Shared, click Locale, and then click the Encoding property.

8. Save the system.xml file in UTF-8 format.

9. Using IBM Cognos Configuration, stop and then restart IBM Cognos Business Intelligence.

   For more information about stopping IBM Cognos BI, see the Installation and Configuration Guide.
Restricting Access to IBM Cognos Software

You may not want all users that exist in an authentication source to have access to IBM® Cognos® software. To secure IBM Cognos software, configure the product so that only users who belong to a specific group or role in your authentication source, or in the Cognos namespace, are allowed access.

We recommend using the Cognos namespace because it contains preconfigured groups and roles that help you to secure IBM Cognos software quickly. One of the preconfigured groups is Everyone. By default, the group Everyone belongs to several built-in groups and roles in the Cognos namespace. If you decide to use the Cognos namespace, you must remove the Everyone group from all built-in groups and roles and replace it with groups, roles, or users authorized to access IBM Cognos software.

To restrict access to IBM Cognos software, do the following:

- In IBM Cognos Configuration, enable the required properties to restrict access. For more information, see the Installation and Configuration Guide.

- In IBM Cognos Administration, remove the Everyone group from all built-in groups and roles. Replace it with groups, roles, or users that are authorized to access the different functional areas of IBM Cognos software. For more information, see "Initial Security" (p. 297).

- In IBM Cognos Connection, set up access permissions for individual entries, such as folders, packages, reports, pages, and so on (p. 275).

For more information about the security concepts implemented in IBM Cognos software, see "Security Model" (p. 263).
Chapter 3: Building IBM Cognos Business Intelligence Applications

The lifetime of an IBM® Cognos® Business Intelligence application can be months, or even years. During that time, data may change and new requirements appear. As the underlying data changes, authors must modify existing content and develop new content. Administrators must also update models and data sources over time. For more information about using data sources, see the IBM Cognos Administration and Security Guide and the IBM Cognos Framework Manager User Guide.

In a working application, the technical and security infrastructure and the portal are in place, as well as processes for change management, data control, and so on. For information about the workflow associated with creating IBM Cognos BI content, see the IBM Cognos Architecture and Deployment Guide. For additional information, see the IBM Cognos Solutions Implementation Methodology toolkit, which includes implementation roadmaps and supporting documents. Information about the toolkit is available on www.ibm.com.

The following graphic provides an overview for how to use IBM Cognos BI to build applications across all of your IBM Cognos BI components.

- Locate and prepare data sources and models
  IBM Cognos BI can report from a wide variety of data sources, both relational and dimensional. Database connections are created in the Web administration interface, and are used for modeling, for authoring, and for running the application.
  To use data for authoring and viewing, the business intelligence studios need a subset of a model of the metadata (called a package). The metadata may need extensive modeling in Framework Manager.

- Build and publish the content
  Reports, scorecards, analysis, dashboards and more are created in the business intelligence studios of IBM Cognos BI. Which studio you use depends on the content, lifespan, and audience of the report, and whether the data is modeled dimensionally or relationally. For example, self-service reporting and analysis are done through IBM Cognos Business Insight Advanced, IBM Cognos Query Studio, and IBM Cognos Analysis Studio, and scheduled reports are created in IBM Cognos Report Studio. Report Studio reports and scorecards are usually prepared for a wider audience, published to IBM Cognos Connection or another portal, and scheduled there for bursting, distribution, and so on. You can also use Report Studio to prepare templates for self-service reporting.
Deliver and view the information

You deliver content from the IBM Cognos portal or other supported portals, and view information that has been saved to portals, or delivered by other mechanisms. You can also run reports, analyses, scorecards, and more from within the business intelligence studio in which they were created.

Chapter 4: Samples

This section explains the purpose, content and location of IBM® Cognos® Business Intelligence samples. It also discusses the sample company, Great Outdoors, its structure, databases, model and packages.

For information on how to set up the sample databases, see "Setting Up the Samples" (p. 73).

The Great Outdoors Company Samples

The Great Outdoors Company samples illustrate product features and technical and business best practices. You can also use them for experimenting with and sharing report design techniques and for troubleshooting. As you use the samples, you can connect to features in the product.

For examples related to different kinds of businesses, see the product blueprints at www.ibm.com. For information about specific installation choices and environments, see the IBM® Cognos® Architecture and Deployment Guide, or the Proven Practices and the IBM Cognos Implementation Roadmaps on www.ibm.com. For information about audit samples, see the IBM Cognos Administration and Security Guide. For information about Mobile samples, see the IBM Cognos Mobile Installation and Administration Guide.

The Great Outdoors Company, or GO Sales, or any variation of the Great Outdoors name, is the name of a fictitious business operation whose sample data is used to develop sample applications for IBM and IBM customers. Its fictitious records include sample data for sales transactions, product distribution, finance, and human resources. Any resemblance to actual names, addresses, contact numbers, or transaction values, is coincidental. Unauthorized duplication is prohibited.

Where to Find the Samples

The samples are included with the product and the samples for each studio are described in the related user guide and online help. To use the samples, you must install, set up, and configure them or contact your administrator to find out where they are installed. For instructions on how to install the samples, see the IBM Cognos Installation and Configuration Guide. For instructions on how to set up and configure samples, see the IBM Cognos Administration and Security Guide or the IBM Cognos Installation and Configuration Guide.

Samples Outline

The samples consist of the following:

- Two databases that contain all corporate data, and the related sample models for query and analysis
- Five samples cubes and the related models
- A metrics data source including associated metrics and a strategy map for the consolidated company, and a model for Metric extracts.
• Reports, queries, query templates, and dashboards

To run interactive reports, scripts are required. To see all the reports included in the samples packages, copy the files from the samples content installation into deployment folder and then import the deployments into the IBM Cognos Business Intelligence product.

Security

Samples are available to everyone. To implement security, see the *Installation and Configuration Guide*.

The Great Outdoors Group of Companies

To make designing examples faster, especially financial examples, some general information about The Great Outdoors Company is useful. To look for samples that use particular product features, see the individual sample descriptions in this section.

Revenue for The Great Outdoors Company comes from corporate stores and from franchise operations. The revenues are consolidated from the wholly-owned subsidiaries. There are six distinct organizations, each with its own departments and sales branches. Five of these are regionally-based companies.

The sixth company, GO Accessories:

• Has its own collection of products, differentiated from the other GO companies by brand, name, price, color and size

• Sells from a single branch to all regions and retailers

• Functions both as an operating company based in Geneva, and as a part owner of the three GO subsidiaries in Europe

The diagram below illustrates the consolidated corporate structure, including the percentage changes in ownership for GO Central Europe, and shows the reporting currency and GL prefix for each subsidiary.
Each corporation has the same departmental structure and the same GL structure, shown in the table below. Divisions may not report in the same currencies. For example, the Americas subsidiary reports in US dollars, but the Corporate division local currency is Canadian dollars, and the Operations division local currency is pesos.

<table>
<thead>
<tr>
<th>Division (GL)</th>
<th>Department (GL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate (1700)</td>
<td>Sales (1720)</td>
</tr>
<tr>
<td></td>
<td>Marketing (1750)</td>
</tr>
<tr>
<td></td>
<td>IS&amp;T (1760)</td>
</tr>
<tr>
<td></td>
<td>Human Resources (1730)</td>
</tr>
<tr>
<td></td>
<td>Finance (1740)</td>
</tr>
<tr>
<td></td>
<td>Procurement (1710)</td>
</tr>
<tr>
<td>Operations (1800)</td>
<td>Production and Distribution (1820)</td>
</tr>
<tr>
<td></td>
<td>Customer Service (1820)</td>
</tr>
</tbody>
</table>

Each corporation has a complete chart of accounts. Most of the accounts, such as those under non-personnel expenses, are at the department level, and contain only summary amounts. For example, although each marketing department has expenses, the cost is unspecified at the transaction level where marketing promotions occur.
Employees

The Great Outdoors data contains a full list of employees in all divisions, departments, and locations. Data is available for reports about bonuses (Global Bonus report) and sales commissions (Sales Commissions for Central Europe report), training (Employee Training by Year report), and performance reviews and employee satisfaction surveys (Employee Satisfaction 2006). If you use Metric Studio, sample metrics for human resources are also available.

In the GO Data Warehouse (analysis) package, groups of measures and the related dimensions are organized into folders. The employees are organized in hierarchies for region and manager, to make different kinds of aggregation easy to report on. Aggregation has been defined for the Employee Position Summary measures, so that Position count and Planned position count aggregate correctly at each level of time: monthly, quarterly, or yearly. For example, see the Planned Headcount report.

The employees are also listed in a sample LDIF file (p. 68). This authentication directory is necessary for the Transformer 8 cubes and for IBM® Cognos® Planning samples. No other samples depend on security profiles. For more information, see the IBM Cognos Business Intelligence Installation and Configuration Guide.

Sales and Marketing

Data about sales and marketing is available for all of the companies in the Great Outdoors group. GO Accessories has richer details to support analysis examples. For example, see the Revenue vs % Profit Margin by Product Brand analysis, based on the Sales and Marketing cube. Marketing and sales campaigns are tied to the Great Outdoors regional companies.

Overall, the GO companies have experienced solid growth across most product lines (Sales Growth Year Over Year), in all regions (Revenue by GO Subsidiary 2005), because of factors like an increase in repeat business and new or improved products, such as the high margin sunglasses product line. In the product lines sold by the five regional companies (all but GO Accessories) promotions have had mixed success (Promotion Success by Campaign, Bundle and Quarter). If you use Metric Studio, this can also be seen in the sample metrics.

Customer Surveys

The data also contains information from customer surveys. For example, the product line that includes bug spray, sun screen, and so on has not been successful (Product Satisfaction - Outdoor Protection 2005) and a source of retailer dissatisfaction may be the level of customer service rather than the returns (Customer Returns and Satisfaction). If you use Metric Studio, this information can also be monitored in metrics.

Sales Outlets

Revenue from the corporate outlets is available at the transaction level. Revenue from the franchise outlets is available at the consolidated level only (Sales and Marketing cube). Metrics about retailers show that the number of new retail outlets has dropped over the time period covered by this data.

GO Accessories sells worldwide, and sells only accessories. Transaction data for GO Accessories is the primary source for analysis of product by brand, color and size. The other five subsidiaries in the group of companies are regional and sell all product lines for retailers in their region. For
example, the report Top 10 Retailers in 2005 uses sparklines and list data to review revenues at the retailer level.

**Great Outdoors Database, Models, and Packages**

The Great Outdoors models illustrate modeling techniques and support the samples. The models are based on the GO data warehouse and the GO sales transactional database and are the basis for the sample reports and queries. Each model contains two packages for publishing analysis (dimensional) and query views of the data.

For a description of each sample report or query, see the user guide for the studio that you open the sample in. For more information about modeling techniques, see the *Guidelines for Modeling Metadata*, or the IBM® Cognos® Framework Manager User Guide.

You must have access to Framework Manager, the modeling tool in IBM Cognos BI, to look at the sample models. You may also need to set up the sample databases and connections. For instructions, see the IBM Cognos Business Intelligence Installation and Configuration Guide.

**GO Data Warehouse**

The GO Data Warehouse model, great_outdoors_data_warehouse.cpf, is based on the database GOSALES DW. It contains data about human resources, sales and marketing, and finance, grouped into business areas. In the Database view, the three business areas are grouped into separate namespaces. The Database view contains a fourth namespace (GO Data) for the common information.

The Database view is very similar to the structure of the underlying database. All tables (database query subjects) are unchanged. This enables IBM Cognos BI to retrieve metadata directly from the package in most cases, instead of using a metadata call to the database. The following changes and additions have been made in the Database view:

- Joins have been added as necessary.
- To allow for aggregation at different levels of granularity, some model query subjects have been created. For example, see the relationships between Time and Sales or Sales fact.
- To allow single joins to be made between the lookup tables and each level in a dimension, lookup tables have been copied. For example, see the Products look up tables.

The Business view contains only model query subjects, with no joins. The following changes and additions have been made in the Business view:

- Calculations were added to the model query subjects. For example, the time dimension contains language calculations.
- Where the database has multiple hierarchies, new dimensions have been created to organize each hierarchy. For example, see the employee hierarchies, where employees are organized by manager and region.
The GO Sales Transactional Database

The GO Sales model, great_outdoors_sales.cpf, is based on the GOSALES database, which is structured as a transactional database. It contains principally sales data.

The Database view is very similar to the underlying database structure. The following changes and additions have been made in the Database view:

- To make it possible to join the fact tables to the time dimension, model query subjects and multipart joins have been used.
- Other joins have been added as necessary.

The Business view contains only model query subjects, with no joins. The following changes and additions have been made in the Business view:

- Calculations were added to the model query subjects.
- Model query subjects that were created in the Database view to enable joins on the time dimension have been linked as reference shortcuts.
- Where the database has multiple hierarchies, new dimensions have been created to organize each hierarchy.
- Sales Staff is a subset of the slowly changing Employee dimension. There is no unique Employee key in GO Sales, so a filter retrieves the current record only. This model does not use historical data.

The Samples Power Cubes

The following cubes are delivered with the Great Outdoors samples in English, French, German, Japanese and Chinese:

- sales_and_marketing.mdc
- employee_expenses.mdc
- go_accessories.mdc
The Samples Packages

The Great Outdoors samples include six packages. Below is a brief description of each available package.

Go Data Warehouse (analysis) is a dimensionally modeled view of the GOSALESDW database. This package can be used in all studios, including Analysis Studio. Using this package you can drill up and down.

Go Sales (analysis) is a dimensionally modeled view of the GOSALES database. This package can be used in all studios, including Analysis Studio. Using this package you can drill up and down.

Go Data Warehouse (query) is a non-dimensional view of the GOSALESDW database. This package can be used in all studios except Analysis Studio, and is useful for reporting when there is no need for drilling up and down.

Go Sales (query) is a non-dimension view of the GOSALES database. This package can be used in all studios except Analysis Studio, and is useful for reporting when there is no need for drilling up and down.

Sales and Marketing (cube) is an OLAP package, based on the sales_and_marketing.mdc cube.

Great Outdoor Sales (cube) is an OLAP package, based on the great_outdoors_sales_en.mdc cube.

Note: The OLAP packages, Great Outdoor Sales (cube) and Sales and Marketing (cube), are not multilingual. The IBM_Cognos_PowerCube.zip archive contains five versions of each package; one in English, French, German, Japanese and Chinese.

Setting Up the Samples

You can use the IBM® Cognos® samples to learn how to use IBM Cognos Business Intelligence, including Framework Manager, Metric Studio, Metric Designer, Event Studio, Business Insight and IBM Cognos Mobile.

IBM Cognos BI provides sample databases that contain sales, marketing, and financial information for a fictional company named the Great Outdoors Company that sells sporting equipment.

Before you can use the sample databases, IBM Cognos BI must be installed, configured, and running and then the IBM Cognos BI Samples must be installed.

To use the modeling tool, you should install the components for Framework Manager, Metric Designer and Transformer.

For information about installing and configuring IBM Cognos BI components and the samples, see the IBM Cognos BI Installation and Configuration Guide.

To set up the samples, do the following:
Chapter 4: Samples

- **Restore the samples databases.** You can manually restore the backup files for the sample databases. For instructions, see (p. 74). You can also restore the backup files using scripts. For DB2®, see (p. 77). For Oracle, see (p. 81).

- **Create the data source connections** to the samples databases.

- **If you plan to use OLAP data source samples,** set up the connection to the sample cubes, if this is required, and create data source connections to the OLAP data sources you want to use. Setup tasks are required only for Microsoft® Analysis Services cubes, Essbase cubes and Cubing Services.

- **If you plan to use the Metric Studio sample,** set up the Metric Studio sample.

- **If you plan to use the Metric Designer sample,** set up a data source connection to it, set up the Metric Studio sample, and import the IBM_Cognos_Samples and IBM_Cognos_Metrics deployment archives.

- **Import the samples content (packages) into the content store.**

- **If you want to test the sample agent ELM Returns Agent using Event Studio,** run the sample agent against changed data.

After you complete these tasks, use IBM Cognos BI to run the sample reports or scorecards. You can later remove the IBM Cognos BI samples.

### Restore Backup Files for the Samples Databases

To use the samples, you must restore backup files for the samples databases. This action re-creates multilingual versions of the Great Outdoors databases.

The following sample databases and associated files are provided with IBM® Cognos® Business Intelligence. For Microsoft® SQL Server, each database is delivered as a Microsoft SQL Server backup file. For Oracle®, you will need to unzip the file GS_DB_ORA.tar.gz. For DB2®, you will need to unzip the file GS_DB.tar.gz. The location for the databases are as follows.

<table>
<thead>
<tr>
<th>Databases</th>
<th>File Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>GS_DB_ORA\data</td>
</tr>
<tr>
<td>DB2</td>
<td>DB2\data</td>
</tr>
</tbody>
</table>

#### Microsoft SQL Server Databases and Files

<table>
<thead>
<tr>
<th>Database or schema description</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Outdoors sales</td>
<td>GOSALES.zip</td>
</tr>
<tr>
<td>Great Outdoors retailers</td>
<td>GOSALES.zip</td>
</tr>
<tr>
<td>Database or schema description</td>
<td>File name</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Great Outdoors sales data warehouse</td>
<td>GOSALESDW.zip</td>
</tr>
<tr>
<td>Great Outdoors market research</td>
<td>GOSALES.zip</td>
</tr>
<tr>
<td>Great Outdoors human resources</td>
<td>GOSALES.zip</td>
</tr>
</tbody>
</table>

**Oracle Databases and Files**

<table>
<thead>
<tr>
<th>Database or schema description</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Outdoors sales</td>
<td>GS_DB_ORA.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors retailers</td>
<td>GS_DB_ORA.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors sales data warehouse</td>
<td>GS_DB_ORA.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors market research</td>
<td>GS_DB_ORA.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors human resources</td>
<td>GS_DB_ORA.tar.gz</td>
</tr>
</tbody>
</table>

**DB2 Databases and Files**

<table>
<thead>
<tr>
<th>Database or schema description</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Outdoors sales</td>
<td>GS_DB.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors retailers</td>
<td>GS_DB.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors sales data warehouse</td>
<td>GS_DB.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors market research</td>
<td>GS_DB.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors human resources</td>
<td>GS_DB.tar.gz</td>
</tr>
</tbody>
</table>

When restoring the samples databases, ensure that you do the following:

- Give the restored databases the same names as the backup or export file names. The names are case-sensitive.
  - You use the correct username and password.
- Create users with select privileges for tables in multiple schemas.
Setup for the GO Data Warehouse packages specifies a single connection object and user signon. This requires a single user named GOSALES DW with the select privilege to tables in a single schema named GOSALES DW.

Setup for the GO Sales packages specifies a single connection object and user signon. This requires a single user named GOSALES with the select privilege to tables in four schemas: GOSALES, GOSALES HR, GOSALES MR, and GOSALES RT.

- Use the UTF-8 character set on the Microsoft Windows® operating system computer that is the Oracle or DB2 client to see reports in multiple languages.
  
  For DB2, you must set the DB2CODEPAGE environment variable to a value of 1208. For Oracle, you must set the NLS_LANG environment variable to a value that is specific to a region. For example, set NLS_LANG for Americas to American_America.UTF8.

- Have sufficient disk space available in the target location. Reserve 150MB for the GO Sales data (four schemas) and 200MB for the GO Data Warehouse data (one schema).

**Oracle Considerations**

To create foreign key constraints in tables that reference different schemas, you must run gs_or_modify.sql, found in the same folder as the .dmp files.

**Microsoft SQL Server Considerations**

If you restore the Microsoft SQL Server backup files, you must use Microsoft SQL Server 2000 or Microsoft SQL Server 2005. Ensure that TCP/IP connectivity is used for the Microsoft SQL Server.

**DB2 Considerations**

The data files for db2move and the scripts, to add constraints, are located in the data directory. The data directory is created when you unzip the GS_DB.tar.gz file.

If you use WinZip to extract the DB2 move file on Windows, ensure that the TAR file smart CR/LF conversion option is not selected.

After extracting the DB2 move file, restore the schemas to a database named GS_DB.

To add views, constraints, user privileges, and stored procedures to GS_DB, prepare and run the gs_db_modify files included with the samples in the following order:

- Update the user name and password at the top of the gs_db_modify.sql and save it.
- Execute gs_db_modify.bat

**Note:** If the script file attempts to create a stored procedure where the procedure does not exist an error is generated. This error does not affect the samples.

**Steps**

1. On the computer where IBM Cognos BI is installed, go to the sql server, oracle, or db2 directory located in c10_location/webcontent/samples/datasources.

2. If required, copy the backup files for the samples databases to your database backup directory.
To ensure the security and integrity of IBM Cognos BI, copy the files to a directory that is protected from unauthorized or inappropriate access.

3. Restore the samples databases using your database management tool.

   **Tips:**
   - For SQL backup files, restore the database from a device, and ensure that the restore locations are correct for the .ldf and .mdf database files. For more information, see the Microsoft SQL Server documentation or the IBM Cognos Knowledge Base on the IBM Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter/).
   - For DB2, when you create the GS_DB database, create a buffer pool with a page size of 16 KB and an associated tablespace.

4. For each database, create at least one user who has select permissions for all the tables in the restored databases.

You can now create the data source connections in the portal.

### Restore Backup Files for Sample Databases for DB2 Using Scripts

You can use scripts to restore backup files for sample databases for DB2®. To set up the sample database, you must extract the GS_DB.tar.gz file, customize a configuration file, and run the setup script.

**Prerequisites for installing the Great Outdoors sample database for DB2 on Linux, UNIX and Windows**

Before you can install the sample databases, you must verify or configure privileges.

1. Extract the GS_DB.tar.gz file and retain the original directory structure. If you use WinZip to extract the DB2 move file on Microsoft® Windows® operating system, ensure that the TAR file smart CR/LF conversion option is not selected.

2. On Linux® and UNIX® operating systems, modify the file permissions on the setupGSDB.sh file so that it is executable: chmod u+x setupGSDB.sh.

3. Ensure that the user ID used to set up the database has DBADM authority or the following authorities in DB2:
   - CREATETAB
   - CREATE_NOT_FENCED_ROUTINE
   - LOAD

**Optional: Editing the configuration file**

The configuration file contains the default configuration options that are used when creating the GOSALES data. The default configuration settings are.
<table>
<thead>
<tr>
<th>Configuration Setting</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOSALES_INST</td>
<td>GS_DB</td>
<td>Used to set the name or alias of the database.</td>
</tr>
<tr>
<td>GOSALES_CREATEDB</td>
<td></td>
<td>Optional: Causes an existing database with the same name to be dropped.</td>
</tr>
<tr>
<td>GOSALES_DB_TERRITORY</td>
<td>US</td>
<td>When creating a database this is the territory of the UTF-8 database that is created.</td>
</tr>
<tr>
<td>GOSALES_BP</td>
<td>GOSALES_BP</td>
<td>Optional: Enter the buffer pool and tablespace name, if these are to be created by the script.</td>
</tr>
<tr>
<td>GOSALES_TS</td>
<td>GOSALES_TS</td>
<td></td>
</tr>
<tr>
<td>GOSALES_GRANTEEES</td>
<td>GOSALES, DB2ADMIN</td>
<td>Enter the list of users, groups or PUBLIC that will have CONTROL permissions for the GOSALES, GOSALESHR, GOSALESMR and GOSALESRT schemas. This string needs to follow the syntax of the GRANT command.</td>
</tr>
<tr>
<td>GOSALESDW_GRANTEEES</td>
<td>GOSALESDW, DB2ADMIN</td>
<td>Enter the list of users, groups or PUBLIC that will have CONTROL permissions for the GOSALESDW schema.</td>
</tr>
<tr>
<td>GOSALES_DPF</td>
<td>N</td>
<td>Change to 'Y' if installing a database partitioned environment (DPF)</td>
</tr>
<tr>
<td>GOSALES_SCHEMA</td>
<td>GOSALES</td>
<td>Enter the names to be used for each schema.</td>
</tr>
<tr>
<td>GOSALESHR_SCHEMA</td>
<td>GOSALESHR</td>
<td></td>
</tr>
<tr>
<td>GOSALESMR_SCHEMA</td>
<td>GOSALESMR</td>
<td></td>
</tr>
<tr>
<td>GOSALESRT_SCHEMA</td>
<td>GOSALESRT</td>
<td></td>
</tr>
<tr>
<td>GOSALESDW_SCHEMA</td>
<td>GOSALESDW</td>
<td></td>
</tr>
</tbody>
</table>

You can customize the sample configuration file to use settings other than the default values.

The setup script creates the GS_DB database, table spaces, tables, views, grants privileges, and modifies the schema names for the sample database. In most situations, you can accept the default
options. If you want to change the database name or modify the users or groups that have permissions on the data, you must update the GOSalesConfig configuration file.

Edit the configuration file by using a text editor.

TIP: If you edit UNIX shell scripts in a Windows environment, ensure that you preserve the UNIX line endings.

<table>
<thead>
<tr>
<th>File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOSalesConfig.bat</td>
<td>Configuration file on Windows</td>
</tr>
<tr>
<td>GOSalesConfig.sh</td>
<td>Configuration file on UNIX</td>
</tr>
</tbody>
</table>

By default, the GS_DB database name is used and permissions are granted to the DB2ADMIN (Linux, UNIX, Windows) and GOSALES users.

**Running the setup script in interactive mode**

In interactive mode, the setupGSDB script prompts you to confirm or provide configuration information for the GS_DB database installation. You can accept the default settings or provide different settings to replace the defaults.

- Run the setup script for your operating system.

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft® Windows</td>
<td>In a DB2 command window, change to the GS_DB/win directory and run the setupGSDB.bat script.</td>
</tr>
<tr>
<td>UNIX</td>
<td>From a shell prompt, source the db2profile change to the GS_DB/unix directory, and run the setupGSDB.sh script.</td>
</tr>
</tbody>
</table>

- Press Enter to proceed. The script displays a summary of your choices before you commit to changes to your environment. If you approve the choices, press Enter and the script makes the changes. For example:

Please confirm the following settings:
Database Name: GS_DB
Drop and Recreate Database: Y
DPF environment: N
Create a 16k Bufferpool named: GOSALES_BP
Create a 16k Tablespace named: GOSALES_TS
GOSALES Grant users/groups: GOSALES, DB2ADMIN
GOSALESDW Grant users/groups: GOSALESDW, DB2ADMIN
Administration User Name: db2admin
Import the sample data to the following schemas:
GOSALES
GOSALESHR
GOSALESMR
GOSALESRT
The GS_DB database is set up.

Running the setup script with command line options

The setupGSDB script lets you provide information on the command line to reduce the number of prompts from the script.

From a command line, run the script for your operating system.

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>setupGSDB.bat</td>
</tr>
<tr>
<td>UNIX</td>
<td>setupGSDB.sh</td>
</tr>
</tbody>
</table>

You can run the setupGSDB script with the following options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-createdb</td>
<td>Creates the database. This option drops any existing database with the same name. It creates the required buffer pool and table space.</td>
</tr>
<tr>
<td>-database database name</td>
<td>Specifies the name of the database. This value overrides the default value of GS_DB.</td>
</tr>
<tr>
<td>-userid administration_user_ID</td>
<td>Specifies the name of the DB2 administrator user ID that is used to create the database.</td>
</tr>
<tr>
<td>-password administration_user_ID</td>
<td>Specifies the password for the DB2 administrator user ID.</td>
</tr>
<tr>
<td>-noprompt</td>
<td>Indicates that no prompt will display. This option runs the script in silent mode. Any missing information causes the script to fail. You will not be prompted for any confirmations.</td>
</tr>
</tbody>
</table>

Example 1: You are a DB2 administrator and want to create the default GS_DB database on the local node. You run the following command:

```
setupGSDB -createdb -noprompt
```

Example 2: You want to create the tables in an existing database named GSDBY, and you want to use the administrator user ID db2admin. Run the following command:

```
setupGSDB -database GSDBY -userid db2admin
```
The script prompts you for the password when it connects to GSDBY. The script will replace any tables that already exist in the GSDBY database, unless you choose to drop the database.

Optional: Installing the sample data on a remote server

If the GS_DB sample database is installed on a remote server in your environment, you can link to it by cataloging the remote database on your local computer and then running the setup script locally.

- If the sample database does not yet exist on the remote server, create it with the CREATE DATABASE command. The database requires a UTF-8 codeset and a default table space with a pagesize of 16 KB or larger. For example, on the remote server, create the database by running the following command:
  ```sql
  CREATE DATABASE GS_DB USING CODESET UTF-8 TERRITORY US PAGESIZE 16k
  ```

- On your local computer, catalog the remote database:
  ```bash
  db2 catalog tcpip node nodename remote ipaddr server port_number
  db2 catalog database GS_DB as GS_DB at node nodename
  ```

- On your local computer, run the script:
  ```bash
  setupGSDB -database GS_DB -userid administration_user_ID
  ```

You are prompted for a password to connect to the database.

Restore Backup Files for Sample Databases for Oracle Using Scripts

You can use scripts to restore backup files for sample databases for Oracle. To set up the sample database, you must extract the file GS_DB_ORA.tar.gz, customize a configuration file, and run the setup script.

Prerequisites for installing the Great Outdoors sample database for Oracle

Before you can install the sample databases, you must verify or configure privileges.

- Extract the GS_DB_ORA.tar.gz file and retain the original directory structure.
- On Linux® and UNIX® operating systems, modify the file permissions on the setupGSDB.sh file so that it is executable: `chmod u+x setupGSDB.sh`.
- Ensure that the user ID used to set up the Oracle database has authority to create users and run the import utility.

Editing the configuration file: Optional

The configuration file contains the default configuration options that are used when creating the GOSALES data. The default configuration settings are.
<table>
<thead>
<tr>
<th>Configuration Setting</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOSALES_IMP_CMD</td>
<td>imp</td>
<td>If necessary can be modified to specify the complete path to the correct version of the import utility.</td>
</tr>
<tr>
<td>GOSALES_INST</td>
<td></td>
<td>Oracle host string.</td>
</tr>
<tr>
<td>GOSALES_TS</td>
<td>GOSALES_TS</td>
<td>If users are created by scripts, used to enter the tablespace name to assign to users.</td>
</tr>
<tr>
<td>GOSALES_CREATE_TS</td>
<td></td>
<td>Optional: Used to create the default tablespace for users.</td>
</tr>
<tr>
<td>GOSALES_TEMP_TS</td>
<td></td>
<td>If users are created by scripts, used to name a temporary tablespace to assign to users. Leave blank to use the default temporary tablespace.</td>
</tr>
<tr>
<td>GOSALES_SCHEMA</td>
<td>GOSALES</td>
<td>Used to enter the username and password for the GOSALES user. You will be prompted for a password if not entered.</td>
</tr>
<tr>
<td>GOSALES_SCHEMA_PW</td>
<td>GOSALESPW</td>
<td></td>
</tr>
<tr>
<td>GOSALESHR_SCHEMA</td>
<td>GOSALESHR</td>
<td>Used to enter the username and password for the GOSALESHR user. You will be prompted for a password if not entered.</td>
</tr>
<tr>
<td>GOSALESHR_SCHEMA_PW</td>
<td>GOSALESHRPW</td>
<td></td>
</tr>
<tr>
<td>GOSALESMR_SCHEMA</td>
<td>GOSALESMR</td>
<td>Used to enter the username and password for the GOSALESMR user. You will be prompted for a password if not entered.</td>
</tr>
<tr>
<td>GOSALESMR_SCHEMA_PW</td>
<td>GOSALESMRPW</td>
<td></td>
</tr>
<tr>
<td>GOSALESERT_SCHEMA</td>
<td>GOSALESRT</td>
<td>Used to enter the username and password for the GOSALESRT user. You will be prompted for a password if not entered.</td>
</tr>
<tr>
<td>GOSALESERT_SCHEMA_PW</td>
<td>GOSALESRTPW</td>
<td></td>
</tr>
<tr>
<td>GOSALESDW_SCHEMA</td>
<td>GOSALESDW</td>
<td>Used to enter the username and password for the GOSALESDW user. You will be prompted for a password if not entered.</td>
</tr>
<tr>
<td>GOSALESDW_SCHEMA_PW</td>
<td>GOSALESDWPW</td>
<td></td>
</tr>
</tbody>
</table>
You can customize the sample configuration file to use settings other than the default values. The setup script creates the users and schemas specified in the configuration file. In most situations, you can accept the default options. If you want to change the schema names or modify the users or groups that have permissions on the data, you must update the GOSalesConfig configuration file.

Edit the configuration file by using a text editor.

**Running the setup script in interactive mode**

In interactive mode, the setupGSDB script prompts you to confirm or provide configuration information for the sample database installation. You can accept the default settings or provide different settings to replace the defaults.

- Run the setup script for your operating system.
In a DOS command window, change to the `GS_DB_ORA\win` directory and run the `setupGSDB.bat` script.

From a shell prompt, change to the `GS_DB_ORA\unix` directory, and run the `setupGSDB.sh` script.

- Press Enter to proceed. The script will run the sample database setup and display a summary of your choices before you commit to changes to your environment. If you approve the choices, press Enter and the script makes the changes. For example:

- Please confirm the following settings:

  - Instance Name is ORAINST123
  - Create the following user accounts and import the data:
    - GOSALES
    - GOSALESHR
    - GOSALESMR
    - GOSLAESRT
    - GOSALESDW
  - Default tablespace is GOSALES_TS
  - Temporary tablespace is DEFAULT
  - Administration User name is sys
  - WARNING: If the users already exist they will be dropped
  - Create a Tablespace named GOSALES_TS
  - Grant select on the GOSALES schemas to GOSALES
  - Grant select on the GOSALESDW schema to GOSALESDW

  Continue creating the sample data with these settings? (Y/N) Default=Y:

**TIP:** If you edit UNIX shell scripts in a Windows environment, ensure that you preserve the UNIX line endings.

**Running the setup script with command line options**

The `setupGSDB` script lets you provide information on the command line to reduce the number of prompts from the script.

From a command line, run the script for your operating system.

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>setupGSDB.bat</td>
</tr>
<tr>
<td>UNIX</td>
<td>setupGSDB.sh</td>
</tr>
</tbody>
</table>

You can run the `setupGSDB` script with the following options:
Option | Description
---|---
-createdb | Creates the users. This option drops any existing users with the same name.
-database database name | Specifies the name of the Oracle instance. This value overrides the default value specified in the configuration file.
-userid administration_user_ID | Specifies the name of the Oracle administrator user ID that is used to create the users.
-password administration_user_ID | Specifies the password for the Oracle administrator user ID.
-noprompt | Indicates that no prompt will display. This option runs the script in silent mode. Any missing information causes the script to fail. You will not be prompted for any confirmations.

Example 1: You are an Oracle administrator and want to create the default sample database schemas. You run the following command:

```
setupGSDB -createDB -noprompt
```

Example 2: You want to create the tables in the existing schemas specified in the configuration file, and you want to use the administrator user ID sys. Run the following command:

```
setupGSDB -YourOracleInstance -userid sys -sysdba
```

The script prompts you for the password when it connects to the Oracle instance. The script deletes any existing tables or views in the specified schemas and replaces them.

Create Data Source Connections to the Samples Databases

You must create data source connections to the samples databases that you restored. IBM® Cognos® Business Intelligence uses this information to connect to the samples databases and run the sample reports or use the sample package.

The DB2® database name that you type must use uppercase letters. Also, in Framework Manager, the schema names that you type for the DB2 data sources must use uppercase letters.

Before you create the data source connections, you must restore the backup files for the samples databases. Also, ensure that the IBM Cognos BI service is running.

To create data sources, you must have execute permissions for the Data Source Connections secured feature and traverse permissions for the Administration secured function. You must have write permissions for the Cognos namespace.

If you have restored the sample databases on a different computer than where you have installed the IBM Cognos BI Application Tier Components, you may have to install the database client to...
access the sample databases. For more information, see "Set Up Database Connectivity for the Reporting Databases" in the Installation and Configuration Guide.

**Steps**

1. Open IBM Cognos Administration by connecting to the IBM Cognos BI portal and clicking **Administer IBM Cognos Content** on the **Welcome** page.

2. Click the **Configuration** tab.

3. Click the new data source icon ![icon](image.png).

4. In the **Name** box, type **great_outdoors_sales** and then click **Next**.

5. In the connection page, click the type of database that you restored and want to connect to, select an isolation level, and then click **Next**.

   The connection string page for the selected database appears.

   **Tip:** The user specified in the great_outdoors_sales data source must have select privileges on the tables in each of the GOSALES, GOSALESRT, GOSALESMR, AND GOSALESHR schemas (p. 74).

6. Do one of the following:

   - If you restored the samples databases in Microsoft® SQL Server, in the **Server Name** box, type the name of the server where the restored databases are located. In the **Database name** box, type **GOSALES**.

     IBM Cognos BI samples require TCP/IP connectivity with Microsoft SQL Server. Ensure the SQL Server Security is set to SQL Server and Microsoft Windows® operating system, instead of Windows Only. The samples use SQL Server security for authentication.

   - If you restored the samples databases in Oracle, in the **SQL*Net connect string** box, type the Oracle connection string.

   - If you restored the samples database in DB2, in the **DB2 database name** box, type **GS_DB** using uppercase letters. In the **DB2 connect string** box, type the DB2 connection string.

   - If you deployed the sample cube to IBM InfoSphere™ Warehouse Cubing Services, in the **Name** box, type **sales_and_marketing_cs**. On the **Specify the connection** page for the **Type** box, select IBM InfoSphere Warehouse cubing services (XMLA). On the **Specify the connection string** page for the **Server URL** box, type the name of the server and the XMLA port number for the cube, followed by /IBMXmlAnalysis. For example, myserver:1999/IBMXmlAnalysis.

7. Under **Signons**, select the both **Password** and **Create a signon that the Everyone group can use** check boxes, type the user ID and password for the user that you created when you restored the databases, and then click **Finish**.

   **Tip:** To test whether the parameters are correct, click **Test the connection**....

8. Click **Finish**.
9. Repeat steps 4 to 9 for the GOSALESDW samples database or schema, and type great_outdoors_warehouse in step 5.

10. If the GOSALESW model will be used by modelers in IBM Cognos Transformer, the connection string must be manually added to the cs7g.ini file.

   For more information, see the Installation and Configuration Guide.

The Great Outdoors data source connections appear as entries in Data Source Connections.
You can now import the samples unless there is a syntax error in the connection string or an incorrect parameter.

Set Up Microsoft Analysis Services Cube Samples

IBM® Cognos® Connection or Framework Manager provides sample cubes for Microsoft® Analysis Services (MSAS).

For finance data, use the GO Finance Fact cube derived from the GOSALESDW database. This cube contains year-to-date and monthly financial data for all accounts so that you can create financial statements in Analysis Studio, Query Studio, and Report Studio. The data is in actual US dollars submissions for 2004, 2005, 2006, or 2007 (7 months actual data only).

The MSAS2000 version of the finance cube and database is in the GOFinanceFact_XX.cab file. The MSAS2005 version is in the GOFinanceFact_XX.abf file. XX represents the language. For example, XX is replaced with EN which indicates English. The MSAS2008 version of cubes also exists, with report content only for 2000 and 2005 versions.

For sales data, use the GOSalesFact cube derived from the GOSalesFact_XX Analysis Services database, based on the GOSALESDW SQLSERVER Database. The cube contains measures such as unit cost, unit price, quantity, and gross profit. Dimensions include Time, Product, and Retailers.

The MSAS2000 version of the sales cube and database is archived in the GOSalesFact_XX.cab. The MSAS2005 version is in the GOSalesFact_XX.abf file.

The backup files are located in the c10_location/webcontent/samples/datasources/cubes/MSAS directory. The files must be restored to a Microsoft SQL Server database running the applicable Microsoft Analysis Services (p. 74). and hosting the GOSALESDW database.

Note: Both Microsoft XML 6.0 Parser and Microsoft SQL 2005 Analysis Services 9.00 OLEDB Provider must be installed on the local client to establish data source connections to MSAS cubes.

Steps

1. On the computer where IBM Cognos Business Intelligence is installed, go to the c10_location/webcontent/samples/datasources/cubes/MSAS/en directory.

2. Copy the GOSALESDW.cab and GOSALESDW.abf files to a directory that you can access from the Analysis Manager console in the Analysis Servers of Microsoft SQL Server.

3. Use the Microsoft Analysis Services Analysis Manager to restore the database from the GOSALESDW.cab and GOSALESDW.abf files.

You can now create the data source connections to these MSAS datasources in Cognos Administration by referencing either the GOSalesFact_XX or GOFinanceFact_XX cubes you restored. (p. 91).
Chapter 4: Samples

Set Up the InfoSphere Warehouse Cubing Services Sample

Before you set up the InfoSphere™ Warehouse Cubing Services samples, you must restore the DB2® sample database.

Steps to Use the IBM InfoSphere Warehouse Cubing Services File

1. On the computer where IBM® Cognos® software is installed, go to the db2 directory located in c10_location/webcontent/samples/datasources/cubes/CubingServices/EN.
2. If required, copy the csgodw.xml file to your working directory.
3. In IBM InfoSphere Warehouse Design Studio, import the csgodw.xml metadata file into a data model based on the DB2 GS_DW schema.
4. Deploy the CSGODW cube to the DB2 GS_DW schema.
5. Use the IBM InfoSphere Warehouse Administration Console to add the new cube to a cube server, and run it.

Note the XMLA port number for the cube, as this number is required for the data source connection.

You can now create the data source connections in the IBM Cognos Connection portal.

Set Up the TM1 Samples

To use the TM1® samples, you must do the following:

- set up the servers
- create a shortcut to the configuration file
- import the deployment files
- create the data source connections

To set up the TM1® Great Outdoors Server samples, unzip and install the greatoutdoors.zip files. To set up the TM1 FinanceFact Server, unzip and install the financefact.zip files. The default installation path for these files is: C:\Program Files\IBM\Cognos\c10\webcontent\samples\datasources\cubes\tm1.

Steps

1. Ensure that you have the TM1 software installed and the server started.
2. Create a desktop shortcut to the preconfigured location of the TM1s.cfg configuration file. The default location is: C:\Program Files\IBM\Cognos\TM1\bin\tm1s.exe " -z " C:\ProgramFiles\IBM\Cognos\c10\webcontent\samples\datasources\cubes\tm1\greatoutdoors."
3. If the location of your configuration file is different, open the configuration file in a text editor and modify it. An example of a basic configuration file is as follows.

   Security Mode
- If IntegratedSecurity Mode is set to 1. All clients must provide a database username and password.

- If IntegratedSecurity Mode is set to 2. The clients will have the choice to connect by providing a database username and password or use the single-login mechanism for authentication.

- If IntegratedSecurity Mode is set to 3. All clients must use the single-login mechanism for authentication.

**TM1S**

DataBaseDirectory=C:\ProgramFiles\IBM\Cognos\c10\webcontent\samples\datasources\cubes\tm1\greatoutdoors

LoggingDirectory=C:\ProgramFiles\IBM\Cognos\c10\webcontent\samples\datasources\tm1\greatoutdoors\LogFiles

ServerName=GreatOutdoors

PortNumber=33339

AdminHost=localhost

Language=eng

Protocol=tcp

NetworkFrame=

SaveTime=

DownTime=

RuleTraceOn=

For more information about setting up the configuration file and its parameters, see the *TM1 Operations Guide*.

4. To start the server, launch the desktop shortcut to TM1s.cfg.

5. To import the report deployment files, Sales_plan.zip, Sales_plan_TC.zip, and TM1_FinanceFact.zip, use IBM Cognos Administration.

The Financefact and Salesplan packages are created. These packages connect to the TM1_FinanceFact and TM1_SalesPlan data sources which you must now create in Cognos Administration.

The deployment packages refer to the following data sources.

**Tip:** For Traditional Chinese, use the x_TC packages.

<table>
<thead>
<tr>
<th>Application</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Outdoors</td>
<td>TM1_SalesPlan</td>
</tr>
<tr>
<td></td>
<td>TM1_SalesPlan_TC</td>
</tr>
</tbody>
</table>
The deployment packages refer to the following Report Studio reports.

<table>
<thead>
<tr>
<th>Packages</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>GreatOutdoors</td>
<td>Best Selling Products</td>
</tr>
<tr>
<td></td>
<td>Channel Pricing Comparison</td>
</tr>
<tr>
<td></td>
<td>Forecast Revenue by Region: Golf Shops</td>
</tr>
<tr>
<td></td>
<td>Golf Shop Sales Forecast - Americas versus Asia Pacific</td>
</tr>
<tr>
<td></td>
<td>Gross Margin Forecast</td>
</tr>
<tr>
<td>FinanceFact</td>
<td>Balance Sheet - Americas</td>
</tr>
<tr>
<td></td>
<td>Balance Sheet - Central Europe</td>
</tr>
<tr>
<td></td>
<td>Income Statement</td>
</tr>
<tr>
<td></td>
<td>Source and Application of Funds (Central Europe)</td>
</tr>
</tbody>
</table>

**Set Up the Essbase Cube Sample**

To set up the Essbase cube sample, you must have Oracle Essbase and Essbase Integration Services Console installed.

Alternatively, you can set up the smaller Essbase cube GODBReduced.zip which is a filtered version of the full version, GODWENU. To set up the small version, unzip GODBReduced.zip, load the OTL and txt file in the Essbase environment, and perform the same steps shown below.

**Steps**

1. Go to the `c10_location\webcontent\samples\datasources\cubes\Essbase\Outlines_and_Raw_Data` directory.
   
   This directory contains zip files for the different languages, such as EN.zip or JA.zip for English and Japanese, respectively.
2. Unzip the file for your language.
   Each zip file contains the following two files:
   - `languageU_Data.txt`, such as ENU_Data.txt or JAU_Data.txt.
   - `GODWlanguageU.otl`, such as GODWENU.otl or GODWJAU.otl.

3. Using block storage in Essbase, create a Unicode application.

4. Within the application, create a new database.
   You can use `GODWlanguageU`, such as GODWENU or GODWJAU, as your database name, or use the name of your choice.

5. Copy and paste the `GODWlanguageU.otl` file in your database directory.

6. If the database name specified in step 4 is different than `GODWlanguageU`, rename the `GODWlanguageU.otl` file to match the database name that you created.
   Confirm that you want to overwrite the `.otl` file.

7. In **Essbase Administration Services** console, open your database outline and save it.
   Confirm that you want to save the outline even if it was not changed.

8. Copy the `languageU_Data.txt` file and paste it in the same directory as the `.otl` file.

9. In **Essbase Administration Services** console, right-click the database you created and select **Load Data**.

10. Browse to the `languageU_Data.txt` file in your database directory, select the file, and click **OK**.

11. After the data loads successfully, right-click the database and select **Execute Calculation**.

12. Select the default calculation, and click **OK**.
    The calculation process may take up to 5 hours, depending on the computer where Essbase OLAP Server is installed.

You can now create a data source connection to the cube.

**Create Data Source Connections to OLAP Data Sources**

IBM® Cognos® Business Intelligence provides the following OLAP samples:

- GO Sales Fact and GO Finance Fact Microsoft® Analysis Services cubes
- Great Outdoors Company cubes which includes sales_and_marketing, employee_expenses, go_accessories, go_americas, go_asia_pacific, and great_outdoors_sales_en.
- Great Outdoors DB2 cube

You must create data source connections to the cubes to use the samples. You must set up the Microsoft Analysis Services cube samples or set up the Essbase cube sample, if you are using them, before creating data source connections.
You can increase the read cache size to improve query performance, although this setting has no effect on the initial time required to open a cube.

Samples are accessible to everyone by default. To create customized data sources, you must have execute permissions for the Data Source Connections secured feature, and traverse permissions for the Administration secured function. You must have write permissions for the Cognos namespace.

Steps for PowerCubes

1. Open IBM Cognos Administration by connecting to the IBM Cognos BI portal and clicking Administer IBM Cognos Content on the Welcome page.

2. Click the Configuration tab.

3. Click the new data source button.
   
   Note: You must add a data source connection for each cube.

4. To create a data source connection for the Sales and Marketing cube, type sales_and_marketing in the Name box, and then click Next.

5. In the connection page, under Type click IBM Cognos PowerCube, and then click Next.
   
   The connection string page for the selected database appears.

6. Optional: In the Read cache size (MB) box, type the cache size of the cube in megabytes.
   
   If you leave this field blank or type 0, IBM Cognos Connection uses the default value in the ppds_cfg.xml file in the configuration folder.

7. In the Windows location box, type the location and name of the sales_and_marketing.mdc file for the data source connection. For example, type c10_location/webcontent/samples/datasources/cubes/PowerCubes/En/Sales_and_Marketing.mdc
   
   You can define a Microsoft Windows® operating system path or a UNIX® operating system path.

   If you define a UNIX® path and you plan to use Framework Manager, you must also define the Windows path and ensure that the cube is also available in the Windows® location. Framework Manager can access cubes only from Windows locations.

8. To test whether the parameters are correct, do the following:
   
   - Click Test the connection.
   
   - Click Test.
   
   - When the test finishes, click Close twice.

9. Click Finish.
You can now import the sample package for the PowerCube to use this data source or you can create your own package using cube.

**Steps for Oracle Essbase Cubes**
1. Open Framework Manager.
2. Click Create a new project.
3. In the New Project page, specify a name and location for the project.
4. In the Select Language page, click the design language for the project.
5. Click OK.
   The Metadata wizard appears.
6. In the connection page, under type click Oracle Essbase/IBM DB2 OLAP Server, select an isolation level, and then click Next.
   The connection string page for the selected database appears.
7. In the Server name box, type the name of the server.
8. To test whether the parameters are correct, click Test.
9. Click Finish.
   To use this data source, you must create a package using this data source in Framework Manager, and then publish the package.

**Steps for Microsoft Analysis Service Cubes**
1. Open IBM Cognos Administration by connecting to the IBM Cognos BI portal and clicking Administer IBM Cognos Content on the Welcome page.
2. On the Configuration tab, click New Data Source.
3. In the Name box, type the name of the data source connection, and then click Next.
   - For the GOFinanceFact cube, type GOFinanceFact_XX_MSAS2005.
   - For the GOSalesFact cube, type GOSalesFact_XX_MSAS2005.
4. In the Specify Connection page of the New Datasource Wizard, click Microsoft Analysis Services 2005 or click Microsoft Analysis Services (via ODBO) as appropriate to the cube you are accessing.
5. Click Next.
6. In the Server Name box, type the name of the server where the restored databases are located. Back slashes are not required.
7. Under Signon, select the Password check box and then select the Create a signon that the Everyone group can use check box. Type the user ID and password for the MSAS database. For MSAS2005, this is a network login.
8. Click **Test the connection**, and then click the **Test** button. Click **Close**.

9. Click **Finish**. You are now prompted to create a package.

   Alternatively, you can deploy an existing package from a sample deployment archive. The names of the deployment archives match the datasource connection names specified in step 4 and contain sample reports that work with the associated cubes.

   In Content Administration on the Configuration tab in IBM Cognos Administration, click **New Import**. The New Import Wizard prompts you to select a deployment archive. When you select a deployment archive, it is important to click **Edit** and specify a target name for the package to prevent an existing package from being overwritten.

10. To create a package, check **Create a Package** and then click **OK**.

11. Specify a package name and then click **OK**.

   - For the GO Finance Fact cube, type GOFinanceFact_XX_MSAS2005.
   - For the GO Sales Fact cube, type GOSalesFact_XX_MSAS2005.

12. Specify the Analysis Services database you restored either GOFinanceFact_XX or GoSalesFact_XX:

   - For either the GOFinanceFact cube or the GOSalesFact cubes, type GOSALESDW.
   - For the GO Sales Fact cube, type GO Sales Fact.

13. Click the cube applicable to the database.

14. Click **Finish**.

### Set Up the Metric Studio Sample

To set up the Metric Studio sample, do the following:

- Create a metric store named GOMETRIC.
  
  For more information about creating a metric store, see the IBM® Cognos® Business Intelligence Installation and Configuration Guide.

- Create a new metric package named GO Metrics that uses the data source go_metrics.
  
  When prompted by the wizard, select the standard Gregorian calendar and accept the defaults for Years, Quarters, and Months. Select January 1, 2004 as the start date for a period that includes the current year. For example, if it is the year 2008, use a period of at least 5 years.
  
  For more information, see "Create a Metric Package" (p. 483).

- Set the import source.

- Import the metric data and files into the metric store.

### Steps to Set the Import Source

1. Copy all text files from the appropriate folder to the folder `c10_location/deployment/cmm:`
For Microsoft® SQL Server or Oracle, copy from $c10_location/webcontent/samples/datasources/metricsdata/GOMetrics_Unicode

For DB2®, copy from $c10_location/webcontent/samples/datasources/metricsdata/GOMetrics_UTF8

For all databases, for English instead of the multilingual Unicode samples, copy from $c10_location/webcontent/samples/datasources/metricsdata/GOMetrics.

**Tip:** You may need to create the cmm folder.

2. In Public Folders, click **GO Metrics**.

3. In Metric Studio, in the **Tools** list, click **Import Sources**.

4. Click the **Set Properties** icon in the **Actions** column next to the Default Import Source.

5. Under **Metric Deployment Location**, click cmm folder. This is the default deployment location.

6. Click **Include sub-directories**.

7. In the **File format** box, click **8.4.2**.

8. Under **Character Set Encoding**, select the appropriate encoding and click **OK**.
   - For Microsoft SQL Server or Oracle, select **Unicode (UTF-16)**
   - For DB2, select **Unicode (UTF-8)**
   - For **GO Metrics** data set, select Western European (Windows-1252), or leave the data set empty by selecting **Other**.

You can now use the GO Metrics package in Metric Studio.

### Steps to Import Metric Data and Files into the Metric Store

1. Choose whether to import the files into the metric store using IBM® Cognos® Connection or Metric Studio:
   - To use IBM Cognos Connection, in **Public Folders** or **My Folders**, open the GO Metrics package by clicking the view metric package contents icon in the **Actions** column. Click **Metric Maintenance**.
   - To use Metric Studio, in Metric Studio, in the **Tools** list, click **Metric Maintenance**.

2. Click the **Import and transfer data from files into metric store** metric task.

   **Tip:** If an error occurs, click **Clear staging area rejected data logs**, **Clear metric history data only**, and **Clear metric history and calendar data**.

   **Tip:** You can also clear all existing audit log data from the metric data store by clicking **Clear audit history**. For more information, see "Clear Audit History" (p. 487).

   **Tip:** You can also clear all existing audit log data from the metric data store by clicking **Clear audit history**. For more information, see the topic about clearing audit history in the *Administration and Security Guide*. 
You can now use the GO Metrics package in Metric Studio.

**Import the Samples**

To use the sample package and other content, you must import them from the sample deployment archive.

Before you import the IBM_Cognos_Samples.zip, IBM_Cognos_Metrics.zip, IBM_Cognos_Mobile.zip, IBM_Cognos_Office.zip, IBM_Cognos_Audit.zip, IBM_Cognos_Statistics.zip, IBM_Cognos_csgodw.zip or IBM_Cognos_DrillThroughSamples.zip deployment archives, you must restore the databases (p. 74). You must also create data source connections to the samples databases (p. 85). Every deployment requires a data source connection in order to run reports.

Before you import the IBM_Cognos_PowerCube.zip deployment archive, you must create a database connection to the appropriate PowerCube and select the language that you want to use. The language that you select must be supported by your locale.

For more information about locales, see the IBM Cognos® Business Intelligence *Installation and Configuration Guide*.

**Steps**

1. Copy the zip file from the c10_location/webcontent/samples/content directory to the directory where your deployment archives are saved.
   
   The default location is c10_location/deployment. The location is set in the configuration tool. For information about changing the location, see the configuration tool online help.

2. Open IBM Cognos Administration by connecting to the IBM Cognos BI portal and clicking **Administer IBM Cognos Content** on the Welcome page.

3. On the **Configuration** tab, click **Content Administration**.

   **Note:** To access this area in IBM Cognos Administration, you must have the required permissions for the **Administration tasks** secured feature.

4. On the toolbar, click the **New Import** button.

   The **New Import** wizard appears.

5. In the **Deployment Archive** box select the archive: IBM_Cognos_Samples, IBM_Cognos_PowerCube, IBM_Cognos_Metrics, IBM_Cognos_DrillThroughSamples, IBM_Cognos_Audit, IBM_Cognos_Mobile, IBM_Cognos_csgodw or IBM_Cognos_Office.

6. Click **Next**.

7. Type a unique name and an optional description and screen tip for the deployment archive, select the folder where you want to save it, and then click **Next**.

8. In the **Public Folders Content** box, select the folders that you want to import.

   The IBM_Cognos_Samples deployment archive has a single folder named Samples with subfolders: Models and Sample Template. The Models folder contains the following packages or folders:
- GO Data Warehouse (analysis), GO Data Warehouse (query), GO Sales (analysis), GO Sales (query).

- Dashboard Folder, Dashboard Objects, Business Insight Samples, Interactive Samples

Note: The Business Insight Advanced folder from the GO Data Warehouse (analysis) package contains reports used for external data.

The IBM_Cognos_PowerCube deployment archive has packages or folders for the following languages:

- English - Sales and Marketing (cube)
- French - localized packages
- German - localized packages
- Japanese - localized packages
- Simplified Chinese - localized packages

The IBM_Cognos_Metrics deployment archive has the following packages or folders:

- GO Metrics

The IBM_Cognos_Mobile deployment contains:

- Sales and Marketing (cube) folder in five languages: English, French, German, Japanese and Chinese

For the IBM_Cognos_Mobile deployment archive, you must set up a data source connection for the following data source:

- the Sales and Marketing cube. A separate connection is required for each language. For more information, see "Create Data Source Connections to OLAP Data Sources" (p. 91)

The IBM_Cognos_Office deployment contains:

- GO Data Warehouse (analysis), GO Data Warehouse (query), GO Sales (analysis) and Sales and Marketing cube packages

The IBM_Cognos_DrillThroughSamples deployment archive has the following packages and folders:

- Sales and Marketing (cube) package in five languages: English, French, German, Japanese, and Chinese
- GO Data Warehouse (analysis) and GO Data Warehouse (query) package

For the IBM_Cognos_DrillThroughSamples deployment archive, you must set up data source connections for the following data sources:

- the sales and marketing cube. A separate connection is required for each language. For more information, see "Create Data Source Connections to OLAP Data Sources" (p. 91)
- the great_outdoors_sales. The database name is GOSALES. For more information, see "Create Data Source Connections to the Samples Databases" (p. 85).
the great_outdoors_warehouse. The database name is GOSLAESDW. For more information, see "Create Data Source Connections to the Samples Databases" (p. 85).

9. Select the options you want, along with your conflict resolution choice for options that you select, and then click Next.

10. In the Specify the general options page, select whether to include access permissions and references to external namespaces, and who should own the entries after they are imported.

11. Click Next.

The summary information appears.

12. Review the summary information and click Next.

13. Select the action that you want:

- To run once now or later, click Save and run once. Click Finish, specify the time and date for the run, then click Run. Review the run time and click OK.

- To schedule at a recurring time, click Save and schedule. Click Finish, and then select frequency and start and end dates. Click OK.

  Tip: To temporarily disable the schedule, select the Disable the schedule check box.

- To save without scheduling or running, click Save only and click Finish.

14. When the import is submitted, click Finish.

You can now use the sample packages to create reports and analyses in Report Studio, Query Studio, and Analysis Studio, view extracts in Metric Designer, or create agents in Event Studio. You can also run the sample reports that are available on the Public Folders tab in the portal.

**Sample Database Models**

The following sample models provide information for the fictional company, the Great Outdoors and are provided with IBM® Cognos® Business Intelligence:

- great_outdoors_sales, which refers to the samples database GOSALES
- great_outdoors_warehouse, which refers to the database GOSALESDW
- gosales_scriptplayer, which refers to the samples databases GOSALES

You can use sample database models on different platforms. For information about moving models from one platform to another, see the Framework Manager User Guide.

**Note:** Transformer uses some of the reports in the GO Data warehouse (query) package as source data for various cubes. These reports are meant to be simple list reports with no formatting. The description information for the reports indicates if the report was developed to be source data for Transformer.
**GO Sales Model**
This model contains sales analysis information for the fictional company, The Great Outdoors. It also has the query items required by the Event Studio samples. The model accesses three schemas and has two packages. One package is based on the dimensional view and the other is based on the query (relational) view.

**GO Data Warehouse Model**
This model contains financial, human resources, and sales and marketing information for the fictional company, The Great Outdoors. The model accesses a dimensional relational data source. The model has two packages. One package is based on the dimensional view, the other is based on the query (relational) view.

**GO Sales Scriptplayer**
These files can be used to run the action logs in sequence. This action generates a model named gosales_scriptplayer, and publishes a package to the content store.

**Example - Running the Sample ELM Returns Agent Against Changed Data**
You can change data in the GOSALES database if an Event Studio user wants to test the sample agent ELM Returns Agent. The Event Studio user can then run the sample agent twice and detect a new event. For more information, see the Event Studio User Guide.

Running the sample agent against changed data involves the following steps:

- The Event Studio user runs the sample agent against the default data and then asks you to change the data.
- You simulate the occurrence of some initial events and then ask the Event Studio user to run the sample agent a second time.
- The Event Studio user runs the sample agent against the changed data. The Event Studio user informs you when the agent has completed running.
- You simulate the passage of time and the resolution of some events and then ask the Event Studio user to run the sample agent a third time.
- The Event Studio user runs the sample agent for the final time. The Event Studio user informs you when the agent has completed running.
- You modify the data so that the ELM Returns Agent detects no events.

**Example - Simulate the Occurrence of Initial Events**
Run part of the Event_Studio_ELM_Agent_Modify_GOSALES.sql script to simulate the following data changes:

- change the date to the current date
- change the follow-up code to -1 in four records.
A code of -1 indicates that follow-up is required.

Steps
1. In SQL Query Analyzer, from the File menu, click Open.
2. Go to c10_location/webcontent/samples/datasources/sqlserver and double-click the Event_Studio_ELM_Agent_Modify_GOSALES.sql file.
3. In the toolbar, from the list of databases, click GOSALES.
4. In the Query window, under Part 1, select all sixteen lines of code.
5. From the Query menu, click Execute.

The database is updated with the changes.

Example - Simulate the Passage of Time and the Resolution of Some Events
Run part of the Event_Studio_ELM_Agent_Modify_GOSALES.sql script to simulate data changes. First, change it so that two days elapsed since the ELM Returns Agent sample was last run. Second, for three of the four event instances found the last time that the ELM Returns Agent sample ran, change the follow-up code from -1 to +1. This indicates that only one of the these event instances still requires follow-up and the other instances are resolved.

Steps
1. In SQL Query Analyzer, from the File menu, click Open.
2. Go to c10_location/webcontent/samples/datasources/sqlserver and double-click the Event_Studio_ELM_Agent_Modify_GOSALES.sql file.
3. On the toolbar, click GOSALES from the list of databases.
4. In the Query window, under Part 2, select all lines of code that appear after the comments.
5. From the Query menu, click Execute.

The database is updated with the changes.

Example - Modify the Data So That the ELM Returns Agent Detects No Events
When the Event Studio user finishes running the sample ELM Returns Agent against changed data, they should notify you. You can then modify the GOSALES database so that the agent no longer detects any event instances.

Step
- Run the following sql commands:
  
  UPDATE GOSALES.RETURNED_ITEM SET FOLLOW_UP_CODE = 0
  UPDATE GOSALES.RETURNED_ITEM SET ASSIGNED_TO = 0
  UPDATE GOSALES.RETURNED_ITEM SET DATE_ADVISED = NULL

100 IBM Cognos Administration
The data is modified. The sample ELM Returns Agent is ready to be used by another Event Studio User.

Remove the Samples Databases from IBM Cognos BI

After you finish using the sample reports to learn about IBM® Cognos® Business Intelligence, including Framework Manager, you can delete the packages on which the samples are based. This action permanently removes the samples from the content store.

Steps

1. Open IBM Cognos Connection by connecting to the IBM Cognos BI portal and clicking IBM Cognos Content on the Welcome page.
2. Click the Public Folders tab.
3. Select the check box for the sample package you want to delete.
4. Click the delete button on the toolbar, and click OK.

To use the samples again, you must set up the samples.
Chapter 5: Setting up Logging

Log messages are an important diagnostic tool for investigating the behavior of IBM® Cognos® BI. In addition to error messages, log messages provide information about the status of components and a high-level view of important events. For example, log messages can provide information about attempts to start and stop services, completion of processing requests, and indicators for fatal errors. Audit logs, which are available from a logging database, provide information about user and report activity.

The IBM Cognos services on each computer send information about errors and events to a local log server. A local log server is installed in the $c10_location/logs$ folder on every IBM Cognos BI computer that contains Content Manager or Application Tier Components. Because the log server uses a different port from the other IBM Cognos BI components, it continues to process events even if other services on the local computer, such as the dispatcher, are disabled.

The following workflow shows the tasks that are required to prepare for logging.

- During planning, determine the logging configuration that is suitable for your environment. For example, evaluate various log message repositories, such as remote log servers and log files, such as the UNIX® or Linux® syslog or the Windows® NT Event log, in addition to the local log file. You can also send only audit logging information to a database. Consider security, such as methods available for protecting log files from system failures and user tampering. For information about planning, see the Architecture and Deployment Guide.

- During configuration, define the startup properties for logging, such as connection settings for databases. You must also create a logging database if you plan to collect audit logs. If communication between a local log server and a remote log server must be secured, make the appropriate configuration changes on both IBM Cognos BI computers. You can also enable certain logging features, such as user-specific logging. For information about configuring logging, see the Installation and Configuration Guide.

- When setting up logging, specify the level of detail to log to focus messages on the information that is relevant in your organization. Audit reports may also be set up to track user and report activity. For information about setting up logging, see the Administration and Security Guide.

For information about using log messages to solve problems and resolving logging-related issues, see the Troubleshooting section of the Administration and Security Guide.

You can perform the following tasks to set up logging:

- set logging levels (p. 106)
- set up audit reporting (p. 107)
view full details for secure error messages (p. 113)

disable the creation of core dump files (p. 114)

You can also diagnose problems for specific users. See "Use Logging to Diagnose a Problem for a Specific User" (p. 114).

Log Messages

You specify the location of the log messages and the size and number of log files, and configure the properties of the log server in the configuration tool. By default, log messages are saved to the cogserver.log file located in \texttt{c10\_location/logs}. They can also be saved in a database. For more information, see the \textit{Installation and Configuration Guide}.

Use log messages for troubleshooting only. If you want to track usage, use audit reports ("Audit Reports" (p. 107).

For more information about the log service, see "Dispatchers and Services" (p. 136).

Logging Levels

You set logging levels to specify the events and messages to record in the log file or in the log database. An event is an occurrence in your IBM Cognos environment that is significant enough to be tracked, such as starting or stopping a service.

You can set a different logging level for each dispatcher service. You can do this for each dispatcher or for all dispatchers in the same folder. By setting different logging levels for different services you can reduce the amount of irrelevant logging information. For example, if you must troubleshoot the batch report service, you can select a detailed logging level for just that service, keeping log messages to a minimum. The logging level for a service applies to all its components.

Note: The log service does not have logging levels associated with it.

The following table indicates the details that each logging level logs.

<table>
<thead>
<tr>
<th>Details</th>
<th>Minimal</th>
<th>Basic</th>
<th>Request</th>
<th>Trace</th>
<th>Full</th>
</tr>
</thead>
<tbody>
<tr>
<td>System and service startup and shutdown, runtime errors</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>User account management and runtime usage</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Use requests</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Service requests and responses</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
You can maintain system performance by managing the amount of logging performed by the server. Since extensive logging affects server performance, increasing the logging level may negatively affect the performance of IBM Cognos software.

The default logging level is Minimal. Use Full logging and Trace levels only for detailed troubleshooting purposes, under the guidance of Customer Support. They may significantly degrade server performance.

If you are using audit reporting, refer to "Setting Up Audit Reporting" (p. 107) for guidelines on setting the logging level.

### Report Validation Levels and Logging Levels

You can collect information about report validation levels by setting the corresponding logging level. Report validation messages can be included in system log messages.

You can use the validation information in different ways. If the system is delivering a generally poor response, you can set logging to a higher level. The additional information can help you determine which reports are at fault and why. If you see warning messages in the logs, this may mean that users are receiving questionable results. You can alert the owners of the offending reports.

There are four report validation levels and five logging levels. The following table shows the correspondence between them.

<table>
<thead>
<tr>
<th>Report validation level</th>
<th>Logging level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error</td>
<td>Minimal, Basic</td>
</tr>
<tr>
<td>Warning</td>
<td>Request</td>
</tr>
<tr>
<td>Key Transformation</td>
<td>Trace</td>
</tr>
<tr>
<td>Information</td>
<td>Full</td>
</tr>
</tbody>
</table>

The higher you set the logging level, the more it degrades system performance. Normally, you set the level to Minimal or Basic to collect errors, or to Request to collect errors and warnings.

For information about reports and report validation, see the IBM Cognos Report Studio User Guide.
Native Query Logging

If you want to create audit reports (p. 107) that include the queries that are run against your reporting data source, you must enable native query logging. You can use native query logging to learn what kinds of information users want or whether a report is running efficiently.

Native query logging is part of Request level logging. However, if you are using audit reports, you can enable native query logging independently from Request level logging, as described in the following steps.

For information on setting logging levels for audit reports, see "Audit Reports" (p. 107).

Set Logging Levels

You set logging levels to specify the events and messages to record in the log file or in the log database. An event is an occurrence in your IBM® Cognos® environment that is significant enough to be tracked, such as starting or stopping a service.

If you are using logging for troubleshooting purposes, see "Logging Levels" (p. 104) for guidelines on setting the logging levels. If you are using audit reports, see "Setting Up Audit Reporting" (p. 107).

Logging levels that you set for the system apply to all dispatchers and services. Logging levels that you set at the dispatcher level apply to all services that are associated with the dispatcher. Logging levels that you set for individual services apply to the service across all dispatchers.

Logging levels that are set for dispatchers override logging levels that are set for the system level. Logging levels that are set for services override logging levels that are set for dispatchers or the system.

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

Steps

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper left corner of the Scorecard pane, click the arrow to view the Change view menu, and then click All dispatchers or Services, depending on where you want to set logging levels.
5. Click the arrow next to the item to view the Actions menu, and then click Set properties. For example, to set logging levels for the system, click the arrow next to the Actions menu.
6. Click the Settings tab.
7. From the Category menu, click Logging.
8. From the Value menu, select the logging level you want for the service.
9. If native query logging (p. 106) is available for the service and you want to use it, select the audit the native query check box.
10. Click OK.
Audit Reports

You use audit reports to view the information in a logging database about user and report activity. You may find this useful for such things as:

- capacity planning
- licensing conformance
- performance monitoring
- identifying unused content

The information in this section is intended to help you model the audit logging database in Framework Manager and create reports based on your logging data. First, you must set up audit reporting (p. 107).

To understand the benefit of audit reports, you may want to refer to the sample model and sample audit reports (p. 107). For information on the database schema for audit reports, see "Data Schema for Log Messages" (p. 919). For information on metric maintenance tasks such as clearing the Metric Studio audit history, clearing the data store metric history and calendar data, and clearing the data store metric history data, see "Metric Maintenance Tasks" (p. 487)

Setting Up Audit Reporting

Before you can create audit reports or use the sample audit reports that come with IBM® Cognos® software, you must set up audit reporting.

- Direct log messages to a database.
  
  Set up a logging database and configure log messages to be sent to the database. For information about configuring log messages, see the Installation and Configuration Guide.

  **Important:** The logging database must be separate from the Content Store database.

- Set the logging level for audit reports.
  
  For audit reporting, set the logging level to Basic (auditing enabled) or Request. If you set the logging level to Minimum, auditing is disabled. Use Full logging and Trace levels only for detailed troubleshooting purposes, under the guidance of Customer Support. They may significantly degrade server performance.

  For more information about logging levels, see "Set Logging Levels" (p. 106).

- Enable native query logging (p. 106).

Sample Audit Model and Audit Reports

IBM® Cognos® software includes a sample model and sample audit reports that you can use.

Sample Audit Model

IBM Cognos software includes a sample audit model in Framework Manager. The default location is `c10_location/webcontent/samples/models/Audit/Audit.cpf`. 

Sample Audit Reports

The following table lists the sample audit reports and describes the content of each report. The default location is `c10_location/webcontent/samples/content/IBM_Cognos_Audit.zip`. Before you can use them, you must set up the sample audit reports (p. 111).

<table>
<thead>
<tr>
<th>Audit report name</th>
<th>Description</th>
</tr>
</thead>
</table>
| Agent execution history by user                        | Lists agent execution history by user and date and time range and includes a bar chart. It also includes the total number of times each agent was executed and the total number of agents that were executed.  
You can select a date and time range. |
| Daily average and poor exceptions - all services       | Shows how to monitor daily average and poor exceptions of thresholds set in IBM Cognos Administration for all services using an agent.  
An email with attached report output is sent to the administrator when average and poor exceptions occur.  
To run this report properly, you must first set thresholds in IBM Cognos Administration (see "System Performance Metrics" (p. 117)). To receive an email, you must specify a mail server account. For more information, see the IBM Cognos Business Intelligence Installation and Configuration Guide. For more information on setting thresholds in IBM Cognos Administration, see "System Performance Metrics" (p. 117). |
| Daily metric exceptions                                | Lists daily metric exceptions for all services.                                                                                                                                                       |
| Execute reports by package and report                  | Lists the reports that were run, by package. It also includes the user, timestamp, and execution time in milliseconds for each report.  
You can select a date and time range, one or more users, one or more packages, and one or more reports. |
| Execute reports by user                                | Lists the reports that were run, by user and by package. It also includes the timestamp and execution time in milliseconds for each report.  
You can select a date and time range, one or more users, one or more packages, and one or more reports. |
<table>
<thead>
<tr>
<th>Audit report name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution history by user</td>
<td>Lists the reports that were run alphabetically, along with the package and timestamp, by user, since the logging database was created.</td>
</tr>
<tr>
<td></td>
<td>It includes the total number of reports each user ran and the total number of times each user ran each report. It also includes the total number of reports run by all users.</td>
</tr>
<tr>
<td></td>
<td>You can select one or more users for the report. After you run the audit report, you can choose to view the statistics for a particular report or for all reports.</td>
</tr>
<tr>
<td>Failed report executions - by package</td>
<td>Lists report failure executions by package and includes a pie chart, which also shows the failed percentage of each package.</td>
</tr>
<tr>
<td>Failed service requests detect agent - all services</td>
<td>Detects preset thresholds for service request failures that are exceeded.</td>
</tr>
<tr>
<td></td>
<td>An email is sent to the administrator with service failure metrics information. The report Service requests metrics - day report is run.</td>
</tr>
<tr>
<td></td>
<td>To run this report properly, you must first set thresholds in IBM Cognos Administration (see “System Performance Metrics” (p. 117)). To receive an email, you must specify a mail server account. For more information, see the IBM Cognos BI Installation and Configuration Guide.</td>
</tr>
<tr>
<td>Logon operations by time stamp</td>
<td>Shows logon and logoff timestamps and operations, by user.</td>
</tr>
<tr>
<td></td>
<td>It also includes the total number of logons and the total number of logons for each user.</td>
</tr>
<tr>
<td></td>
<td>You can select the time period and one or more users for the report.</td>
</tr>
<tr>
<td>Logon operations by user name</td>
<td>Shows logon and logoff timestamp by user, along with the type of logoff operation that occurred.</td>
</tr>
<tr>
<td></td>
<td>It includes the total number of logons and the total number of logons for each user.</td>
</tr>
<tr>
<td></td>
<td>You can select one or more users for the report.</td>
</tr>
<tr>
<td>Migration exceptions</td>
<td>A list report shows exceptions for migration tasks.</td>
</tr>
<tr>
<td>Audit report name</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Operations by selected object and users</td>
<td>Shows the operations that are performed on target objects, by user. It includes the target object path, timestamp, and the status of the operation.</td>
</tr>
<tr>
<td></td>
<td>You can select one or more objects, operations, or users for the report.</td>
</tr>
<tr>
<td>Report execution history (detailed report)</td>
<td>Lists reports alphabetically along with the associated package and the timestamp for each time the report was executed.</td>
</tr>
<tr>
<td></td>
<td>It also shows the total number of times each report was executed and the total number of reports that were executed.</td>
</tr>
<tr>
<td></td>
<td>It also includes a color-coded pie chart that gives an overview of how often the reports are used.</td>
</tr>
<tr>
<td>Report execution history (summary report)</td>
<td>Lists reports alphabetically along with the timestamp for each time the report was run since the logging database was created.</td>
</tr>
<tr>
<td>Report usage</td>
<td>Lists reports by frequency of use. For each report, it lists the user and the number of times it was run by the user since the logging database was created.</td>
</tr>
<tr>
<td></td>
<td>This report can help you determine if there are any reports that are not being used. If so, you may want to remove them.</td>
</tr>
<tr>
<td>Service requests metrics - day report</td>
<td>Shows percentage of successful and failed requests for IBM Cognos services for the current day. Includes a bar chart.</td>
</tr>
<tr>
<td>User session - abnormal termination</td>
<td>Shows logon date and time of abnormally terminated user sessions. It also includes a total of session termination for all dates.</td>
</tr>
<tr>
<td></td>
<td>You can select a date and time range.</td>
</tr>
<tr>
<td>User session - details</td>
<td>Shows user session details, including the logon time, logoff time, logoff operation, and session duration.</td>
</tr>
<tr>
<td></td>
<td>It also includes the total amount of session time for each user and the total amount of session time for all users.</td>
</tr>
<tr>
<td></td>
<td>You can select a date and time range and one or more users.</td>
</tr>
</tbody>
</table>
### Audit report name | Description
--- | ---
User session - logon errors for past 30 days chart | This audit report shows a bar graph of logon failures for the past 30 days.
User session - summary | This audit report shows the average session duration by user. It also shows the total average session duration by user.
You can select a date and time range and one or more users.
View reports by package and report | This audit report lists users and timestamps for reports for the package that you select.
You can select a date and time range, one or more users, and one or more reports.

---

### Setting Up the Sample Audit Reports

You must set up sample audit reports before you can use them. Before you begin, see "Setting Up Audit Reporting" (p. 107)

- Create a data source connection to the logging database. The logging database and data source in IBM® Cognos® Connection must be named Audit.
  
  Follow the procedure "Add or Modify a Data Source Connection" (p. 231). For the data source name and database name, enter the name Audit. Confirm that the connection is working.

- "Set Up the Sample Report Usage Audit Report" (p. 112) to create new data source named url_xml and using the URL as the connection string. This data source is only used by the Report Usage audit report.

- Import the sample audit reports.
  
  The file IBM_Cognos_Audit.zip is included with your installation and is located at c10_location/webcontent/samples/content.
  
  Copy the file to c10_location/deployment, and then follow the procedure "Import the Samples" (p. 96) IBM_Cognos_Audit. In the public folders content list, select the check box for Audit.
  
  The audit reports reside in the Public Folders area of IBM Cognos Connection.

- Run the sample audit reports.
  
  **Tip:** In IBM Cognos Connection, click Public Folders, click Audit, and click the audit report that you want to run.
  
  Depending on the audit report that you select, you are prompted for report criteria.
Set Up the Sample Report Usage Audit Report

The Report Usage Audit Report lists reports by frequency of use. Before it can be used, it must be set up.

Steps

1. If you are using the default application server (Tomcat) that is provided with IBM® Cognos® Business Intelligence, then in a text editor, open the web.xml file located at $c10_location$/webapps/p2pd/WEB-INF, and add the following XML fragment:

   ```xml
   <servlet>
   <servlet-name>DSServlet</servlet-name>
   <servlet-class>com.cognos.demo.DSServlet</servlet-class>
   </servlet>
   <servlet-mapping>
   <servlet-name>DSServlet</servlet-name>
   <url-pattern>/cognos/DSServlet.jsp</url-pattern>
   </servlet-mapping>
   
   Note that the url-pattern value can be anything you choose.
   
   2. If you are using an application server other than Tomcat, or if Content Manager and Application Tier Components are installed in separate locations, add the XML fragment from step 1 to the following files:
      - $c10_location$/webapps/p2pd/WEB-INF/web.xml.noCM
      - $c10_location$/webapps/p2pd/WEB-INF/web.xml.withCM

   3. If you do not have the following directory on your system, create it: $c10_location$/webapps/p2pd/WEB-INF/classes/com/cognos/demo.

   4. Copy the file build.bat for Microsoft® Windows® operating system or build.sh for UNIX® operating system located in $c10_location$/webapps/Audit to $c10_location$/webapps/p2pd/WEB-INF/classes/com/cognos/demo.

      Edit the build file to ensure the JAVA_HOME definition points to your JDK and ensure the CRN_HOME definition points to your IBM Cognos location.

   5. If it is not already there, copy the DSServlet.java file from the $c10_location$/webapps/Audit directory to $c10_location$/webapps/p2pd/WEB-INF/classes/com/cognos/demo.

   6. Do one of the following in the DSServlet.java file:
      - If you are allowing anonymous logon, comment out the following line:
        ```java
        binding.logon(...)  
        ```
      - If you are not allowing anonymous logon, make sure that the username, password, and namespace are correct and uncomment the following line: `binding.logon(...)`

   7. At a command prompt, run build.bat or build.sh from $c10_location$/webapps/p2pd/WEB-INF/classes/com/cognos/demo.

   8. Restart IBM Cognos software and open IBM Cognos Connection.
9. If you are using an application server other than Tomcat, rebuild the application file and then redeploy IBM Cognos BI to the application server.

   For instructions, see the *Installation and Configuration Guide*.

10. Create a data source connection to the XML data source by doing the following:

    - In the upper-right corner of IBM Cognos Connection, click **Launch, IBM Cognos Administration**.
    - On the **Configuration** tab, click **New Data Source**.
    - Under **Name**, type url_xml.
    - Click **Next**.
    - Under **Type**, select XML.
    - Click **Next**.
    - In the **Connection string** field, enter the connection string. If you used the defaults, the connection string is http://localhost:9300/p2pd/cognos/DSServlet.jsp.
    - Click **OK**.

**View Full Details for Secure Error Messages**

Some IBM® Cognos® error messages may contain sensitive information such as server names. By default, the IBM Cognos Application Firewall secure error messages option is enabled. Users are presented with information that indicates only that an error has taken place. For more information, see "Filtering of Error Messages" (p. 268).

If you have the appropriate permissions, you can retrieve full error details, which may contain sensitive information.

You may also want to see log messages (p. 104).

**Steps to retrieve the full error details**

1. Find the error code ID in the user error message. For example, the error number in the following message is secureErrorID:2004-05-25-15:44:11.296-#9:

   An error has occurred. Please contact your administrator. The complete error has been logged by CAF with SecureErrorID:2004-05-25-15:44:11.296-#9

2. Open the cogserver.log file using a text editor.

   The file is located in $c10_location/logs$.

3. Search for the error code ID to locate the applicable error message.
Disable the Creation of Core Dump Files

Core dump files are created when there is a serious problem, such as an unhandled exception or when an IBM® Cognos® process terminates abnormally. Since core dump files are big and a new one is created each time the problem recurs, you may want to disable them. You can enable core dump files again if you encounter problems that require it.

If such a problem occurs, you receive the following error message: *Report Server not responding.* See the Troubleshooting section in the *Administration and Security Guide* immediately.

You may also want to delete any existing core dump files from the \bin directory of the IBM Cognos server installation, if they are not required for troubleshooting purposes. In a Microsoft® Windows® environment, core dump files have a .dmp extension and the file name *processID.dmp*, such as BIBusTKServerMain_seh_3524_3208.dmp. In a UNIX® environment, the files are named *core*. In a Linux® environment, the files are named *core.*processID.

In some IBM Cognos hotsite builds, core file creation is automatically enabled. The configuration file that controls this is different for IBM Cognos 8.1 MR1 and later versions of the product. During an upgrade, configuration settings are not overwritten.

**Steps to Turn Off Core File Creation for IBM Cognos BI MR1**

1. On the server where IBM Cognos BI is installed, open the rsvpproperties.xml file from the *c10_location*\configuration directory.

2. Change the *Win32StructuredExceptionHandling* property to 0 (zero) so that it reads

   `<property>Win32StructuredExceptionHandling</property>
   <value type="long">0</value>

3. Save the file.

**Steps to Turn Off Core File Creation for IBM Cognos BI MR2 and Later Versions**

1. On the server where IBM Cognos BI is installed, open the cclWin32SEHConfig.xml file from the *c10_location*\configuration directory.

2. In the configuration element, change the value of the environment variable setting to 0 (zero) so that it reads

   `<env_var name="CCL_HWE_ABORT" value="0"/>

3. Save the file.

Use Logging to Diagnose a Problem for a Specific User

You can use logs to diagnose a problem that is occurring for one or more specific users. You temporarily set logging to occur for the specified users only. After the problem is resolved, you disable the user-specific logging and resume normal logging without interfering with existing logging settings.

You enable and disable logging for specific users by using the Remote Process service for Java™ Management Extensions (JMX), a technology that supplies tools to manage and monitor applications and service-oriented networks. You connect to the JMX Remote Process service using the jconsole
executable that is provided with the Java JDK. By default, output from the user-specific logging is saved in the \texttt{c10\_location/logs} directory.

You must first enable user-specific logging for IBM\textsuperscript{®} Cognos\textsuperscript{®} Business Intelligence. For more information, see the \textit{Installation and Configuration Guide}.

You must have the required permissions to access IBM Cognos Administration functionality to complete the tip in step 4 below. See "\textit{Secured Functions and Features}" (p. 283).

\textbf{Steps to Enable Logging for a User}

1. Ensure that user-specific logging is enabled, as described in the \textit{Installation and Configuration Guide}.

2. To connect to the JMX Remote Process service, launch the \texttt{jconsole} executable and specify the following information:
   - the URL to connect to the data
     For example,
     \begin{verbatim}
     service:jmx:rmi:///Content_Manager_server/jndi/rmi:///monitoring_server:<JMX-port>/proxyserver
     \end{verbatim}
     where \texttt{JMX-port} is the value from \textit{External JMX port} in IBM Cognos Configuration, and \texttt{Content_Manager_server} and \texttt{monitoring_server} are computer names. Do not use localhost, even if connecting locally.
   - the user ID and password to secure the connection
     Enter the values from \textit{External JMX credential} in IBM Cognos Configuration.

3. In the remote process server connection window, expand \texttt{com.cognos, Metrics, camAsyncAA, http://c10_server_name:port/p2pd} and select the \textit{Operations} node.

4. Copy the user's CAMID into the \texttt{enableDyeTrace} field and click the \texttt{enableDyeTrace} button.
   \textbf{Tip:} In IBM Cognos Administration, you can find the CAMID by doing the following:
   - Click the \textit{Security} tab and then click \textit{Users, Groups, and Roles}.
   - Click \textit{Set properties} for the user and then click \textit{View the search path, ID and URL}.

5. Navigate back up to \textit{Attributes} and view the contents of the \texttt{DyeTracedUsers} setting to verify you have enabled the user correctly (optional).

6. To start logging for the specified user, do the following:
   - Using a text editor, open the file \texttt{ipfclientconfig.xml.template} located at \texttt{c10\_location/configuration}.
   - Change the port values to your configured log server port, then add the line \texttt{<appender-ref ref="DyeTraceOutput"/>} to the \texttt{<category name="Audit"...>} tag.
   - Save the file as \texttt{ipfclientconfig.xml}.
Tip: To avoid an overwhelming number of indications, you can change the components and sub-components that log indications. Also, note that you can get some indications that are not specific to the specified user, for example starting the product.

The output is stored in $c10_location/logs/dyetrace_output.log. Only actions by the specified user are logged. It could take up to 30 seconds for the user-specific logging to start.

**Step to Disable Logging for a Specific User**

- Delete the ipfclientconfig.xml file that you created in "Steps to Enable Logging for a User" (p. 115).

Normal logging of all users resumes. It could take up to 30 seconds for the user-specific logging to stop.
Chapter 6: System Performance Metrics

You can monitor system performance using metrics in IBM Cognos Administration, which allows you to diagnose and fix problems quickly. For example, you may want to know if there are more than 50 items in a queue or if any item has been waiting in a queue for longer than a specified amount of time.

You must have the required permissions to access IBM Cognos Administration "Secured Functions and Features" (p. 283).

Using metrics, you can assess the status of the system as a whole, along with the status of individual servers, dispatchers, and services (p. 118). You can view the attributes for each metric score, set the threshold values (p. 131) that are used to calculate metric scores (p. 131), and reset metrics (p. 132). You may want to refresh report service connections if a PowerCube has been rebuilt (p. 133).

You can also perform functions such as starting and stopping dispatchers or services (p. 139), and unregistering dispatchers (p. 142).

You can use log files to analyze long-range performance and usage (p. 103).

You can create a metric dump file for troubleshooting purposes "Metric Dump File" (p. 687).

How Metric Data is Gathered

Data for metrics is gathered differently depending on the metric change type, time scope, and gathering time associated with the metric. For more information on how these apply to individual metrics, see "System Metrics" (p. 118).

Metric Change Type

The value that is displayed for a metric depends on the change type, as shown in the following table.

<table>
<thead>
<tr>
<th>Change Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counter</td>
<td>The value is a sum that increases with each change. For example, number of requests is a counter change type.</td>
</tr>
<tr>
<td>Gauge</td>
<td>The value may increase or decrease over time, depending on events. For example, the number of processes running at any time is a gauge change type.</td>
</tr>
</tbody>
</table>

Metric Time Scope

The interval over which a metric value is gathered differs by metric, as shown in the following table.
**System Metrics**

There are a wide variety of metrics available to help you monitor the performance of your IBM® Cognos® software installation. They are listed in the following table with the type of entry they apply to, a description, and the associated change type, time scope, and gathering time (p. 117).

Some metrics are reset when the service restarts. You can also reset some metrics manually (p. 132).

At the system and server levels, the metrics include all associated dispatchers. At the dispatcher level, metrics include all associated services. For server groups, metrics are for all the dispatchers in the group.

**Session Metrics**

You can use session metrics to monitor user sessions. This is useful for monitoring system trends such as usage patterns by time of day and day of week. Session metrics are also useful for understanding the context of other metrics. For example, if the number of sessions is extraordinarily high, it could account for the queue length metrics (p. 119) being higher than normal.

The following session metrics are available:

- **Number of sessions**

  Specifies the number of currently active user sessions.
• **Number of sessions high watermark**
  Specifies the maximum number of active user sessions since the last reset.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
</tbody>
</table>

• **Number of sessions low watermark**
  Specifies the minimum number of active user sessions since the last reset.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
</tbody>
</table>

**Queue Metrics**

You can use queue metrics to determine if the system is keeping up with demand. For example, if requests spend too much time in a queue, you may not have enough resources to meet demand.

Queue metrics are available for services that use queues, such as the report service and report data service.

At the system level, queue metrics are available for the following entries:

• **Job**
  Job queue contains metrics related to the internal queue used by all event management services.

• **Task**
  Task queue contains metrics related to the internal queue used by all monitor services. This queue contains tasks until they are successfully completed.

• **SMTP**
  SMTP queue contains metrics related to the internal queue used by all delivery services. This queue contains emails until they are sent.

Some of the metrics available for these queue metric groups must be enabled to be displayed. For more information, see "Enable Job, SMTP, and Task Queue Metrics" (p. 193).

The following queue metrics are available:

• **Latency**
  Specifies the average amount of time that requests have spent in the queue (in seconds).
### Number of queue requests

Specifies the number of requests that have passed through the queue.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Queue length

Specifies the number of items currently in the queue.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Point in time</td>
<td>On demand</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Queue length high watermark

Specifies the maximum number of items in the queue since the last reset.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Queue length low watermark

Specifies the minimum number of items in the queue since the last reset.
**Time in queue**

Specifies the cumulative amount of time that requests have spent in the queue (in days, hours, minutes, and seconds).

**Time in queue high watermark**

Specifies the maximum length of time that a request waited in the queue (in days, hours, minutes, and seconds).

**Time in queue low watermark**

Specifies the minimum length of time, in days, hours, minutes, or seconds, that a request waited in the queue.

### JVM Metrics

You can use JVM metrics to monitor the Java™ Virtual Machine and the associated heap size, which specifies the amount of memory that is currently in use. For example, if a dispatcher has been running
for a long time and heap usage is high, you may want to restart the dispatcher. The maximum heap size metric tells you if you have allocated a suitable amount of memory to the JVM based on the amount of hardware memory available. The current heap size, in relation to the maximum heap size, lets you know if available memory is being used. If current heap size is close to the maximum heap size, you may want to adjust tuning settings (p. 159) to reduce the load on a particular JVM. The current heap size may vary widely depending on the current load on the system.

The following JVM metrics are available:

- **Current heap size (bytes)**
  Specifies the current size of the JVM heap (in bytes).

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispatcher</td>
<td>Gauge</td>
<td>Point in time</td>
<td>On demand</td>
</tr>
</tbody>
</table>

- **Initially requested heap size (bytes)**
  Specifies the initial amount of memory that the JVM requests from the operating system during startup (in bytes).

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispatcher</td>
<td>Gauge</td>
<td>Point in time</td>
<td>On demand</td>
</tr>
</tbody>
</table>

- **Maximum heap size (bytes)**
  Specifies the maximum amount of memory that can be used by the JVM (in bytes).

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispatcher</td>
<td>Gauge</td>
<td>Point in time</td>
<td>On demand</td>
</tr>
</tbody>
</table>

- **Up time**
  The length of time that the JVM has been running (in days, hours, minutes, and seconds).
  At the system, server, and server group levels, this is the highest value from all associated dispatchers.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Counter</td>
<td>Point in time</td>
<td>On demand</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Committed heap size**
Specifies the amount of memory that is guaranteed to be available for use by the JVM (in bytes).

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispatcher</td>
<td>Gauge</td>
<td>Point in time</td>
<td>On demand</td>
</tr>
</tbody>
</table>

**Request Metrics**

You can use request metrics to monitor volume of requests, operational status of services, response times, and processing times. General request metrics include data for all services and are a consolidation of metrics for all dispatchers. Request metrics specific to a service include only data for that service.

At the system, server, and server group levels, the metrics include data from all associated dispatchers. At the dispatcher level, metrics include all associated services.

The following request metrics are available:

- **Current time**
  
  Specifies the current date and time used by the service to interpret time values.

  Use only if the service has no clock synchronization mechanism.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>Counter</td>
<td>Point in time</td>
<td>On demand</td>
</tr>
</tbody>
</table>

- **Last response time**
  
  Specifies processing time for the most recent successful or failed request (in days, hours, minutes, and seconds).

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Point in time</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Number of failed requests**
  
  Specifies the number of service requests that failed (a fault was returned).
• **Number of processed requests**

Specifies the number of processed requests.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Counter</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td>Counter</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• **Number of successful requests**

Specifies the number of service requests that succeeded (no fault was returned).

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Counter</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td>Counter</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• **Percentage of failed requests**

Specifies the percentage of processed requests that failed.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• **Percentage of successful requests**
Specifies the percentage of processed requests that succeeded.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Response time high watermark**

  Specifies the maximum length of time taken to process a successful or failed request (in days, hours, minutes, and seconds).

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Response time low watermark**

  Specifies the minimum length of time taken to process a successful or failed request (in days, hours, minutes, and seconds).

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Seconds per successful request**

  Specifies the average length of time taken to process a successful request (in seconds).
- **Service time**
  Specifies the time taken to process all requests (in days, hours, minutes, and seconds).

- **Service time failed request**
  Specifies the time taken to process all failed service requests (in days, hours, minutes, and seconds).

- **Service time successful requests**
  Specifies the time taken to process all successful service requests (in days, hours, minutes, and seconds).
• **Successful requests per minute**

  Specifies the average number of successful requests processed in one minute.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Gauge</td>
<td>Since reset</td>
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<td></td>
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</tr>
<tr>
<td>Dispatcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Process Metrics for Report and Batch Report Service and Metadata Service**

The following process metrics are available for report service and batch report service and metadata service:

• **Number of processes**

  Specifies the number of processes currently running.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Point in time</td>
<td>On demand</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report service and Batch report service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metadata service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• **Number of configured processes**

  Specifies the same value that was configured for the following properties of affected services:

  • "Maximum number of processes for the [service_name] during peak period"
  • "Maximum number of processes for the [service_name] during non-peak period" to be a non-default value

  This value cannot be reset.
- **Number of processes high watermark**

  For system, server, and server group, the total of all Number of processes high watermark metrics for all associated resources is specified.

  For services, the maximum number of processes that ran at any one time since the last reset is specified.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Gauge</td>
<td>Since reset</td>
<td>On change</td>
</tr>
<tr>
<td>Server/Server group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report service and Batch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>report service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metadata service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Number of processes low watermark**

  For system, server, and server group, the total of all Number of processes low watermark metrics for all associated resources is specified.

  For services, the minimum number of processes that ran at any one time since the last reset is specified.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Change Type</th>
<th>Time Scope</th>
<th>Gathering Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
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<td></td>
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</tr>
<tr>
<td>Report service and Batch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>report service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metadata service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Panes on the Status System Page**

The **System** page has three panes, **Scorecard**, **Metrics**, and **Settings**, that you use to evaluate system status. You can refresh each pane independently.

You can sort some columns by clicking on the title. By default, columns are sorted in ascending order. To sort in ascending order, click once. To sort in descending order, click again. To return to default order, click a third time.

**Scorecard Pane**

The **Scorecard** pane lists entries: system, servers, server groups, dispatchers, and services. For each entry, it shows a metric score and operational status so that you can assess system performance (p. 130).
Each metric score is represented by one of the following icons:

- a green circle for good
- a yellow diamond for average
- a red square for poor

You must set metric thresholds before metric scores appear (p. 131).

If a service is disabled in IBM® Cognos® Configuration, it is not listed.

The metric score for each entry is based on the performance of individual child entries. The status that is displayed for each entry is the lowest status of the child entries. For example, if all the metrics for a dispatcher are good, but one service on that dispatcher has a poor metric, the metric score shown for the dispatcher is poor.

Status is one of the following:

- **Available** if all components are available
- **Partially available** if at least one component is available and at least one component is unavailable or partially unavailable.
- **Unavailable** if all components are unavailable

The Group actions menu lets you perform functions, such as starting and stopping dispatchers or services (p. 139), unregistering dispatchers (p. 142), and testing dispatchers (p. 148). Each entry also has an Actions menu associated with it, which you access by clicking the arrow next to the entry.

You use the Scorecard pane to navigate to the entry that you want to view. You can select the view that you want from the Change view menu in the upper-left corner. You can click on entries to select them and display the next level of entries. For example, click a server to see associated dispatchers, or click a dispatcher to see associated services.

You can maximize the Scorecard pane to see a consolidated view of information that is displayed in the Scorecard pane and important metrics from the Metrics pane. The consolidated view includes the following information:

- For servers and server groups: metric score, operational status, up time, service time, number of processed requests and percentage of successful requests.
- For dispatchers: metric score, operational status, number of processes, service time, current heap size (bytes), number of processed requests, and percentage of successful requests.
- For services the information depends on the service.

**Metrics Pane**

The Metrics pane shows the metrics for the selected entry. You can expand metric groups to see the individual metric scores and values. You can reset each metric group independently (p. 132)

You can select the metrics that you want to display by clicking a check box at the top of the pane. By default, all metrics are displayed. Metrics with no metric score include ones that you cannot set
Assess System Performance

To evaluate how IBM® Cognos® software is performing, you can view metric scores that are based on thresholds that you set. You can also view the operational status of system components.

You must set metric thresholds before metric scores appear (p. 131). If dispatchers and services are not performing as they should, you can tune server performance (p. 159). For more information on logging settings, see "Setting up Logging" (p. 103).

Steps

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
   - The metric score icon next to System shows overall system status. The metric score icon next to each server shows the status of that server. In the Metrics pane, individual metrics are listed.
4. In the upper left corner of the Scorecard pane, click the arrow to view the Change view menu, and then click the view that you want.
   - If you choose All server groups, display dispatchers that are not grouped by server by clicking Default server group.
5. To view the metrics for a displayed item, click the icon to the left of the entry.
6. To view the children of a displayed entry, click the entry itself.
   - Tip: You can refresh individual panes by clicking the refresh button in the pane.
7. To view or change the properties of an entry, click the actions menu button next to the entry, and then click Set properties.
8. To see the consolidated view, click the maximize button on the Scorecard pane.
   - Tip: To return to the previous view, click the restore button.
View Attributes for Metric Scores

You can view the last time a metric was reset and updated. You can also view the current threshold setting for each metric score for which a threshold is set (p. 131). For metrics that are collected at regular intervals, you can also view the period of time to which the value applies.

Steps
1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper left corner of the Scorecard pane, click the arrow to view the Change view menu, and then click the view that you want.
5. In the Metrics pane, expand the metric group that you want to view.
6. In the Value column of the Metrics pane, pause your pointer over the value for the metric that you want to view.
   The name of the metric is displayed.
7. To view more information about some metrics, click More.

Set Metric Threshold Values

You can set threshold values that are used for some metric scores. Acceptable threshold values depend on your operating environment. When a threshold is crossed, the state of the metric score changes.

For example, you determine that the maximum acceptable queue length is 50 items. You select Low values are good. You set the upper value to 50 and the lower value to 40. If the queue remains below 40 items in length, the metric score is green (good). If the queue length goes above 40 items, the metric score is yellow (average). If the queue length goes above 50 items, the metric score is red (poor).

Or for percentage of successful requests, you select High values are good. You set the upper value to 98 and the lower value to 95. If the percentage of successful requests goes below 95 percent, the metric score is red (poor). If the percentage of successful requests is between 95 and 98 percent, the metric score is yellow (average). If the percentage of successful requests remains above 98, the metric score is green (good).

Changes to thresholds are effective immediately.

There are no threshold defaults. You must set thresholds for metric scores to display.

If you want to be notified when thresholds are exceeded, you can create an agent (p. 461). Sample agents that monitor the audit database for threshold violations and perform common actions when violations are detected are included in the audit samples package.

Log entries (p. 103) occur in the following circumstances:
when metric thresholds are violated
when enumerated metrics, such as operational status, change
Logs are not generated when metric values change but remain in the same range.

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper left corner of the Scorecard pane, click the arrow to view the Change view menu, and then click the view that you want.
5. To change the threshold for a metric, in the Metrics pane, click the Edit thresholds button next to the metric.
6. Click the performance pattern that you want: **High values are good**, **Middle values are good**, or **Low values are good**.
7. To specify a threshold value, click in the threshold box and enter the threshold number you want.
8. Click the arrow beside the threshold value to specify which range the value itself falls into.
   For example, if your maximum value is 50 and you want values of 50 to fall into the average category rather than the poor category, click the arrow to move the threshold value into the average category.
9. Click OK.

**Reset Metrics**

You can reset a group of metrics at any time. For example, for a server, you can reset the Queue - Report service group of metrics. When you reset a group of metrics, all the metrics in the group are reset.

Some metrics cannot be reset. For example, JVM metrics cannot be reset because they were re-calculated after the last reset.

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper left corner of the Scorecard pane, click the arrow to view the Change view menu, and then click the view that you want.
5. In the **Metrics** pane, click the reset button for the group of metrics that you want to reset.

**Reset Metrics for the System**

You can reset all metrics for the system at the same time. Some metrics cannot be reset. For example, JVM metrics cannot be reset because they were re-calculated after the last reset.

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Status** tab, click **System**.
4. In the **Scorecard** pane, click **Actions, Reset all metrics of the system**.

**Refresh Report Service Connections**

If a PowerCube has been rebuilt, you can update the connection information without affecting current users. To do this, you must first update the connection information to the rebuilt PowerCube, and then refresh the report servers to use the rebuilt PowerCube for new connections. For more information, see "Deploy Updated PowerCubes" (p. 230).

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Status** tab, click **System**.
4. With all servers displayed, click the check box for the servers you want, and from the Group actions menu, click Refresh report service connections.

**Tip**: You can also do this from the Actions menu next to System, servers, and dispatchers. You can also click the Configuration tab, and then click Dispatchers and Services, and then click the **Refresh Report Service Connections - Configuration** button.

5. When the View the results page appears, ensure that the operation has been successful and then click Close.
You can perform the following server administration tasks that help you manage and maintain your IBM® Cognos® system and tune performance.

You can perform the following server administration tasks:

- manage dispatchers and services
- manage Content Managers
- maintain the content store
- migrate PowerPlay reports published to IBM Cognos BI
- tune server performance
- tune Metric Studio connections
- manage query execution
- disable session caching
- reduce decimal precision
- save report output to a file location
- enable accessible report output using system-wide settings
- configure the lineage solution
- configure the IBM InfoSphere Business Glossary URI
- configuring the Collaboration discovery URI
- enable job, task, and SMTP queue metrics
- specify settings for human tasks and annotations
- change the dynamic drill-through filter behaviour to generate a filter using the Member Business Key instead of the default Member Caption

You should be familiar with the IBM Cognos components and with how they are installed and configured. If you installed IBM Cognos servers or components on more than one computer, all functionality can be controlled through system administration. For information about the IBM Cognos environment, see the Installation and Configuration Guide and the Architecture and Deployment Guide.

For some server administration tasks, you use IBM Cognos Administration and must have the required permissions to the access administration functionality "Secured Functions and Features" (p. 283).
Dispatchers and Services

The dispatcher is the entry point for IBM® Cognos® service requests sent by a Web server gateway or other software. The dispatcher handles the routing requests and balances the load of user requests to the various IBM Cognos services.

You can have more than one dispatcher in your IBM Cognos environment. In such distributed installations one dispatcher is configured for every instance of the Content Manager or Application Tier Components that are installed and configured in your environment.

After you install and configure IBM Cognos software, one dispatcher is available on each computer by default. Each dispatcher has a set of associated services, listed in the following table.

### IBM Cognos services

After you install and configure IBM Cognos BI, one dispatcher is available on each computer by default. Each dispatcher has a set of associated services, listed in the following table.

<table>
<thead>
<tr>
<th>Service</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent service</td>
<td>Runs agents. If the conditions for an agent are met when the agent runs, the agent service asks the monitor service to run the tasks.</td>
</tr>
<tr>
<td>Annotation service</td>
<td>Enables the addition of commentary to reports via the IBM Cognos Dashboard. These comments persist across versions of the report.</td>
</tr>
<tr>
<td>Batch report service</td>
<td>Manages background requests to run reports and provides output on behalf of the monitor service.</td>
</tr>
<tr>
<td>Content Manager cache service</td>
<td>Enhances the overall system performance and Content Manager scalability by caching frequent query results in each dispatcher.</td>
</tr>
<tr>
<td>Content Manager service</td>
<td>• Performs object manipulation functions in the content store, such as add, query, update, delete, move, and copy</td>
</tr>
<tr>
<td></td>
<td>• Performs content store management functions, such as import and export</td>
</tr>
<tr>
<td>Data movement service</td>
<td>Manages the execution of data movement tasks in IBM Cognos BI. Data movement tasks, such as Builds and JobStreams, are created in Data Manager Designer and published to IBM Cognos BI.</td>
</tr>
<tr>
<td>Service</td>
<td>Purpose</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Delivery service</td>
<td>Sends emails to an external SMTP server on behalf of other services, such as the report service, job service, agent service, or data integration service</td>
</tr>
<tr>
<td>Event management service</td>
<td>Creates, schedules, and manages event objects that represent reports, jobs, agents, content store maintenance, deployment imports and exports, and metrics</td>
</tr>
<tr>
<td>Graphics service</td>
<td>Produces graphics on behalf of the Report service. Graphics can be generated in 4 different formats: Raster, Vector, Microsoft® Excel XML or PDF.</td>
</tr>
<tr>
<td>Human task service</td>
<td>Enables the creation and management of human tasks. A human task such as report approval can be assigned to individuals or groups on an ad hoc basis or by any of the other services.</td>
</tr>
<tr>
<td>Index data service</td>
<td>Provides basic full-text functions for storage and retrieval of terms and indexed summary documents.</td>
</tr>
<tr>
<td>Index search service</td>
<td>Provides search and drill-through functions, including lists of aliases and examples.</td>
</tr>
<tr>
<td>Index update service</td>
<td>Provides write, update, delete, and administration functions.</td>
</tr>
<tr>
<td>Job service</td>
<td>Runs jobs by signaling the monitor service to run job steps in the background. Steps include reports, other jobs, import, exports, and so on.</td>
</tr>
</tbody>
</table>
| Log service              | Records log messages generated by the dispatcher and other services. The log service can be configured to record log information in a file, a database, a remote log server, Windows® Event Viewer, or a UNIX® system log. The log information can then be analyzed by customers or by Cognos Software Services, including:  
  ● security events  
  ● system and application error information  
  ● selected diagnostic information |
<table>
<thead>
<tr>
<th>Service</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata service</td>
<td>Provides support for data lineage information displayed in Cognos Viewer, Report Studio, Query Studio, and Analysis Studio. Lineage information includes information such as data source and calculation expressions.</td>
</tr>
<tr>
<td>Metric Studio service</td>
<td>Provides the Metric Studio user interface for monitoring and entering performance information</td>
</tr>
<tr>
<td>Migration service</td>
<td>Manages the migration from IBM Cognos Series 7 to IBM Cognos BI.</td>
</tr>
</tbody>
</table>
| Monitor service               | • Manages the monitoring and execution of tasks that are scheduled, submitted for execution at a later time, or run as a background task  
                                 | • Assigns a target service to handle a scheduled task. For example, the monitor service may ask the batch report service to run a report, the job service to run a job, or the agent service to run an agent.  
                                 | • Creates history objects within the content manager and manages failover and recovery for executing entries                         |
| Planning administration console service | Manages communication with the Contributor Administration Console.                                                                                   |
| Planning data service         | Manages communications for real-time reporting from Contributor plan data in IBM Cognos BI.                                                      |
| Planning job service          | Manages communications with the Planning Job Server subsystem.                                                                               |
| Planning web service          | Manages communications with Contributor Web and Contributor Add-in for Excel users.                                                             |
| PowerPlay® service            | Manages requests to run PowerPlay reports.                                                                                                |
| Presentation service          | • Transforms generic XML responses from another service into output format, such as HTML or PDF  
<pre><code>                             | • Provides display, navigation, and administration capabilities in IBM Cognos Connection                                                      |
</code></pre>
<table>
<thead>
<tr>
<th>Service</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Query service</td>
<td>Manages Dynamic Query requests and returns the result to the requesting batch or report service.</td>
</tr>
<tr>
<td>Report data service</td>
<td>Manages the transfer of report data between IBM Cognos BI and applications that consume the data, such as IBM Cognos BI for Microsoft Office and IBM Cognos Mobile.</td>
</tr>
<tr>
<td>Report service</td>
<td>Manages interactive requests to run reports and provides output for a user in IBM Cognos Connection or a studio.</td>
</tr>
<tr>
<td>System service</td>
<td>Defines the Business Intelligence Bus API-compliant service used to obtain application-wide IBM Cognos BI configuration parameters. It also provides methods that normalize and validate locale strings and map locale strings to locales supported by your application.</td>
</tr>
</tbody>
</table>

You can perform the following maintenance on dispatchers and their associated services:

- start and stop dispatchers and services
- activate a Content Manager service
- remove dispatchers from the environment
- group dispatchers in configuration folders
- specify advanced dispatcher routing
- specify gateway mappings
- rename dispatchers
- test dispatchers
- administer failover for multiple dispatchers

### Stop and Start Dispatchers and Services

You can stop and start dispatchers and services manually. If a service stops responding, you must stop and restart it.

Each dispatcher and service can be

- started
- stopped immediately and delete all the requests that are running or queued, without completing those requests
stopped after running and queued requests are processed

You can stop or start all dispatchers and services in the IBM® Cognos® environment at once.

When you start IBM Cognos software using the configuration tool, all dispatchers and services start unless they are disabled in the configuration tool. For more information, see the Installation and Configuration Guide.

By default, all services start when you restart the computer on which they are installed.

Stopping a service also stops all its processes. When you stop a dispatcher, all its services are stopped. If the suspended dispatcher has an active Content Manager, all users except administrators are locked out.

After a service is stopped, it has a suspended status "System Performance Metrics" (p. 117).

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu and find the dispatchers or services that you want.
   
   Click All servers, All server groups, or All dispatchers. To select a service, pause your pointer over Services and click the required service.

5. Click the arrow next to the dispatcher or service, and choose the action that you want to perform.

Depending on the dispatcher or service, you can do the following:

<table>
<thead>
<tr>
<th>Goal</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start all dispatchers in system</td>
<td>With all servers displayed, in the upper right corner of the Scorecard pane, click the arrow to view the Group actions menu, and then click Start dispatchers.</td>
</tr>
<tr>
<td></td>
<td>Tip: To apply an action to only some entries, select check boxes for one or more entries and then click the action that you want.</td>
</tr>
<tr>
<td>Start all dispatchers for a server group</td>
<td>With all server groups displayed, click the arrow to view the Actions menu next to the server group, and then click Start dispatchers.</td>
</tr>
<tr>
<td>Goal</td>
<td>Action</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Start all dispatchers for a server</td>
<td>With all servers displayed, click the arrow to view the actions menu next to the server, and then click <strong>Start dispatchers</strong>.</td>
</tr>
<tr>
<td>Start a specific dispatcher</td>
<td>With all dispatchers displayed, click the arrow to view the Actions menu next to the dispatcher, and then click <strong>Start</strong>.</td>
</tr>
<tr>
<td>Start a specific service</td>
<td>With all services displayed, click the arrow to view the Actions menu next to the service, and then click <strong>Start</strong>.</td>
</tr>
<tr>
<td>Stop all dispatchers in system</td>
<td>With all servers displayed, in the upper right corner of the <strong>Scorecard</strong> pane, click the arrow to view the Group actions menu, and then click <strong>Stop dispatchers immediately</strong> or <strong>Stop dispatchers after running and queue processed</strong>.</td>
</tr>
<tr>
<td>Stop all dispatchers for a server group</td>
<td>With all server groups displayed, click the arrow to view the Actions menu next to the server group, and then click <strong>Stop dispatchers immediately</strong> or <strong>Stop dispatchers after running and queue processed</strong>.</td>
</tr>
<tr>
<td>Stop all dispatchers for a server</td>
<td>With all servers displayed, click the arrow to view the Actions menu next to the server, and then click <strong>Stop dispatchers immediately</strong> or <strong>Stop dispatchers after running and queue processed</strong>.</td>
</tr>
<tr>
<td>Stop a specific dispatcher</td>
<td>With all dispatchers displayed, click the arrow to view the Actions menu next to the dispatcher, and then click <strong>Stop immediately</strong> or <strong>Stop after running and queue processed</strong>.</td>
</tr>
<tr>
<td>Stop a specific service</td>
<td>With all services displayed, click the arrow to view the Actions menu next to the service, and then click <strong>Stop immediately</strong> or <strong>Stop after running and queue processed</strong>.</td>
</tr>
</tbody>
</table>

A dialog box appears and confirms the action.

6. **Click Close.**

**Activate a Content Manager Service**

One Content Manager service is designated to become active at startup. All other Content Manager services start up in standby mode. Only one Content Manager service can be active at any time.

You can manually activate a Content Manager service that is in standby mode. When you activate a service, any currently active service switches to standby mode.
You can also specify a Content Manager service which is currently standby as the default active service at startup.

You must have the required permissions to access IBM Cognos Administration. See "Secured Functions and Features" (p. 283).

**Steps to Specify a Default Content Manager Service**

1. Start IBM® Cognos® Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Status tab, click System.

4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, and then click Content Manager.

5. Click the arrow for the Actions menu next to the Content Manager service and click Set as active by default.
   
   **Tip:** Only Content Manager services that are not already the default have Set as active by default displayed in the Actions menu.

**Steps to Activate a Content Manager Service**

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Status tab, click System.

4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Under Services, click Content Manager

5. Click the arrow to view the Actions menu next to the Content Manager service, and then click Start.

**Remove Dispatchers from the Environment**

You can remove a dispatcher if you no longer need it in the IBM® Cognos® environment. To remove a dispatcher, you must first stop the dispatcher from the computer where it is installed. After stopping the dispatcher, you must then remove the dispatcher from the content store by unregistering it in IBM Cognos Administration.

You can stop the IBM Cognos service using IBM Cognos Configuration. This will stop the dispatcher as well. If you delete a dispatcher without stopping the IBM Cognos service first, the dispatcher will automatically be reinstated in 30 seconds.

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Stop the IBM Cognos service using IBM Cognos Configuration.
This also stops the dispatcher. For information about stopping the IBM Cognos service, see the *Installation and Configuration Guide*. 

2. Start IBM Cognos Connection. 

3. In the upper-right corner, click **Launch, IBM Cognos Administration**. 

4. Click the **Status** tab, and then click **System**. 

5. Determine the dispatchers that you want to unregister. You can unregister all dispatchers in the system, unregister all dispatchers for a server, or unregister all dispatchers for a server group. 

6. In the upper-left corner of the **Scorecard** pane, click the arrow to view the Change view menu. Depending on the dispatchers you want to unregister, click **All servers**, **All server groups**, or **All dispatchers**. 

<table>
<thead>
<tr>
<th>Goal</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unregister all dispatchers in system</td>
<td>With all dispatchers displayed, in the upper-right corner of the <strong>Scorecard</strong> pane, click the arrow to view the Group actions menu, and then click <strong>Unregister dispatchers</strong>. <strong>Tip:</strong> To apply an action to only some entries, select check boxes for one or more entries and then click the action that you want.</td>
</tr>
<tr>
<td>Unregister all dispatchers for a server</td>
<td>With all servers displayed, click the arrow next to a server to view the Actions menu, and then click <strong>Unregister dispatchers</strong>.</td>
</tr>
<tr>
<td>Unregister all dispatchers for a server group</td>
<td>With all server groups displayed, click the arrow next to a dispatcher to view the Actions menu, and then click <strong>Unregister dispatchers</strong>.</td>
</tr>
<tr>
<td>Unregister a specific dispatcher</td>
<td>With all dispatchers displayed, click the arrow next to a dispatcher to view the Actions menu, and then click <strong>Unregister</strong>.</td>
</tr>
</tbody>
</table>

A dialog box appears to confirms the action. 

7. Click **OK**. 

The dispatcher information is removed from the content store. 

**Group Dispatchers in Configuration Folders**

Configuration folders are useful to organize dispatchers if your installation includes many dispatchers. You can group dispatchers so that you can apply the same configuration settings once to all the dispatchers and services in the folder.
When you add a dispatcher to a configuration folder, it automatically inherits the configuration settings of the folder. However, if you previously changed the default values of that dispatcher or service, the changed values are kept.

When you change the configuration settings of a dispatcher or configuration folder, the services for the dispatcher and any child entries for the folder automatically acquire the new values. However, if you change the values of the services, the changed values are kept.

You can create a new configuration folder at the root of the Configuration area or in an existing configuration folder.

**Tips**

- To view and edit the configuration properties of the parent of an entry shown in the path on the toolbar, click the Set properties - Configuration button. You can change and apply configuration settings for all the dispatchers and services in the Configuration area when you are in the root of the Configuration area.

- Use the path on the toolbar to explore the different levels of your configuration. The path starts with Configuration and, when the path becomes too long, it wraps.

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM® Cognos® Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Configuration tab, click Dispatchers and Services.

4. Click the new folder button.

5. Type a name and, if you want, a description, and specify where to save the configuration folder.

6. Click Finish.

   You can now add dispatchers to the configuration folder by cutting them from their original location and then pasting them inside the folder. You can also change settings at the configuration folder level.

   **Tip:** To move a dispatcher to another folder, click More next to the dispatcher and then click Move.

**Specify Advanced Dispatcher Routing**

Depending on how your system is set up, you may want to control how reports are distributed among servers. For example, you have different departments that maintain their own servers, or you have specific servers set up for specific data access, such as Microsoft® Windows® servers for Microsoft® SQL Server databases and Linux servers set up for DB2® access. You can set up IBM® Cognos® software so that report requests are processed by specific servers by applying routing rules. Affinity settings (p. 166) take precedence over advanced routing settings.
**Server Groups**

When you define the routing rules, you must select a server group. Server group names are a property of a dispatcher or the configuration folders into which the dispatchers are organized. See (p. 160) to set server group names.

To determine which server groups process certain reports, you must associate keywords with packages and user roles or groups, and then specify how the keywords are distributed among the dispatchers in your environment. The distribution is controlled by routing rules that you create for the routing keywords. The report request will be processed by a specific server depending on the keywords associated with the package from which the report was created and/or the user or group running the report.

When you create the routing rules, you create conditions that determine the server groups by which the reports are to be processed. For example, you can set up routing rules so that reports from a Finance package made by a user in the Finance group are processed by Finance servers. Alternatively, you can set up routing rules so that reports by any Sales users, regardless of which package was used to create the report, are processed by Sales servers. In the first example, you would specify keywords for both user role or group and package, but in the second you would only specify a keyword for user role or group and leave the package keyword blank. You do not have to specify a keyword for both package and user role or group in your routing rules.

You set up the routing keywords and the routing rules using IBM Cognos Connection.

You must have the required permissions to access IBM Cognos Administration functionality. See "Set Server Group Names for Advanced Dispatcher Routing" (p. 160).

**Steps to Set Routing Keywords for Packages**

1. In IBM Cognos Connection, click the Public Folders tab.

2. Click the set properties button for a package.

3. Under Advanced routing, click Set.

   The Assign routing sets page appears.

4. Type a routing keyword for the package in Type routing sets, and click Add.

5. Repeat step 4 to add other routing keywords that you want to apply to the package. Separate each keyword with a semi-colon, for example, Red;Blue;Green;

   The order in which the routing keywords are added does not matter.

6. Click OK.

   The routing keywords are displayed under Advanced routing.

7. On the Set properties page, click OK.

**Steps to Set Routing Keywords for User Roles or Groups**

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. Click the Security tab, and then click Users, Groups, and Roles.

4. Click the namespace to display the roles.

5. Click the set properties button for a role or group.

6. Under Advanced routing, click Set.
   The Assign routing sets page appears.

7. Select a routing keyword for the users role or group in Select routing sets, or type it in Type Routing Sets, and click Add. If you are typing, separate each keyword with a semi-colon, for example, Red;Blue;Green;

8. Repeat step 7 to add other routing keywords that you want to apply to the users role or group.
   The order in which the routing keywords are added does not matter.

9. Click OK.
   The routing keywords are displayed under Advanced routing.

10. On the Set properties page, click OK.

Steps to Set Routing Keywords for Server Groups

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Configuration tab, click Dispatchers and Services.
   The dispatchers and any configuration folders that have been created are shown.
   Note: You can only apply routing rules to server groups. Server groups are a property of dispatchers or configuration folders, and must be set up before you can set routing keywords for server groups (p. 160).

4. Click the specify routing rules button.
   The Specify the routing rules page appears.

5. Click Add a rule.

6. Select the Package routing set, Group routing set, Role routing set, and Server group that you want.

7. In the Actions column, click the View the members button to see an overview of the members.

8. To change the order of routing rules, click Modify the sequence, and then the item you want to move and click Up, Down, To top, or To bottom.

   Note: Unlike routing keywords, the order in which the routing rules are listed affects how they are applied. A rule is matched when properties associated with the package and/or the user or group involved in the request satisfy the criteria of the rule. The rules are evaluated in order until the first one is matched, and the request is routed to the server group named by the first rule that was matched. You can change the order of the rules by clicking Modify the sequence.
9. Click OK.

Specify Gateway Mappings for Series 7 PowerPlay Data

IBM® Cognos® for Microsoft® Office users may send requests to Report data service (RDS) for data that resides on a Series 7 PowerPlay® server. Report data service (running on the IBM Cognos application server) communicates with Series 7 PowerPlay through the Series 7 PowerPlay Enterprise Server gateway.

If the network configuration prohibits application server access to the Web tier server that hosts the Series 7 PowerPlay Enterprise Server gateway, then a second internal Series 7 PowerPlay Enterprise Server gateway must be installed in the application server tier. In this type of configuration, you can specify the location of the Series 7 PowerPlay server by using the Gateway Mappings setting in Server Administration.

Steps

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Status tab, click System.

4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, and then click Report data.

5. Click the arrow next to reportDataService to view the Actions menu, and then click Set properties.

6. Click the Settings tab.

7. In the Value column, click Edit for Gateway mappings.

8. Click the check box Override the settings acquired from the parent entry.

9. Click Add a mapping.

10. For Application gateway (external), type the address of the Web server.

11. For Application gateway (internal), type the address of the Series 7 PowerPlay server.

12. Click OK.

Rename Dispatchers

As a security measure, you can rename dispatchers if you do not want to reveal the host computer name, port number, servlet, or path of the dispatcher (p. 151).

Typically, server administrators can view and change the name of dispatchers.

We recommend that when renaming a dispatcher, you do not use any information that reveals the host computer name or port, or other system or path information. However, it is important to remember where the dispatcher is installed, for monitoring purposes.
Tip: If you rename a dispatcher and need to access the host, port, and path information, you can use the Software Development Kit methods to find this information in the dispatcherPath property of the Dispatcher Object.

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

Steps
1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click All dispatchers.
5. Click the arrow next to the dispatcher to view the Actions menu, and then click Set properties.
6. In the Name box, type the new name for the dispatcher.
   Use a meaningful name to help you distinguish dispatchers. Do not reveal system information in the name.
7. If you want, add a screen tip and description information.
8. Click OK.

Test Dispatchers
To evaluate how IBM® Cognos® software is performing, you can test the status of dispatchers. You can also ensure that the dispatchers are responding and view the uptime, which is the time in seconds during which the dispatchers are working without failure.

You can also view the status of dispatchers and service and review log messages.

When you test a dispatcher, you also test the services that belong to that dispatcher.

You must have the required permissions to access IBM Cognos Administration (p. 283).

Steps
1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. Determine the dispatchers that you want to test then follow the instructions in this table. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu and then click the items you want to display.
With all servers displayed, in the upper right corner of the Scorecard pane, click the arrow to view the Group actions menu, and then click Test.

Tip: To apply an action to only some entries, select check boxes for one or more entries and then click the action that you want.

With all server groups displayed, in the upper right corner of the Scorecard pane, click the arrow to view the Group actions menu, and then click Test dispatchers.

With all servers displayed, click the arrow next to the server to view the Actions menu, and then click Test.

With all dispatchers displayed, click the arrow next to the dispatcher to view the Actions menu, and then click Test.

A dialog box appears and confirms the action.

5. Click OK.

If dispatchers are not performing as they should, you can tune server performance by changing their configuration settings (p. 159).

**Administering Failover for Multiple Dispatchers**

In a distributed IBM® Cognos® software installation, you may choose to configure each of your gateway components to communicate with more than one dispatcher for failover purposes. The gateway components scan their associated dispatchers to ensure that requests are routed to dispatchers that are in service and responding correctly. You can set the frequency with which these scans are executed.

For information about configuring multiple dispatcher, see the "Configuring Gateway Computers" topic in the *Installation and Configuration Guide*.

**Set the Frequency of Dispatcher Status Scans**

You can specify how often dispatchers are scanned to determine their current status for failover purposes.

Use the following parameters:

- ConnectionCheckingSleepTime

  Specifies, in seconds, the interval between scans for the state of dispatchers.

  Valid settings are 1 to 2147483647. Settings less than 5 may consume too many resources (CPU time and network bandwidth). The default setting is 30.
• **ConnectionCheckingQuick SleepTime**

  Specifies, in seconds, the interval between scans when no operational dispatchers are found. This value of this parameter must be less than ConnectionCheckingSleepTime.

  Valid settings are 1 to 2147483647. Settings less than 5 may consume too many resources (CPU time and network bandwidth). The default setting is 5.

**Steps**

1. Copy the `c10_location/cgi-bin/cognoscgi.conf.sample` file to `c10_location/bin` and rename it `cognoscgi.conf`.

2. Open the `cognoscgi.conf` file in an editor that can save files in UTF-8 format.

3. Add the following lines to the file:
   
   ```
   ConnectionCheckingSleepTime=time in seconds
   ConnectionCheckingQuickSleepTime=time in seconds
   ```

4. Save the `cognoscgi.conf` file in UTF-8 format.

---

**Set the Frequency of Dispatcher Scans for a Servlet Gateway**

If you have chosen to use Servlet Gateways, you can specify how often they scan dispatchers for their current status. Traffic is routed to another dispatcher if the first one fails.

Use the following parameters:

• **pingPeriod**

  Specifies, in seconds, the interval between scans for the state of dispatchers.

  Valid settings are 1 to 2147483647. Settings less than 5 may consume too many resources (CPU time and network bandwidth). The default setting is 180.

• **fileCheckPeriod**

  Specifies, in seconds, the interval between startup configuration file checks for new dispatchers.

  Valid settings are 1 to 2147483647. The default is 30.

For information about gateways and URIs, see the *Installation and Configuration Guide*.

**Steps**

1. Open the Servlet Gateway `web.xml` file, located either in `c10_location/war/gateway/` or in the deployment directory of the servlet, depending on which server you are using, in an editor that supports saving files in UTF-8 format.

2. Change the values for the parameters as required.

   ```
   <!-- The number of seconds between pings to dispatcher -->
   <param-name>pingPeriod</param-name>
   <!-- A non-zero positive integer -->
   <param-value>180</param-value>
   </init-param>
   <init-param>
   <!-- The number of seconds between checking the startup file -->
   ```
for changed dispatchers -->
<param-name>fileCheckPeriod</param-name>
<!-- A non-zero positive integer -->
<param-value>30</param-value>
</init-param>

3. Save the web.xml file in UTF-8 format.

Securing Dispatchers

Users of IBM® Cognos® software can enter XPath search paths in the address field of a Web browser, or in hyperlinks. The users can input any search path syntax against search path parameters in the user interface. IBM Cognos software relies on the Content Manager Access Control List (ACL) to check the objects that are returned to the user.

In some cases, malicious users could see the dispatcher name in IBM Cognos Connection. This can pose a security risk, even though the users cannot click the dispatcher name or perform any actions on it.

To avoid this type of security risk, administrators can change the default dispatcher name. The default dispatcher name is `computer_name`:9300 and it can be changed to, for example, `server1` to mask the port number and host name. For more information, see "Rename Dispatchers" (p. 147)

For more information about other security technics used in IBM Cognos Connection, see the *Architecture and Deployment Guide*.

Content Manager Computers

Your installation may include more than one Content Manager, each on a different computer. One Content Manager computer is active and one or more Content Manager computers are on standby.

Ensure that the clocks on each computer where Content Manager is installed are synchronized. If they are not, you may experience odd behavior if a failover occurs. For example, there may be a delay before the status of a newly disabled server is updated in IBM® Cognos® Administration.

You can set advanced Content Manager parameters (p. 154) for the following:

- database connection pool settings (p. 152)
- sorted entries for non-English locales (p. 152)
- Content Manager synchronization (p. 153)
- control browsing of external namespaces (p. 153)
- set cache size limit for Content Manager cache service (p. 154)
- reduce the Content Manager load by storing user session files on the report server (p. 155)

For more information about Content Manager, see the *Installation and Configuration Guide*.

You must have the required permissions to access IBM Cognos Administration functionality (p. 283).
Managing Database Connection Pool Settings for Content Manager

Content Manager uses database connections to access the content store. You can change connection pool settings for Content Manager to increase performance.

With pooled connections, Content Manager does not have to create and open connections for new requests. This provides faster response times. However, pooled connections reserve database resources, so idle connections should be closed if they are not needed.

You can manage the number of connections to the content store by limiting the maximum number of connections and by specifying how long connections stay in the pool before they are automatically closed.

The following parameters are available:

- **CM.DbConnectPoolMax**
  Specifies the maximum number of concurrent database connections that the content store allows.
  
  This parameter applies only to the Content Manager connection pool settings. If you have other services that access the same content store, there may be more concurrent database connections than specified in this parameter.

  The valid settings are -1, or 5 to 2147483647, or the database setting, whichever is less. The default is -1 (unlimited).

- **CM.DbConnectPoolTimeout**
  Specifies in milliseconds the maximum length of time that a thread waits for a connection to be available from the pool.

  The valid settings are -1 to 2147483627. A setting of 0 specifies that threads never wait for a connection if one is not available immediately. The default is -1 (unlimited).

- **CM.DbConnectPoolIdleTime**
  Specifies in milliseconds the minimum length of time that a connection stays idle in the pool. This parameter is used only if the value of the DbConnectPoolCleanUpPeriod setting is positive.

  The valid settings are -1 to 2147483647. A setting of 0 or -1 specifies that idle connections are closed when Content Manager restarts. The default is 300000 (5 min).

- **CM.DbConnectPoolCleanUp Period**
  Specifies in milliseconds the length of time between invocations of a cleanup thread that closes idle connections in the pool that exceed the setting of DbConnectPoolIdleTime.

  The valid settings are -1 to 2147483647. The default is 300000 (5 min).

Sorting Entries for Non-English Locales

If you use a locale other than English, entries in IBM® Cognos® Connection may not be sorted correctly. You can correct this problem for an Oracle or Microsoft® SQL content store by using the CM.SortCollation setting.
For example, to sort entries in an Oracle database using a Chinese phonetic collation, set CM.SortCollation parameter to SCHINESE_PINYIN_M.

For information about supported collations, see the Oracle and SQL Server documentation. Setting the CM.SortCollation value has no effect on Content Manager running against DB2 or Sybase databases.

Managing Content Manager Synchronization

If your installation includes standby Content Manager computers, you can set parameters that specify Content Manager standby activities. You can specify how often checks occur to ensure that the active dispatcher has not failed, how long it takes to determine which Content Manager is active when failover occurs and at startup, how often an active Content Manager sends a response when it is busy, and how long a short network interruption can be without causing a failover.

The following parameters are available:

- **CM.CMSync_NegotiationTime**
  Specifies in milliseconds the length of time that it takes to determine the active Content Manager when a failover occurs.
  The valid settings are 1 to 9223372036854775807. The default is 2000.

- **CM.CMSync_NegotiationTimeForStartUp**
  Specifies in milliseconds the length of time that it takes to determine the active Content Manager at startup.
  The valid settings are 1 to 9223372036854775807. The default is 60000.

- **CM.CMSync_CheckActive Time**
  Specifies in milliseconds the length of time that it takes for an active Content Manager to become standby when another Content Manager becomes active.
  The default is 10000.

- **CM.CMSync_PingTimeout**
  Specifies in milliseconds the length of time that it takes for a busy Content Manager to send a response if it is running.
  The valid settings are 1 to 9223372036854775807. The default is 120000.

- **CM.CMSync_ShortNetwork InterruptionTime**
  Specifies in milliseconds the length of time that a short network interruption can occur without causing a failover.
  The valid settings are 1 to 9223372036854775807. The default is 3000.

Control Browsing of External Namespaces

You can control whether users can browse external namespaces.

When the CM.SecurityQueryRequiresRead setting is set to true, the Content Manager prevents browsing of external namespaces when the external namespace policy is updated to deny read
permissions to users or groups. This setting controls whether the Content Manager forces a read
permission filter for external namespace query results. The default is false.

**Set Advanced Content Manager Parameters**

You can set advanced Content Manager parameters. For information about parameters, see "Content Manager Computers" (p. 151).

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, and then click Content Manager.
5. Click the arrow next to ContentManagerService to display the Actions menu, and then click Set properties.
6. Click the Settings tab.
7. Click Edit next to Advanced Settings.
8. Select Override the settings acquired from the parent entry.
9. In the Parameter column, type the parameter name. For example, type CM.DbConnectPoolCleanUpPeriod.
10. In the Value column, type the associated value for the setting.
11. Continue typing setting names and values as required.
12. Click OK.
13. On the Set properties page, click OK.

**Set the Cache Size Limit for the Content Manager Cache**

You can specify the upper limit of the cache size, as a percentage of the JVM heap size. The default is 10%. Valid values are 0 to 100. Increasing the cache size can reduce the load on the Content Manager, allowing it to serve more distributed nodes. However, setting this value too high may cause out-of-memory errors in the dispatcher.

Setting the value to 0 (zero) disables the cache system-wide, sending all query requests directly to the Content Manager, which may degrade system performance. However, this is useful for comparing performance with and without the cache.

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Status tab, click System.

4. In the upper-left corner of the Scorecard pane, click the arrow next to All servers to view the Change view menu, then select Services, Content Manager Cache.

5. Click the arrow next to ContentManagerCacheService to display the Actions menu, and then click Set properties.

6. Click the Settings tab.

7. In the Value column, change the number for Heap limit for the content manager cache service.

8. Type the setting that you want, and click OK.

**Reduce the Content Manager Load by Storing User Session Files Locally**

When a user runs an interactive report, the report server sends a request to the Content Manager, asking it to store the report output in the session cache for the user. Such report output may be in one of the following formats: PDF, HTML with images, Microsoft® Excel spreadsheet software, CSV, or XML.

To reduce the processing load on the Content Manager, user session files are stored on the report server local file system. By default, this location is on the report server. You can change the location to a remote computer, such as a shared directory on Microsoft® Windows® operating system or a common mounted directory on UNIX® operating system. For more information, see the topic about changing the location of temporary report output in the Installation and Configuration Guide.

If you’re upgrading, user session files are stored in Content Manager. You will need to change the report server local file system if you want to reduce the Content Manager load.

Storing temporary files might result in increased disk usage. Make sure to allocate sufficient space for the files.

This will not interfere with older versions of applications, such as Software Development Kit, which still send requests to the Content Manager.

The following parameters are available:

- **Temporary objects location**
  
  Specifies the location of temporary cache files. To store the temporary cache files on the report server, select ServerFileSystem. To store the temporary cache files on the Content Manager, select ContentStore.
  
  The default is ServerFileSystem.

- **Temporary objects lifetime**
  
  Specifies in hours the length of time that temporary cache files are kept. If you set this to zero, files are kept until they are manually deleted.
This setting is used only by the dispatcher. The report server deletes temporary cache files when the browser is closed or when the user clicks the back button in the browser. If the report server does not delete the files, the dispatcher uses this setting to delete the files.

The default is 4 hours.

There is also a setting in Cognos Configuration for encrypting temporary files, which is not affected by the Temporary objects lifetime or the Temporary objects location settings. For more information, see the Installation and Configuration Guide.

**Steps**
1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Dispatchers and Services.
4. Click the Set Properties - Configuration button in the upper right corner then click Settings.
5. From the Category menu, click Tuning.
6. Change the settings for Temporary objects location and Temporary objects lifetime, as required.
7. Click OK.

**Override the (Default) Locale Processing in the Prompt Cache**

You can override the locale processing in the prompt cache for all reports using the Report Service parameter RSVP.PROMPTCACHE.LOCALE.

When the RSVP.PROMPTCACHE.LOCALE parameter is set, the specified locale is used instead of the locale specified in the report whenever prompt cache data is created, updated, or used. This means that a single prompt cache is used for each report regardless of the report user’s locale.

**Steps**
1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu, and then click Services and click Report.
5. Click the arrow next to ReportService to display the Actions menu and click Set properties.
6. Click the Settings tab.
7. Click Edit next to Advanced Settings.
8. Select Override the settings acquired from the parent entry.
9. In the Parameter column, type RSVP.PROMPTCACHE.LOCALE.
10. In the Value column, type the associated value for the setting.

11. Click OK.

12. On the Set properties page, click OK.

**Maintain the Content Store**

You can find and fix inconsistencies within the content store or between the content store and external namespaces.

You can create content maintenance tasks and run them on demand. You can run content maintenance tasks at a scheduled time or based on a trigger, such as a database refresh or an email (p. 371). You can schedule content maintenance tasks as part of a job (p. 368), or as part of an agent (p. 461). You can also view the run history of content maintenance tasks (p. 359).

Content maintenance tasks can check for inconsistencies within the content store due to missing data or obsolete data or between the content store and external namespaces.

**Internal Content Store Maintenance**

Missing data within the content store may cause updates to fail. Obsolete data may prevent you from creating new objects. When a content store maintenance task fixes the content store, it adds default values for the missing data, which you can update later. It also permanently deletes any obsolete data. To ensure that you do not lose any data that you wanted to keep, we recommend that you choose the find mode first and check the results before fixing the content store.

When you find and fix the data, the content store is not fixed while the content maintenance task is running. Instead, Content Manager fixes the inconsistencies in the content store the next time it starts up.

**Important:** After you run a content maintenance task to find and fix the content store, back up your content store before you restart Content Manager.

We recommend that you perform internal maintenance checks regularly, but it is particularly important to do so before you upgrade, to ensure the consistency of the content stores.

**Content Store Maintenance on External Namespaces**

When you delete users in your authentication provider, the user account information remains in the content store. You can use the IBM® Cognos® Administration to find user information that still exists in the content store and fix the content store by deleting any users that do not exist in your external namespaces. You can also delete individual user profiles from the content stores (p. 409).

If you want to run a content maintenance task on more than one namespace, do one of the following:

- If you want to run the content maintenance task now, simply log on to the namespaces and create the content maintenance task.

- If you want to schedule a content maintenance task to run in the future or on a recurring basis, keep in mind that a scheduled content maintenance task runs against the namespaces that you select when you create the content maintenance task. Before you schedule a content maintenance task, ensure that your credentials contain logon information for each namespace by renewing...
the credentials after you log on to every namespace that you select to run the content maintenance task against.

**Tip:** Click *My Area Options, My Preferences*, click the *Personal* tab, and then click *Renew the credentials*.

You must have access permissions for each selected external namespace and read permissions for all user accounts in each external namespace. If you do not have read permissions for a user account, it is assumed that the user was deleted from the namespace. When you run a content maintenance job, the user information in the content store is either listed as inconsistent (for *Find only*) or automatically deleted (for *Find and fix*).

You must have the required permissions to access *IBM Cognos Administration*. For more information, see "Secured Functions and Features" (p. 283).

**Steps to Create a Content Store Maintenance Task**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click *Launch, IBM Cognos Administration*.
3. On the *Configuration* tab, click *Content Administration*.
4. Click the arrow on the new content maintenance button on the toolbar, and then click *New Consistency Check*.
5. Type a name and, if you want, a description and screen tip, and click *Next*.
6. Choose the consistency check that you want:
   - To check the content store for inconsistencies, click *Internal references*.
   - To run content maintenance on namespaces, click *References to external namespaces* and select the namespaces that you want.
7. Click *Next*.
8. Choose the action that you want:
   - To run the task now or later, click *Save and run once* and click *Finish*. Specify a time and date for the run. Click *Find only* or *Find and fix*, and then click *Run*. Review the run time and click *OK*.
   - To schedule the task at a recurring time, click *Save and schedule* and click *Finish*. Then, select frequency and start and end dates. Click *Find only* or *Find and fix* and click *OK*.
     **Tip:** To temporarily disable the schedule, select the *Disable the schedule* check box. To view the schedule status, see "Manage Scheduled Activities" (p. 357).
   - To save the task without scheduling or running, click *Save only* and click *Finish*.

**Steps to Run a Content Store Maintenance Task**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Configuration tab, click Content Administration.

4. Click Run with options next to the content maintenance task.

5. Select the Now check box to run the content maintenance task immediately or the Later check box to set a day and time.

6. Click Find or Find and fix.

7. Click Run.

**Migrating PowerPlay Reports Published to IBM Cognos BI**

You can migrate IBM® Cognos® Series 7 PowerPlay® reports published to IBM Cognos Connection to Report Studio or Analysis Studio, using the Open With Analysis Studio or Open With Report Studio functionality. The migration tools must already be installed.

For information about migrating PowerPlay reports or installing migration components, see the IBM Cognos Business Intelligence Migration Assistant or the IBM Cognos PowerPlay documentation.

**Tune Server Performance**

Regardless of the size of your organization, you should include performance tuning as a regular part of administering servers. By tuning the configuration settings of dispatcher and services, you can optimize the speed and efficiency of IBM® Cognos® software.

For users, optimal performance means that their reports run fast and without errors. For you, it means that IBM Cognos software is stable and that the users are happy.

Ideally, you want to tune the servers to meet the user demand at the peak usage times.

You may need to add dispatchers to your installation to meet the demands of users. Or, you may need to distribute your installation or upgrade the computer on which IBM Cognos software is installed. For more information, see the Installation and Configuration Guide and the Architecture and Deployment Guide.

The level of logging (p. 106) can affect performance. When IBM Cognos software logs more detail, more resources are allocated to logging and fewer resources are then available to run reports.

Before you change any settings, ensure that you tested dispatchers (p. 148), and reviewed the pertinent log messages (p. 104). You should also understand your performance requirements.

**Models**

Ensure that your models are optimized for reporting. For more information, see the Framework Manager User Guide.
Operating Systems

How IBM Cognos software performs is tightly related to the performance of the operating system of the computer where IBM Cognos software is installed. Therefore, it is important to ensure that your operating system is tuned.

Tuning Process

Tuning IBM Cognos software includes

- setting server group names for advanced dispatcher routing
- balancing requests amongst dispatchers (processing capacity)
- balancing dispatcher load with in-progress request factor
- using cluster compatible mode for dispatchers (load balancing)
- balance data movement task execution load
- setting usage during peak periods
- setting the maximum number of processes and connections and affinity settings
- setting queue time limits
- setting PDF file character encoding, font embedding, and compression types and levels
- setting the maximum execution time
- limiting hotspots that are generated in and Analysis Studio or Report Studio chart
- setting retention time for watch list output
- setting compression for email attachments
- setting e-mail attachment maximum size configuration parameters
- setting the report size limit for the report data service (governor limit)

Set Server Group Names for Advanced Dispatcher Routing

If you intend to define routing rules for reports (p. 144), you must set server group names for the dispatchers or configuration folders to which you want reports to be routed.

Steps

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click All dispatchers.
5. Click the arrow for the Actions menu next to the dispatcher and click Set properties.
6. Click the **Settings** tab.

7. Select **Tuning** from the **Category** list.

8. Type a name in the **Value** column for the **Server Group** property.

9. Click **OK**.

   You can use this server group name when you define routing rules.

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**Balance Requests Among Dispatchers**

If your installation includes more than one dispatcher, you can specify the proportion of requests that each dispatcher handles by changing their processing capacity. This is commonly referred to as load balancing. You typically set the capacity for a dispatcher based on the CPU speed of the computer where it is installed.

For example, a first dispatcher is installed on a 2 GHz computer and a second dispatcher on a 1 GHz computer. You set the processing capacity of the first dispatcher to 2.0 and the second to 1.0. The first dispatcher handles two-thirds of the requests while the second handles one-third of the requests. If you set the capacity of both dispatchers to 1.0, requests are sent to each dispatcher alternately.

The default processing capacity for each dispatcher is 1.0.

Affinity settings (p. 166) take precedence over balance request settings.

You can also control dispatcher load balancing by setting the in-progress request factor. See "Balance Dispatcher Load with In-Progress Request Factor" (p. 162). You can also turn off the weighted round robin format of load balancing for the dispatcher. See "Use Cluster Compatible Mode for Dispatchers " (p. 163).

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

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**Steps**

1. Start IBM® Cognos® Connection.

2. In the upper-right corner, click **Launch, IBM Cognos Administration**.

3. On the **Status** tab, click **System**.

4. Click the arrow for the Actions menu next to **System** and click **Set properties**.

5. Click the **Settings** tab.

6. Select **Tuning** from the **Category** list.

7. In the **Value** column, type a new value for the **Processing capacity**, and then click **OK**.

   The new value takes effect immediately.
Balance Dispatcher Load with In-Progress Request Factor

The weighted round robin format of load balancing treats all requests as equal, and all dispatchers as equally capable of handling the number of requests that they receive. However, different requests require more or less processing power. Dispatchers also run on different servers, with different processing capabilities. For example, if a dispatcher falls behind because it is running on a slower server or because it is getting a lot of requests that require a lot of processing power, the round robin format still treats all dispatchers the same.

You can set the in-progress request factor to provide feedback to the round robin algorithm, telling it how well each dispatcher is doing. Dispatchers that start to fall behind have a higher number of in-progress requests in their queue. The round robin algorithm can use this information to avoid sending new requests to those dispatchers until they're no longer overloaded.

The inProgressRequestFactor advanced setting controls how much feedback is sent to the round robin algorithm. The larger the value, the less likely it is that a node with more in-progress requests will be used. Our research shows that the ideal amount of feedback is the default value of 2.0. To use a simple round robin format, set it to 0.0 at a system level.

You can set the value at the system level or at the service level. The system level setting is used as the default for all services. The service settings take precedence over the system level setting.

You can also control dispatcher load balancing by setting capacity processing. See "Balance Requests Among Dispatchers" (p. 161). You can also turn off the weighted round robin format of load balancing for the dispatcher. See "Use Cluster Compatible Mode for Dispatchers " (p. 163).

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

Steps to Set the Property System-Wide

1. Start IBM® Cognos® Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Status tab, click System.

4. Next to System, click the arrow for the Actions menu, and click Set properties.

5. Click the Settings tab.

6. Next to Advanced Settings, click Edit.

7. Select Override the settings acquired from the parent entry.

8. To set a system-wide default to be used by all services, in the Parameter column, type DISP.default.inProgressRequestFactor

9. In the Value column, type the associated value that will be used as a default for all services.

10. Click OK.

11. On the Set properties page, click OK.
Steps to Set the Property for a Specific Service

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, then click the service that you want.
5. Next to the dispatcher, click the arrow for the Actions and click Set properties.
6. Click the Settings tab.
7. Next to Advanced Settings, click Edit.
8. Select Override the settings acquired from the parent entry.
9. In the Parameter column, type DISP.<service_name>.inProgressRequestFactor, where <service_name> is the name of the service.
   For example, for report service, type DISP.reportService.inProgressRequestFactor.
10. In the Value column, type the associated value that will be used as a default for all services.
11. Click OK.
12. On the Set properties page, click OK.
    The new value takes effect immediately.

Use Cluster Compatible Mode for Dispatchers

If your IBM® Cognos® servers operate within a load balancing infrastructure, you can turn off the weighted round robin format of load balancing for the dispatcher. Otherwise, load balancing may be duplicated by the cluster and by IBM Cognos software, which can degrade performance.

You can set the dispatcher property named loadBalancingMode either to weightedRoundRobin or clusterCompatible.

In weightedRoundRobin mode, the dispatcher sprays requests in a weighted round fashion, according to the configuration settings for the dispatcher (p. 161). This is the default mode.

In clusterCompatible mode, non-affinity requests are processed locally if possible. If there is no service on the local dispatcher, the request fails. This ensures that IBM Cognos software respects any load balancing performed by your own load balancing infrastructure.

You can set the loadBalancingMode property for single dispatchers or for a group of dispatchers in a configuration folder (p. 143). Because it is an inherited property, you can move dispatchers to a configuration folder and set the loadBalancingMode property for the folder to quickly set the property for a group of dispatchers.
You can also control dispatcher load balancing by setting the in-progress request factor, see "Balance Dispatcher Load with In-Progress Request Factor" (p. 162), or by setting capacity processing, see "Balance Requests Among Dispatchers" (p. 161).

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

Steps
1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. Click the arrow for the Actions menu next to System and click Set properties.
   Tip: You can also change the load balancing setting at the dispatcher level.
5. Click the Settings tab.
6. Select Tuning from the Category list.
7. In the Value column, select the value for the Load Balancing Mode, either Weighted Round Robin or Cluster Compatible, and then click OK.
   The new value takes effect immediately.

Balance the Data Movement Task Execution Load

To improve server performance, you can balance the execution load when more than one IBM Cognos software instance is running the Data movement service. Some data movement tasks, such as JobStreams, are comprised of multiple processes. When such a task runs, the default is for all processes to run on a single instance of the Data movement service.

You can use the DMS.DistributeBuilds setting to distribute the DM Fact Build and Dimension Build JobStream nodes over several instances of the Data movement service. For more information, refer to your Data Manager documentation.

Steps
1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, and then click Data Movement.
5. Click the arrow next to Data Movement to view the Actions menu, and then click Set properties.
6. Click the Settings tab.
7. Click Edit next to Advanced Settings.
8. Select **Override the settings acquired from the parent entry**.

9. In the **Parameter** column, type **DMS.DistributeBuilds**.

10. In the **Value** column, type **TRUE** to enable data movement load balancing.

11. Click **OK**.

12. On the **Set properties** page, click **OK**.

**Set Usage Peak Periods**

Most organizations have a period of peak demand. This period is usually during business hours when employees are at work and run interactive reports. You can determine the start and end hours of the peak demand period for your organization.

During the peak period, you may want to set the number of connections and processes (p. 166) low enough so that jobs can run faster and system resources can process interactive requests from users. During the non-peak period, you can set the number of connections and processes higher because demands on the system are lower.

The default peak period is from 07:00 to 18:00. The default number of connections for each service during the peak period and during the non-peak period is four.

You must have the required permissions to access **IBM Cognos Administration** functionality. See "**Secured Functions and Features**" (p. 283).

**Steps**

1. Start **IBM® Cognos® Connection**.

2. In the upper-right corner, click **Launch, IBM Cognos Administration**.

3. On the **Status** tab, click **System**.

4. In the upper-left corner of the **Scorecard** pane, click the arrow to view the Change view menu. Click **All dispatchers**.

5. Click the arrow for the Actions menu next to the dispatcher and click **Set properties**.

6. Click the **Settings** tab.

7. Select **Tuning** from the **Category** list.

8. In the **Value** column, type new values for the following settings:
   - **Peak period start hour**
   - **Non Peak period start hour**

   **Tip:** If you want to reset a configuration setting to its default value, select its check box and click **Reset to default value**.

9. Click **OK**.
Set the Maximum Number of Processes and Connections

For the report service, the batch report service, and the data movement service, you can set the maximum number of processes and the maximum number of high affinity and low affinity connections that the dispatcher can open to handle requests. For the agent, Content Manager, data movement, delivery, job, and report data services, you can set the maximum number of connections. There are separate settings for peak and non-peak hours (p. 165).

**Maximum Number of Connections**

There is a maximum of one of each of these services per dispatcher: agent, Content Manager, data movement, delivery, job, report data. Connections handle one request from one service at a time. You can specify the maximum number of connections for each service during peak periods and non-peak periods using the following settings:

- Maximum connections for `<service_name>` service during non-peak period
- Maximum connections for `<service_name>` service during peak period

The default number of connections is four.

**Maximum Number of Processes**

There can be multiple report service, batch report service, and data movement processes on each dispatcher. You can specify the maximum number of processes during peak periods using the following settings:

- Maximum number of processes for the `<service_name>` during peak period
- Maximum number of processes for the `<service_name>` during non-peak period

The default number of processes for each service is two.

**Affinity Connections**

In addition, report servers accept low and high affinity connections to process requests from the batch report and report services. Servers also accept low and high affinity connections to process requests from the data movement service.

Low affinity requests can be handled by any report server. Typically, low affinity requests are used when a report or data movement run is initially requested.

High affinity requests are ideally handled by a specific report server. Typically, high affinity requests are for reports that were already requested and may include actions, such as going to the next page in a report. If the specific report server is not available or busy, then the report is rerun (low affinity request) on any report server and the next page (high affinity request) is directed to that server.

Affinity settings take precedence over balance request settings (p. 161) and advanced routing settings (p. 144).

If affinity settings are changed for a service while entries are running, the number of server processes could double. The number of processes may temporarily exceed the maximum setting while the change takes effect. This may cause problems if your system does not have enough memory for the interim period.
For more information about affinity connections, see the *Architecture and Deployment Guide*.

You can specify the number of low and high affinity connections for the report service, the batch report service, and the data movement service using the following settings:

- **Number of high affinity connections for the `<service_name>` during peak period**
- **Number of high affinity connections for the `<service_name>` during non-peak period**

For batch report service, the default number of low affinity connections is two. For the data movement service and report service, the default number of low affinity connections is four. The default number of high affinity connections for all services is one.

**Prerequisites**

You must have the required permissions to access *IBM Cognos Administration* functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services and then click the service you want.
5. Click the arrow for the Actions menu next to the service and click Set properties.  
   **Tip:** For report service and batch report service, you can also set some settings at the system or dispatcher level.
6. Click the Settings tab.
7. Select Tuning from the Category list.
8. In the Value column, type new values for the processes and connections that you want to change.  
   **Tip:** If you want to reset a configuration setting to its default value, select its check box and click Reset to parent value.
9. Click OK.

**Specify Queue Time Limits**

You can specify the maximum number of seconds that interactive requests made by users wait in the queue for an available report service or data movement connection. If a request cannot be processed within the time limit, the request fails and users receive an error message.

If your operating system has adequate resources and IBM® Cognos® software is properly configured, requests should not take longer than the time limit.

When you specify a time limit, consider the maximum number of seconds that you want users to wait for a response. The default queue time limit is 240 seconds.
Requests for the batch report service stay in the queue indefinitely.

If you have a high user load (over 165 users) and interactive reports are running continuously in a distributed installation, increase the queue time limit to 360 to avoid getting error messages. You may also want to increase the asynchronous timeout setting to avoid getting error messages. For more information, see the IBM Cognos Business Intelligence Installation and Configuration Guide.

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. Click the arrow for the Actions menu next to System and click Set properties.
   - **Tip:** You can also change the queue time limit settings at the dispatcher or service level.
5. Click the Settings tab.
6. Select Tuning from the Category list.
7. In the Value column, type a new value for the Queue time limit of report service (seconds) or Queue time limit of data movement service (seconds) setting.
   - **Tip:** If you want to reset a configuration setting to its default value, select its check box and click Reset to default value.
8. Click OK.

**PDF File Settings**

There are four settings for PDF files that together determine the speed at which PDF files are created and the size of PDF files.

The ideal settings are different for different environments. For example, if you create PDF files as part of batch jobs overnight, you may not care about speed. You may choose settings that create small files that can be easily distributed but take longer to generate. If you create ad hoc PDF files or complex PDF files with many charts and graphics, you may care more about speed than file size.

You can use different PDF file settings for report service and for batch report service.

**PDF Character Encoding**

PDF character encoding determines the character set that is used to create PDF files. You can choose to use Windows1252 encoding, the standard Microsoft® Windows® operating system single-byte encoding for Latin text in Western writing systems, or unicode (UTF-16) encoding. By default, PDF character encoding is determined automatically, based on the characters found in the file.

The settings names are:

- PDF Character Encoding for report service
PDF Character Encoding for batch report service.

<table>
<thead>
<tr>
<th>Value</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows1252</td>
<td>If you know your files contain only Windows1252 characters, use this setting for faster PDF file creation. Any unicode (UTF-16) character without a Windows1252 equivalent is converted to an indeterminate Windows1252 character.</td>
</tr>
<tr>
<td>Font</td>
<td>If you know your files contain non-Windows1252 characters (for example, Chinese characters), use this setting for faster PDF generation than with the Auto setting. PDF built-in fonts are all Windows1252 character encoded. Almost all other fonts use the UTF-16 character set. This setting typically creates larger PDF files than the Windows1252 setting. It is possible for UTF-16 encoded files to gain better compression (see &quot;Content Compression Type&quot; (p. 170)).</td>
</tr>
<tr>
<td>Auto</td>
<td>Use this setting to automatically determine if Windows1252 or UTF-16 should be used to encode the text in the document. If large bodies of text must be analyzed, this is the slowest of the three settings. If speed is a concern you may choose to try the other values with various reports to determine the best setting for your environment. This is the default.</td>
</tr>
</tbody>
</table>

Font Embedding

To ensure that the fonts that are used in a report are available to all readers, fonts can be embedded in PDF files. In IBM® Cognos® Configuration, there are two font embedding lists, one for the report service and one for the batch report service.

Fonts can be specified as always embedded or never embedded. For example, fonts that you do not have a legal right to redistribute may be specified as never embedded. Fonts that are not available at your remote sales offices but are required to read PDF reports may be specified as always embedded.

For more information about the font embedding lists, see the Installation and Configuration Guide.

In IBM Cognos Administration, you can allow or disallow font embedding in report service and batch report service PDF files. You can also choose automatic font embedding. Keep in mind that files with embedded fonts are larger and take more time to generate. Embedding fonts can cause a strain on network resources. Fewer embedded fonts can reduce network resource consumption.

The license for some fonts prohibits embedding. Ensure that you have permission from the vendor to embed licensed fonts.

The settings names are:
- Option to allow the report service to embed fonts in generated PDF documents
- Option to allow the batch report service to embed fonts in generated PDF documents.

There are specialized fonts, such as bar-code fonts, that are always embedded when used. These settings do not control embedding of specialized fonts. PDF built-in fonts are never embedded.

<table>
<thead>
<tr>
<th>Value</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow</td>
<td>If you know that your audience does not have all the fonts they need to view PDF reports, use this setting. Files are larger and PDF output is generated more slowly. Fonts that are in the never embed list in IBM Cognos Configuration are prevented from being embedded. This is the default.</td>
</tr>
<tr>
<td>Disallow</td>
<td>If you know that your audience has all the fonts they need to view PDF reports, use this setting. Files are smaller and are generated faster. Fonts are not embedded unless they’re in the always embed list in IBM Cognos Configuration.</td>
</tr>
<tr>
<td>Auto</td>
<td>Automatically determines which fonts to embed. This setting takes the longest time to generate PDF reports. If the data contains only Windows1252 characters, both the always embed and the never embed list in IBM Cognos Configuration are used. If there is a conflict, the never embed list is used. Except for specialized fonts, unlisted fonts are usually embedded only if UTF-16 characters from that font are used in the file.</td>
</tr>
</tbody>
</table>

**Content Compression Type**

You can set the compression type to use when PDF reports are created. It takes longer to create PDF output for files with a higher compression type but the resulting files are smaller.

The content compression type specifies which data is compressed. The "Compression Algorithm Level" (p. 171) specifies how much the data is compressed. The combination of the two settings determines the final file size.

The settings names are:

- The PDF compression type for PDF documents created by the report service
- The PDF compression type for PDF documents created by the batch report service.

The choices for this setting, from lowest to highest compression type, are: Classic, Basic, Improved, Advanced, and Full. Classic is the default.
Compression type refers to the amount of data that is compressed within a PDF report. Typically, less compression means faster compression and a larger document. Versions of the Adobe® PDF Acrobat Reader earlier than version 6.0 do not support compression types higher than Classic. There are rare cases where compression causes small files to become slightly larger.

**Compression Algorithm Level**

You can specify the compression algorithm level to use when PDF files are created.

The content compression type specifies which data is compressed. The "Content Compression Type" (p. 170) specifies how much the data is compressed. The combination of the two settings determines the final file size.

The settings names are:

- Content Compression level for PDF documents created by the report service
- Content Compression level for PDF documents created by the batch report service

Valid choices for compression algorithm level are 0 (no compression) to 9 (maximum compression). The default is 9.

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Service, and the service you want.
5. Click the arrow for the Actions menu next to the service and click Set properties.
6. Click the Settings tab.
7. Select Tuning from the Category list.
8. In the Value column, type the value that you want for each of the PDF file settings.
   - Tip: If you want to reset a configuration setting to its default value, select its check box and click Reset to default value.
9. Click OK.

**Set Maximum Execution Time**

You can set the maximum execution time for the report service, batch report service, and data movement service. If the time limit is exceeded, the execution is canceled.

For example, you may want to limit execution time if you know that there is something wrong if tasks take longer. You may also want to ensure that no one task monopolizes server time to the detriment of others.

The default is zero, which specifies no limit on execution time.
This setting has priority over the governor limit setting. See "Set the Report Size Limit for the Report Data Service" (p. 176).

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click **Launch**, IBM Cognos Administration.
3. On the **Status** tab, click **System**.
4. In the upper-left corner of the **Scorecard** pane, click the arrow to view the Change view menu. Click **Services** and the service you want.
   **Tip:** You can also change the queue time limit settings at the dispatcher or service level.
5. Click the arrow for the Actions menu next to the service and click **Set properties**.
   **Tip:** You can also set these service settings at the **System** level.
6. Click the **Settings** tab.
7. Select **Tuning** from the **Category** list.
8. In the **Value** column, type a new value for the **Maximum execution time for the <service_name> (seconds)** setting.
9. Click **OK**.

**Specify How Long to Keep Watch List Report Output**

You can keep watch list report output for a specific number of runs or for a specific number of days or months. For example, you can keep up to 10 versions or you can keep the report output versions for 2 days or 6 months.

There are two settings:

- If you want to specify the maximum length of time to keep watch list report output, use the **Periodical document version retention age** setting. The default is 1 day. In the **Settings** pane, this appears as 1 Day(s).
- If you want to specify the maximum number of copies to keep, use the **Periodical document version retention count** setting. There is no default.

If you specify both settings, whichever is reached first determines how many versions are kept.

The settings that you choose depend on how often watch list report output is generated and your system resources. For example, if a report runs nightly to provide output during the day on demand via the portal and watch lists are updated on a weekly basis, you may only want to keep four version each month, but no more than 5 versions during that time. If a job is used to run reports and watch lists are updated only when the job is run, you may only want to keep 1 version each day.

For more information on watch lists, see "Enable Watch Rules for a Report" (p. 442).
You must have the required permissions to access **IBM Cognos Administration** functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Status** tab, click **System**.
4. Click the arrow for the Actions menu next to **System** and click **Set properties**.
5. Click the **Settings** tab.
6. Select **Tuning** from the **Category** list.
7. In the **Value** column, type a new value for the **Periodical document version retention age** setting and select **Day(s)** or **Month(s)** from the drop-down menu.
8. In the **Value** column, type a new value for the **Periodical document version retention count** setting.
9. Click **OK**.

**Limit Hotspots That are Generated in an Analysis Studio or Report Studio Chart**

A hotspot in a chart appears when you pause a pointer over it. For example, a hotspot on a drill-down symbol or a tooltip gives details about the column, line, or pie slice. The browser response time increases with the number of hotspots. When charts with many members are generated, the hotspots can become an additional burden for the system resources, which can freeze the browser. To improve performance, limit the number of hotspots that are generated for Analysis Studio and Report Studio charts.

When you limit the number of hotspots, priority is given to items such as axis labels and legend labels before individual graphical elements such as bars, pie slices, and so on. Depending on the number of items in a chart and the setting for maximum number of hotspots, some axis items may have hotspots while other axis items and all graphical elements do not, or all axis items and some graphical elements may have hotspots while other graphical elements do not.

The maximum hotspot setting in Report Studio overrides this setting. For more information, see the IBM® Cognos® Report Studio User Guide.

The default is an unlimited number of hotspots.

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Status** tab, click **System**.
4. Click the arrow for the Actions menu next to **System** and click **Set properties**.
Tip: You can also change the hotspot setting at the dispatcher or service level.

5. Click the Settings tab.

6. Select Tuning from the Category list.

7. Locate the Number of hotspots generated in a chart by the Batch report service or the Number of hotspots generated in a chart by the Report service setting. In the Value column, click the arrow next to Unlimited and then click <Number>. Type a new value for the maximum number of hotspots.

8. Click OK.

Setting E-mail Attachment Maximum Size Configuration Parameters

In IBM® Cognos® BI, you can choose to limit the size of e-mail attachments to avoid potential problems with abnormally large items. The allowable range is from 0-2047 MB. If you do not specify a value, then Cognos Connection applies no restrictions to the size of the e-mail attachment.

Before setting the e-mail size limit in Cognos Connection, you must know the e-mail size limit set in the e-mail server. The limit typically set by an e-mail server administrator is from 10 to 25 MB. If you need to deliver reports with a larger file size, consider using a different file transfer method, like FTP or secure copy.

If the limit set in Cognos Connection is lower than in the e-mail server, then the Cognos Connection setting overrides the e-mail server setting. For example, if the Cognos limit is 10 MB and the e-mail server limit is 20 MB, then a 15 MB attachment will be replaced with a plain text file containing a warning message by the Cognos BI server. It will be accepted by the e-mail server and delivered to the recipient. The plain text warning message informs the e-mail recipient that the oversized attachment has been removed and replaced with a warning message. The recipient would then have to view the report through Cognos Connection.

If the limit set in Cognos Connection is higher than the limit in the e-mail server, then the Cognos Connection setting does not override the e-mail server setting. For example, if the limit set in Cognos Connection is 20 MB and the e-mail server limit is 10 MB, then a 15 MB attachment will be sent by the Cognos BI server to the e-mail server, but will be rejected by the e-mail server.

Steps

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Configuration tab, click Dispatchers and Services.

4. Select the Dispatcher you want to configure.

5. Click the Set Properties - Configuration button in the upper right corner.

6. Click the Settings tab.

7. For the Environment category, next to the Advanced settings name, click the Edit link.

8. Select Override the settings acquired from the parent entry checkbox, if available.
9. For Parameter, type `mail.attachment.limit`.

10. Specify a Value for the `mail.attachment.limit` setting. The following settings are available.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Setting</td>
<td>Type 0 (zero). This is the default setting.</td>
</tr>
<tr>
<td>Setting E-mail attachment size</td>
<td>Type <code>n</code>, where <code>n</code> is the maximum size of the attachment in MB.</td>
</tr>
</tbody>
</table>

11. Click OK.

12. If you have more than one dispatcher configured, perform steps 4 to 10 for each remaining dispatcher.

13. Using IBM Cognos Configuration, you must stop and restart the IBM Cognos software.
    For information about stopping IBM Cognos software, see the *Installation and Configuration Guide*.

**Set Compression for Email Attachments**

In IBM® Cognos® Business Intelligence, you can choose to compress email attachments above a specific size, or disable compression. By default, compression is disabled. If you want email attachments compressed, change the default behavior using the configuration setting, **Maximum size of an uncompressed email attachment in MB**.

An email attachment must be at least 1MB to be compressed.

**Steps**

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Configuration tab, click Dispatcher and Services.

4. Click the dispatcher you want.

5. For DeliveryService, click the set properties button.

6. Click the Settings tab.

7. To filter the settings, in the Category box, click Tuning.

8. Specify a value for the **Maximum size of an uncompressed email attachment in MB** setting. The following settings that are available.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disable compression</td>
<td>Type 0 (zero). This is the default setting.</td>
</tr>
<tr>
<td>Goal</td>
<td>Action</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>Compress email attachments if the attachment is greater than ( n ).</td>
<td>Type ( n ), where ( n ) is the size of the attachment in MB.</td>
</tr>
<tr>
<td>( N ) is the size of the attachment in MB.</td>
<td></td>
</tr>
</tbody>
</table>

9. Click **OK**.

10. Click the **Configuration** link in the path at the top of the page.

You return to the list of dispatchers.

11. If you have more than one dispatcher configured, perform steps 4 to 10 for each remaining dispatcher.

12. Using IBM Cognos Configuration, stop and then restart IBM Cognos software.

   For information about stopping IBM Cognos software, see the *Installation and Configuration Guide*.

### Set the Report Size Limit for the Report Data Service

To limit the resources, such as memory, that are used by Report data service, IBM® Cognos® software restricts the size of the report data that can be sent out. If you receive errors in IBM Cognos for Microsoft® Office that a report result is too large, you can increase the size limit for report data by changing the Governor limit setting.

The maximum execution time setting (p. 171) has priority over this setting.

**Steps**

1. Start IBM Cognos Connection.

2. In the upper-right corner, click **Launch, IBM Cognos Administration**.

3. On the **Status** tab, click **System**.

4. In the upper-left corner of the **Scorecard** pane, click the arrow to view the Change view menu. Click **Services**, and then click **Report Data**.

5. Click the arrow next to **ReportDataService** to view the Actions menu, and then click **Set properties**.

6. Click the **Settings** tab.

7. In the **Value** column, change the number for **Governor limit (MB)**.

8. Click **OK**.
Tune Metric Studio Connections

You can set Metric Studio parameters that control both the number of established connections to the database server and how long unused connections are left open. Unused data source connections can affect Metric Studio performance and performance of other applications on your server.

To determine the settings that you should use, monitor connections to the database server during low, typical, and high use periods. For specific instructions, refer to your data source documentation.

For example, you have 500 users. Because keeping 500 connections open all the time could affect the performance of the database server, you set the initial number of connections to 100 and the maximum number of connections to 500. You set the timeout for unused connections to 10 minutes and set the period of time between unused connection checks to 5 minutes.

You set increment connections to 10. The number of open database connections changes in increments of 10 to match the user load as it increases and decreases throughout the day.

You must have the required permissions to access IBM Cognos Administration functionality(p. 283).

The following parameters are available:

- **initialConnections**
  
  The number of connections that Metric Studio service opens when a database is first accessed. These connections are never closed. They remain available to service the typical user load. Valid settings are 0 to 30,000. The default is 5. If you want all connections be closed when not in use, set to zero.

- **incrementConnections**
  
  The number of connections that Metric Studio service opens when more than initial connections are required to handle the user load. Connections are opened and closed in a block. Connections in a block are not closed until all connections in the block are unused. Valid settings are 1 to 30,000. The default is 5.

- **maximumConnections**
  
  The maximum number of connections that the Metric Studio service opens. The user receives an error when the maximum number of connections is reached, and all the allocated connections are processing other requests. Valid settings are 1 to 30,000. The default is 200. This setting must be greater than the **initialConnections** setting.

- **connectionIdleTimeout**
  
  The time in seconds that a connection is unused before it is closed. Valid settings are 1 to 30,000. The default is 3600 (1 hour).

- **connectionMaintenanceInterval**
  
  The time in seconds that the Metric Studio service waits before checking for unused connections that it will close. Valid settings are 1 to 30,000. The default is 3600 (1 hour).

**Steps**

1. Start IBM® Cognos® Connection.
Chapter 7: Server Administration

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Status tab, click System.

4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, and then click Metric Studio.

5. Click the arrow next to MetricStudioService to display the Actions menu, and then click Set properties.

6. Click the Settings tab.

7. Click Edit next to Advanced Settings.

8. Select Override the settings acquired from the parent entry.

9. In the Parameter column, type the parameter name.
   For example, type connectionIdleTimeout.

10. In the Value column, type the associated value for the setting.

11. Continue typing setting names and values as required.

12. Click OK.

13. On the Set properties page, click OK.

14. Restart the Metric Studio service for the new settings to take effect. For instructions, see "Stop and Start Dispatchers and Services" (p. 139).

Query Execution

There are three settings that you can use for query execution:

- set parameters for concurrent query execution (p. 178)
- set query prioritization (p. 180)
- enable conversion of numeric search keys to strings in queries(p. 183)

Set Parameters for Concurrent Query Execution

By default, IBM® Cognos® software executes queries in a report sequentially. Depending on your environment, you may be able to improve report run performance by enabling concurrent query execution. You can do this by setting advanced server properties for the report service, the batch report service, or both. When concurrent query execution is enabled, the report server determines which queries in the report can be run concurrently.

The report author must specify the queries in a report that are candidates for concurrent execution. For more information, see the IBM Cognos Report Studio User Guide.
RSVP.CONCURRENTQUERY.NUMHELPERSPERPROCESS
Use this parameter to enable concurrent query execution and set the maximum number of query execution helpers for each report service or batch report service process.

The default value is 0, meaning that the concurrent query execution disabled.

Each query execution helper results in an additional data source connection. For example, a report service has four processes with two high affinity connections and two low affinity connections:

- If the maximum number of query execution helpers is set to 0 (disabled), the maximum number of data source connections created by the report service is 16 (two low affinity connections plus two high affinity connections plus zero query execution helpers times four processes).

- If the maximum number of query execution helpers is set to 2, the maximum number of data source connections created by the report service is 24 (two low affinity connections plus two high affinity connections plus two query execution helpers times four processes).

RSVP.CONCURRENTQUERY.MAXNUMHELPERSPERREPORT
Use this parameter to specify the maximum number of query execution helpers for each report. This parameter is used to prevent a single report from consuming all available query execution helpers.

For example, a report has eight queries that can run concurrently:

- If RSVP.CONCURRENTQUERY.NUMHELPERSPERPROCESS and RSVP.CONCURRENTQUERY.MAXNUMHELPERSPERREPORT are both set to four, the report consumes all query helpers when executed. No other report is able to run queries concurrently until the report has finished executing.

- If RSVP.CONCURRENTQUERY.MAXNUMHELPERSPERREPORT is set to two instead, the report consumes two query helpers, leaving two for other reports to use.

The default value for this parameter is 1.

This setting has no effect unless RSVP.CONCURRENTQUERY.NUMHELPERSPERPROCESS is set to greater than 0.

RSVP.CONCURRENTQUERY.ENABLEDFORINTERACTIVEOUTPUT
Use this parameter to enable concurrent query execution when the report service is producing interactive output.

For interactive reports, if concurrent query execution is enabled, some queries may be unnecessarily executed because the results are not used. For example, all the queries for a multi-page report may execute with at least one query on each page, but the user may view only the first page. If you do not want to use resources for results that are not used in interactive reports, disable this parameter.

Authored prompt pages are not interactive output and are not affected by this setting.

The default value for this parameter is false, meaning disabled.
RSVP.PROMPT.EFFECTIVEPROMPTINFO.IGNORE

Use this parameter to disable the issuing of effectivePromptInfo attribute in metadata requests and effectively disable moving the prompt information from under the caption attribute of a level to the level itself.

The default value for this parameter is false, meaning disabled.

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

Steps

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, and then click (All).
5. Click the arrow for the Actions menu next to a Report or Batch report and click Set properties.
6. Click the Settings tab.
7. Click the set properties button for the report or the batch report service.
8. Click the Settings tab.
9. Click Edit next to Advanced Settings.
10. Select Override the settings acquired from the parent entry.
11. In the Parameter column, type a parameter name.
12. In the Value column, type the setting that you want to use.
13. Click OK.
14. On the Set properties page, click OK.

Set Query Prioritization

When you run a report with prompt controls defined, all parameter information is retrieved, including parameter information defined in the report, the model, and the data source. This is required for data typing and to align capabilities for prompt controls with those of its associated parameter. This operation can impact performance, especially when there are many or complex queries. From the user perspective, it can take too long to present the first prompt page or report page.

To increase speed, report authors can set a query hint in Report Studio to give a query priority in determining parameter information. Queries are prioritized based on where they are used and whether they contain filters. A priority group is the set of queries sharing similar attributes, such as a filter. Instead of retrieving the parameters for all the queries at the same time, parameters for
queries with author-defined priority are retrieved first, regardless of how automated query prioritization is set. For more information about parameters, filters, and prompt controls, see the IBM® Cognos® Report Studio User Guide.

Queries are grouped by priority as shown in the following table. When a query group has subgroups, the first sub-group has priority over the second.

<table>
<thead>
<tr>
<th>Query group</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries with the Use for Parameter Info property set to Yes in Report Studio</td>
<td>1</td>
</tr>
<tr>
<td>Queries with defined filters that are not used to populate prompt controls</td>
<td>2</td>
</tr>
<tr>
<td>● First reference to such queries</td>
<td></td>
</tr>
<tr>
<td>● Subsequent references to such queries</td>
<td></td>
</tr>
<tr>
<td>Queries with defined filters that are used to populate prompt controls</td>
<td>3</td>
</tr>
<tr>
<td>● First reference to such queries</td>
<td></td>
</tr>
<tr>
<td>● Subsequent references to such queries</td>
<td></td>
</tr>
<tr>
<td>Queries with no defined filters that are not used to populate prompt controls</td>
<td>4</td>
</tr>
<tr>
<td>● First reference to such queries</td>
<td></td>
</tr>
<tr>
<td>● Subsequent references to such queries</td>
<td></td>
</tr>
<tr>
<td>Queries with no defined filters that are used to populate prompt controls</td>
<td>5</td>
</tr>
<tr>
<td>● First reference to such queries</td>
<td></td>
</tr>
<tr>
<td>● Subsequent references to such queries</td>
<td></td>
</tr>
</tbody>
</table>

To specify a system-wide configuration that defines how queries and query groups are processed, you can assign either a setting value or name to the report server advanced setting, RSVP.PROMPT.RECONCILIATION. This allows you to specify the degree of reconciliation between prompt control capabilities and data type to that of the associated parameter. The setting you choose determines whether reconciliation accuracy or speed is more important. For example, if the report author ensures that parameters are defined with the same datatype and capabilities (i.e., optionality, cardinality, and discreteness), across all queries, specifying CHUNKED or 3 would likely achieve the best performance in the widest variety of situations.

RSVP.PROMPT.RECONCILIATION.CHUNKSIZE lets you specify chunk size. This setting is applicable when you use CHUNKED GROUPED and CHUNKED. The default chunk size is 5.

The report server advanced properties and Report Studio query hints work cooperatively to provide the best performance.

You can use the settings shown in the following table to configure RSVP.PROMPT.RECONCILIATION.
### Setting | Name | Purpose
--- | --- | ---
0 | COMPLETE | All queries are sent at once. This is the slowest, most accurate form of reconciliation. This is the default setting.
1 | GROUPED | Queries are sent by priority group. This setting works best for reports that have many unfiltered queries and few filtered queries. It provides medium speed and high reconciliation accuracy.
2 | CHUNKED GROUPED | Queries are sent by priority group with a maximum number per request. The queries do not span groups. This setting works best on reports that have many queries with similar filter expressions. It provides maximum speed and low reconciliation accuracy.
3 | CHUNKED | Queries are sent by priority group with a maximum number per request. The queries can span groups.

You must have the required permissions to access **IBM Cognos Administration** (p. 283).

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, and then click (All).
5. Click the arrow for the Actions menu next to a Report or Batch report and click Set properties.
6. Click the Settings tab.
7. Click Edit next to Advanced Settings.
8. Select Override the settings acquired from the parent entry.
9. In the Parameter column, type a parameter name.
10. In the Value column, type the setting that you want to use.
11. Click OK.
12. On the Set properties page, click OK.
Enable Conversion of Numeric Search Keys to Strings in Queries

An error may occur if your data source does not convert numeric data items to strings. A search prompt is associated with a query that does not get executed when the search prompt is rendered the first time. Typing a search string filters the query and the results are displayed in a list box. The report server does not check the data type of the filtered query item because most data sources convert the data item to a string (varchar) and the filter becomes valid. However, some data sources, such as Teradata, do not make the conversion, which causes an error.

The associated error message occurs when a Report Studio or Query Studio report runs:

RQP-DEF-0177 An error occurred while performing operation 'sqlPrepareWithOptions' status='-69' UDA-SQL-0043 The underlying database detected an error during processing the SQL request.[NCR][ODBC Teradata Driver][Teradata Database] Partial string matching requires character operands

Example of Unconverted Data Item

[data item] starts with '20'
[data item] contains '123'

Or a boolean combination:
[data item] starts with '2' AND [data item] contains '009' OR [data item] contains '119'

Example of Unconverted Data Item with Lower Function

If the search is case insensitive then these expressions will contain the lower function, which makes more sense when searching on string data items than on numeric:

lower([data item]) starts with lower('20')
lower([data item]) contains lower('123')
(lower([data item]) starts with lower('2') AND lower([data item]) contains lower('009') OR lower([data item]) contains lower('119'))

Example of Data Item Converted to a String

cast([data item], varchar(128)) starts with '20'
cast([data item], varchar(128)) contains '123'
cast([data item], varchar(128)) starts with '2' AND cast([data item], varchar(128)) contains '009' OR cast([data item], varchar(128)) contains '119'

You can use the RSVP.PROMPT.CASTNUMERICSEARCHKEYTOSTRING setting to convert numeric data items into a string (varchar) format. The default value for the setting is False (no conversion). To enable conversion, set it to True.

You must have the required permissions to access IBM Cognos Administration (p. 283).

Steps

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the **Status** tab, click **System**.

4. In the upper-left corner of the **Scorecard** pane, click the arrow to view the Change view menu. Click **Services**, and then click **Report**.

5. Click the arrow for the **Actions** menu and click **Set properties**.

6. Click the **Settings** tab.

7. Click **Edit** next to **Advanced Settings**.

8. Select **Override the settings acquired from the parent entry**.

9. In the **Parameter** column, type RSVP.PROMPT.CASTNUMERICSEARCHKEYTOSTRING.

10. In the **Value** column, type the setting that you want to use.

11. Click **OK**.

12. On the **Set properties** page, click **OK**.

13. Repeat steps 4 to 12 for batch report system (**Batch Report**).

---

### Disable Session Caching

In Report Studio, Query Studio, and IBM® Cognos® Viewer the results for previous requests to the database are cached for the duration of a session when session caching is enabled. To increase performance, for subsequent queries, IBM Cognos software uses cached results for some actions rather than accessing the database. This applies when the same results can be used or when the new results are a subset of the cached results. You can enable session caching at the server level or at the package or report level.

Because performance may be affected, you may want to leave session caching disabled at the server level in the following situations:

- users expect up-to-date results directly from the database for every query, for example, new records that were added to the database in the interim
- you want to limit the number of times the cache is accessed during a session

You may also want to leave session caching disabled for individual reports because of high resource consumption, for example, reports that use bursting.

You can also enable and disable session caching for specific queries in reports in Report Studio (see the IBM Cognos Report Studio **User Guide**) and for models in Framework Manager (see the Framework Manager **User Guide**).

Session caching for new models and reports is enabled by default. Existing packages and reports retain existing session caching settings.

### Steps to Disable at Server Level

1. Copy the `c10_location/configuration/CQEConfig.xml.sample` file to `c10_location/bin` and rename it `CQEConfig.xml`. 
2. Open the \texttt{c10\_location}/bin/CQEConfig.xml in an editor.
3. Ensure that your editor supports saving files in UTF-8 format.
4. Find the \texttt{queryReuse} parameter and change the value to 0.
5. Save the CQEConfig.xml file.
6. Using IBM Cognos Configuration, stop and then restart IBM Cognos software.

For information about stopping IBM Cognos software, see the \textit{Installation and Configuration Guide}.

### Steps to Disable at Package or Report Level

1. Copy the \texttt{c10\_location}/configuration/CQEConfig.xml.sample file to \texttt{c10\_location}/bin and rename it CQEConfig.xml.
2. Open the \texttt{c10\_location}/bin/CQEConfig.xml in an editor.
3. Ensure that your editor supports saving files in UTF-8 format.
4. Find the \texttt{queryReuse} parameter and remove it.
5. Save the CQEConfig.xml file.
6. Using IBM Cognos Configuration, stop and then restart IBM Cognos software.

For information about stopping IBM Cognos software, see the \textit{Installation and Configuration Guide}.

For information on disabling session caching at the package level, see the \textit{Framework Manager User Guide}. For information on disabling session caching at the report level, see the Report Studio \textit{User Guide}.

### Reduce Decimal Precision

In a crosstab report, values support a maximum of 18 digits, plus the decimal point. Decimal precision determines the number of the digits that are reserved to express the decimal component of a number. The remaining digits are reserved to express the integer component of the number. By default, the decimal precision is set to 7 digits, which restricts the length of integers to 11 digits.

If you want to reserve more than 11 integers to express the integer component of a number, you must reduce the decimal precision. For example, you may set the decimal precision to 2, which allows you to reserve up to 16 digits for the integer component of a number.

### Steps

1. In the \texttt{c10\_location}/configuration directory, locate the qfs\_config.xml file.
2. Copy the qfs\_config.xml file, and rename the copied file to qfs\_config.xml.backup.
3. Open the original qfs\_config.xml file, and find the following line of code:
4. For the `providerDetails` element, add the following line:

```xml
<scaleOfFloatDouble value="n"/>
```

where "n" represents the decimal precision value that you want to specify.

The default value is 7.

5. Save the `qfs_config.xml` file.

6. Restart the IBM Cognos service.

### Saved Report Output

By default, the report output files are saved in the content store. You also have the following choices for saving report output files:

- **A location outside of IBM® Cognos® software**
  
  You can share the report output files saved to this location with external applications or with people who do not have IBM Cognos software (p. 187). Most report output files are saved this way.

- **Another location within IBM Cognos software**
  
  The report output files saved to this location can be used again in IBM Cognos software (p. 186). This option may be useful for archive purposes, since the files saved in the content store may be deleted regularly due to retention rules.

  A descriptor file with an _descr extension is also saved. Saved files are not managed by IBM Cognos software.

### Set File Location to Save a Copy of Report Output Outside of IBM Cognos Software

You can specify that an additional copy of report output be saved in a file system outside of IBM® Cognos® software. For example, users may want to share a report with an external application, such as a web site, and have it saved there every time it is updated so that current content is always available. Users may also want to save reports on a Local Area Network for people who do not have access to IBM Cognos software.

In IBM Cognos Connection, if users select **Save to the file system** as the report delivery method (p. 436) when they run or schedule a report, the files are saved in the specified location each time the report runs.

There are two associated properties in IBM Cognos Configuration that must be set first: one enables saving file output to a file system, the other specifies the root directory for saving files. For more information, see the IBM Cognos Business Intelligence *Installation and Configuration Guide*. 
You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Configuration** tab, click **Dispatchers and Services**.
4. On the toolbar, click the Define File System Locations button.
5. Click **New**.
6. Type a name, description, and screen tip.
7. In **File systems location** box, type the location where you want to save report output files.
   - The location that you type is appended to the **File system root location**.
8. Click **Finish**.

**Set File Location to Save a Copy of Report Output in IBM Cognos Software**

By default, report output files are saved in the content store. For single-file report outputs, you can also save a copy of the output in a file location in IBM® Cognos® software so that you can use it again. This may also be useful for archive purposes, since files that are saved in the Content Store may be deleted regularly due to retention rules.

The following formats can be saved: PDF, .csv, XML, Microsoft® Excel spreadsheet software 2002, and HTML that does not have embedded graphics. You cannot save HTML fragment, XMTML, or Excel 2000 or 2007 single sheet formats.

The file location applies to saved output originating from the selected Content Manager service.

If users select **Save to the file system** as the report delivery method (p. 436) when they run or schedule a report in IBM Cognos Connection, the files are saved in the specified location each time the report runs.

Use the following parameters to set the file location.

- **CM.OutputLocation**
  - Specifies the location where you want to store copies of report output files.
  - Old report versions are not deleted when a new one is saved. You must manage the content of the output directory to keep the report versions you want.

- **CM.OutputScript**
  - Specifies the location and name of a shell script, such as a .bat or .sh file, that runs after a report output is saved to the target directory. The full file names of the output file and descriptor are passed to the script.

- **CM.OutputByBurstKey**
When report output is distributed by bursting, it is assigned a burst key. Specify whether to store output in a subdirectory with the same name as the burst key.

Default: false (output not stored by burst key).

**Report Output Descriptor File**

When you save report outputs files to a file system in IBM Cognos software, a report output descriptor file is also created. The descriptor file is an XML file that contains information about the report output, such as the name, locale, creation time, owner user name and authentication namespace, the associated report search path, burst key information, and the report version contact. The descriptor file takes the same name as the output file, with the suffix _descr added. For example, a saved PDF report with the name 158_1075940415360.pdf has a descriptor file with the name 158_1075940415360_desc.xml.

**Post-processing Scripts**

You can also specify a script so that you can run post-processing commands each time a report output is copied to the file system. For example, if your report output files are ultimately stored in an archiving system, you can use a script to perform this action.

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Status** tab, click **System**.
4. In the upper-left corner of the **Scorecard** pane, click the arrow to view the Change view menu. Click **Services**, and then click **Content Manager**.
5. Click the arrow next to **ContentManagerService** to display the Actions menu, and then click **Set properties**.
6. Click the **Settings** tab.
7. Click **Edit** next to **Advanced Settings**.
8. Select **Override the settings acquired from the parent entry**.
9. In the **Parameter** column, type the parameter name.
   For example, type **CM.OutputLocation**.
10. In the **Value** column, type the associated value for the setting.
11. Continue typing setting names and values as required.
12. Click **OK**.
13. On the **Set properties** page, click **OK**.
Enable Accessible Report Output Using System-wide Settings

Accessible reports contain features, such as alternate text, that allow users with disabilities to access report content using assistive technologies, such as screen readers. In IBM® Cognos® Administration, you can specify system-wide settings for accessible report output that apply to all entries, including reports, jobs, and scheduled entries.

Accessibility settings in the user preferences and report properties can overwrite the system-wide settings in IBM Cognos Administration. For information about enabling accessibility support in user preferences or report properties, see "Enable Accessible Report Output" (p. 437).

Accessible reports require more report processing and have a larger file size than non-accessible reports. Consequently, accessible reports affect performance negatively. By default, support for accessible report output is disabled.

Accessible report output is available for the following formats: PDF, HTML, and Microsoft® Excel spreadsheet software 2007.

Steps
1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Dispatchers and Services.
4. From the toolbar in the upper-right corner of the page, click the set properties button.
5. Click the Settings tab.
6. Under Category, click Administrator Override.
7. For the Administrator Override category, next to Accessibility support for reports, in the Value column, click Edit.
8. In the Accessibility support for reports page, select one of the following options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disable</td>
<td>Accessible report output is denied.</td>
</tr>
<tr>
<td>Make mandatory</td>
<td>Accessible report output is always created.</td>
</tr>
<tr>
<td>Allow the user to decide</td>
<td>Accessible report output is specified by the user. If you set this option to Not selected, then accessible report output is not created automatically. This is the default. If you set this option to Selected, then accessible report output is created by default.</td>
</tr>
</tbody>
</table>
Configure the Lineage Solution

Lineage provides details about data in a report, such as the data source and calculation expressions. You can access lineage information in IBM® Cognos® Viewer, Report Studio, Query Studio, and Analysis Studio.

You can configure the default IBM Cognos software lineage solution, the IBM InfoSphere™ Metadata Workbench lineage tool, or a custom lineage solution. To use the default solution or IBM InfoSphere Metadata Workbench, ensure that the value for the Metadata Information Service URI parameter of the Environment category is configured as specified in the steps in this section.

To implement a custom lineage solution, you must

- create a Web interface that translates the IBM Cognos software lineage request parameters and invokes the custom lineage solution.
  
  For more information, see the section about integrating a custom lineage solution in the Software Development Kit Developer Guide.

- change the value for the Metadata Information Service URI parameter of the Environment category to the URL of your lineage server.

To enable lineage, ensure the lineage capability is enabled. For more information, see "Secured Functions and Features" (p. 283), and "Object Capabilities" (p. 293).

Steps

1. In IBM Cognos Connection, click Launch, IBM Cognos Administration.
2. On the Status tab, click System.
3. Click the arrow next to System to display the Actions menu, and then click Set Properties.
4. Click the Settings tab.
5. For the Environment category, Metadata Information Service URI, type one of the following values.
   
   - If you want to configure the default IBM Cognos software lineage solution, type /lineageUIService.
     
     If this value is already specified, click Cancel at the bottom of the page. You do not need to change anything.

   - If you want to configure IBM InfoSphere Metadata Workbench as your lineage solution, type
     
     
     where http://workbench_server_name:9080/workbench/autoLoad.do is the URL where IBM InfoSphere Metadata Workbench can be accessed on the network.

     workbench_server_name represents the server name where IBM InfoSphere Metadata Workbench is installed.
To leverage a combination of Cognos lineage and InfoSphere Metadata Workbench lineage, there is an additional parameter to be configured. A "launchPoint" parameter set with a value of "indirect" will indicate that Cognos lineage should be used for Cognos level lineage (i.e. report and model level information) and Metadata Workbench can be used to explore lineage for the data source. Clicking on the data source object in the Cognos lineage viewer will invoke IBM InfoSphere Metadata Workbench to explore in-depth data source level lineage information.

Example:

```
/lineageUIService?iis="Metadata WorkbenchURL"&launchPoint=indirect
```

For example:

```
```

*workbench_server_name* represents the server name where IBM InfoSphere Metadata Workbench is installed.

- If you want to configure a custom lineage solution, replace the existing value with the URI that represents your lineage Web interface.
  
  For example, type `http://mycompany.com/ourLineageService.cgi`

6. Click **OK**.

**Configure the IBM InfoSphere Business Glossary URI**

If your organization uses the IBM® InfoSphere™ Business Glossary, you can also access the Glossary in IBM Cognos® software from IBM Cognos Viewer (p. 430), and from the metadata tree in Report Studio, Query Studio, and Analysis Studio.

To access IBM Business Glossary, you must specify the URI of the Glossary Web page. By default, the Glossary search results in IBM Cognos software return all terms that contain the keyword specified in the search.

To access the Glossary, users must have permissions for the **Glossary** capability. For more information, see "Secured Functions and Features" (p. 283), and "Object Capabilities" (p. 293).

**Steps**

1. In IBM Cognos Connection, click **Launch, IBM Cognos Administration**.
2. On the **Status** tab, click **System**.
3. Click the arrow next to **System** to display the Actions menu, and then click **Set Properties**.
4. Click the **Settings** tab.
5. For the **Environment** category, **IBM Business Glossary URI**, type the following URI:
   
   `http://server_name:port_number/bg/popup/popupSearch.do`
   
   For example, type
   
   `http://myserver:9080/bg/popup/popupSearch.do`
   
   All terms that contain the keyword specified in the search are returned.
6. Click OK.

**Configuring the Collaboration Discovery URI**

You can configure IBM® Cognos® Business Intelligence and IBM Cognos Business Insight to use IBM Lotus® Connections for collaborative decision-making. Integration with Lotus Connections allows business users to collaborate while creating or viewing reports, performing analysis, or monitoring dashboards. Users have access to Lotus Connections activities from within Business Insight and to the Lotus Connections homepage from within IBM Cognos BI and Business Insight.

The Collaboration discovery URI specifies the Lotus Connections server to use as the collaboration provider. When a URI is specified, collaboration-related support is added to IBM Cognos BI as follows:

- a link is added to the Cognos Connection Welcome page. If the user has access to the Lotus Connections homepage, the link is named Access my social network and links the user to the homepage. If the user has access to Lotus Connection activities, but not the homepage, the link is named My Activities and links the user to the activities page.
- a link to the Lotus Connections homepage is added to the Launch menu in Cognos Connection
- a link to the Lotus Connections homepage is added to the Actions menu in Business Insight
- the Collaborate menu button is added on the dashboard application bar in Business Insight. This allows the user to create or view a dashboard activity in Lotus Connections.

To access the Lotus Connections homepage and activities page, the administrator must enable the **Collaborate** capability. For more information, see "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Configuration tab, click Dispatchers and Services to view the list of dispatchers.

4. From the toolbar in the upper-right corner of the page, click the set properties button.

5. Click the Settings tab.

6. For the Environment category, Collaboration discovery URI, specify the URI as follows: http://server_name:port_number/activities/serviceconfigs.

   For example, http://server_name:9080/activities/serviceconfigs

   where server_name represents the server name where IBM Lotus Connections is installed.

7. Click OK.
Enable Job, SMTP, and Task Queue Metrics

By default, only the queue length metric for job, task, and SMTP queue metrics is enabled. The following metrics are also available for each but are set to zero and do not appear in the user interface unless you enable them:

- Time in queue high water mark
- Time in queue low water mark
- Time in queue
- Number of queue requests
- Queue length high water mark
- Queue length low water mark

For more information about these metrics, see "System Performance Metrics" (p. 117). Note that enabling these settings may affect performance.

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

Steps

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. Click the arrow next to System to display the Actions menu, and then click Set Properties.
5. Click the Settings tab.
6. For the Environment category, next to Advanced settings, click the Edit link.
7. If it appears, select the Override the settings acquired from the parent entry check box. Otherwise, proceed to the next step.
8. In the Parameter column, type the following settings: enable.tide.metrics.smtpqueue, enable.tide.metrics.jobqueue, and enable.tide.metrics.taskqueue.
9. Beside each parameter, in the Value column, type True to enable the metric.
10. Click OK.
11. Open the c10_location/webapps/p2pd/WEB-INF/classes/iManage-metadata.xml file in an editor. Ensure that your editor supports saving files in UTF-8 format.

For a distributed install, you must edit the iManage-metadata.xml file on every computer, otherwise, the global metrics may display initially but not persist after navigating away from the page.
12. Uncomment the sections that begin with <!-- These metrics have been explicitly disabled. Please consult documentation on how to enable them. -->

13. Save the file.

14. Using IBM Cognos Configuration, stop and then restart IBM Cognos software.
   For information about stopping IBM Cognos software, see the Installation and Configuration Guide.

Set Lifetime of Completed Human Tasks and Annotations (Comments)

You can set the lifetime of completed annotations and human tasks. The lifetime is the length of time after the associated entry is deleted. For example, if the lifetime for an annotation is set to 60 days, the annotation is deleted 60 days after the associated report is deleted. If the lifetime for a human task is set to 120, the human task might be deleted 120 days if all linked reports or dashboards are deleted.

The default lifetime is 90 days for completed human tasks and 180 days for completed annotations.

For more information about human tasks, see "Managing Human Tasks" (p. 469). For more information about annotations (comments), see the IBM® Cognos® Dashboard User Guide.

Steps
1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu, and then click Services.
5. Click Human Task Service or Annotation Service.
6. Click the arrow next to the service to display the Actions menu and click Set properties.
7. Click the Settings tab.
8. For annotations, find the setting Completed annotation lifetime. For HumanTaskService, find the setting Completed human task lifetime. Set the lifetime in days or months and click OK.

Completed annotations or human tasks are deleted after the number of days that you specify.

Changing Drill-Through Filter Behavior

You can change the dynamic drill-through filter behavior if you want drill-through to generate a filter using the Member Business Key instead of the default Member Caption. You use the parameter RSVP.DRILL.DynamicFilterUsesBusinessKey.

Set the parameter to 0 to use Member Caption. Set it to 1 to use the Business Key.
You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, then Report or Batch Report.
5. Next to ReportService or BatchReport Service, click the arrow for the Actions menu and click Set properties.
6. Click the Settings tab.
7. Click Edit next to Advanced Settings.
8. Select Override the settings acquired from the parent entry.
9. In the Parameter column, type RSVP.DRILL.DynamicFilterUsesBusinessKey.
10. In the Value column, type the associated value for the setting.
11. Click OK.
12. On the Set properties page, click OK.
A data source is necessary to create models in Framework Manager, the IBM® Cognos® software modeling tool, and run reports or analyses from IBM Cognos software.

IBM Cognos software supports the following types of data sources:

- DB2
- IBM Cognos Cubes
- Oracle Essbase
- IBM Infosphere Warehouse Cubing Services
- Informix
- Microsoft Analysis Services
- Microsoft SQL Server
- ODBC Connections
- Oracle
- SAP BW
- Sybase Adaptive Server Enterprise
- TM1
- XML

A data source defines the physical connection to a database. The data source connection (p. 227) specifies the parameters needed to connect to the database, such as the location of the database and the timeout duration. A connection can include credential information and signons (p. 234). You can also add new connections to data source and modify existing connections (p. 231).

You can make more than one data source connection available by combining them, along with other elements, in packages created and published using Framework Manager. For information specific to the data source that you are using, see the pertinent section in this chapter. For instructions on creating the package, see the Framework Manager User Guide. You can also create and edit packages in IBM Cognos software for some data sources. For more information, see "Packages" (p. 401).

You can secure data sources using IBM Cognos security. IBM Cognos software also respects any security that is defined within the data source (p. 249).

You move data sources from one environment to another environment by deploying the entire content store (p. 375).
**Dynamic Query Mode**

Dynamic query mode provides communication to data sources using Java/XMLA connections. For supported OLAP data sources, Java/XMLA connectivity optimizes access by providing customized and enhanced MDX for the specific source and version of your OLAP technology and it harnesses the smarts of the OLAP data source.

You can use dynamic query mode with the following OLAP data sources:

- Oracle ESSBASE
- SAP Business Information Warehouse (SAP BW)
- TM1®

For information about the data sources supported by the dynamic query mode, see the IBM Cognos Business Intelligence *Dynamic Query Guide*.

**DB2**

IBM® Cognos® Business Intelligence supports DB2® data sources. DB2 connection types can be used to connect to DB2 Linux®/UNIX®/Microsoft® Windows® operating systems, Db2 zOS, and DB2 i5OS.

**DB2 Connection Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 database name</td>
<td>Enter the name (alias) of the DB2 database that was used when the DB2 client was configured.</td>
</tr>
<tr>
<td>DB2 connect string</td>
<td>Optional. Enter name/value pairs that DB2 or ODBC vendors can accept.</td>
</tr>
<tr>
<td>Collation sequence</td>
<td>Enter the collation sequence to be included in the database connection string.</td>
</tr>
<tr>
<td></td>
<td>Collation sequences are required only in rare cases where there may be sorting discrepancies between IBM Cognos BI and a database. We recommend that you contact customer support before using a collation sequence.</td>
</tr>
<tr>
<td>Open asynchronously</td>
<td>Not used.</td>
</tr>
</tbody>
</table>
### Parameter Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trusted context</td>
<td>Select this check box to allow IBM Cognos BI to attempt a trusted connection to an appropriately configured DB2 server. For more information, refer to the DBA/DB2 documentation. If you select this check box with a client or server that does not support the feature, you may get a connection error or a report execution error.</td>
</tr>
<tr>
<td>Timeouts</td>
<td>Specify the time in seconds within which you want the database to connect or wait for your reply before timing out. Valid entries are zero to 32,767. To have the database wait indefinitely, enter zero, which is the default.</td>
</tr>
<tr>
<td>Signon</td>
<td>For more information on signon, see &quot;Securing Data Sources&quot; (p. 249). If no authentication is required, click No authentication. If authentication is required, click Signons. If a user ID and password is required in the connection string, select the User ID check box. If a password is required, select the Password check box and enter the password in the Password and Confirm password boxes. To create a user ID and password that automatically connects to the data source, click Create a signon that the Everyone group can use. Enter the User ID and then enter the password in the Password and Confirm password boxes.</td>
</tr>
</tbody>
</table>

---

**IBM Cognos Cubes**

The IBM® Cognos® cubes that can be used as data sources in IBM Cognos Business Intelligence include:

- IBM Cognos Finance
- IBM Cognos Now! - Real-time Monitoring Cube
- IBM Cognos Planning - Contributor
- IBM Cognos Planning - Series 7
- IBM Cognos PowerCube

If you have problems creating data source connections to Cognos cubes, see the Troubleshooting section in this document.

For information about integrating IBM Cognos Finance multidimensional cubes in your IBM Cognos environment, see the IBM Cognos Finance User Guide. For information about connecting to the IBM Cognos Planning - Contributor unpublished (real-time) data, see the IBM Cognos Administration and Security Guide.
Planning Installation Guide. For information about real-time monitoring, see the IBM Cognos Real-time Monitoring Dashboard User Guide.

**IBM Cognos Finance**

IBM® Cognos® Business Intelligence supports IBM Cognos Finance as a data source.

You can make an IBM Cognos PowerCube data source connection available by creating a connection to live Cognos Finance data.

When you create a package, select a specific IBM Cognos Finance submission. This does not limit reporting to that single submission. IBM Cognos Finance submissions can have different hierarchies within each submission. Selecting a submission designates the reporting view of the hierarchy and does not affect how data is calculated within IBM Cognos Finance.

**IBM Cognos Finance Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server name</td>
<td>Enter the name of the IBM Cognos Finance server.</td>
</tr>
<tr>
<td>Port number</td>
<td>Enter the port number of the IBM Cognos Finance server. Use the port number that is specified on the IBM Cognos Finance Server Configuration page. The default is 8800.</td>
</tr>
<tr>
<td>Signon</td>
<td>Select the namespace to use for authentication.</td>
</tr>
</tbody>
</table>

**IBM Cognos Now! - Real-time Monitoring Cube**

IBM® Cognos® Business Intelligence supports IBM Cognos Now! - IBM Real-time Monitoring cubes as data sources. Both cubes and view objects are supported. For cubes, use the parameters listed below. For views, you can download an ODBC driver from the Cognos Real-time Monitoring appliance under References and Downloads. Follow the instructions that come with the ODBC driver to set up your IBM Cognos environment.

**IBM Cognos Now - Real-time Monitoring Cube Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server name</td>
<td>Enter the name of the server.</td>
</tr>
<tr>
<td>Port number</td>
<td>Enter 80 as the port number.</td>
</tr>
</tbody>
</table>
IBM Cognos Planning Contributor

IBM® Cognos® Business Intelligence supports IBM Cognos Planning Contributor as a data source. You can use IBM Cognos BI to report on and analyze real-time Contributor data. You can create an IBM Cognos Contributor package in one of the following ways:

- Using the Contributor Administration Console, you can create a package that contains all the cubes in the application. When a user opens the package in a studio, they are presented with metadata for all the cubes in the application and can choose from multiple cubes to create reports. However, users may be at risk of inadvertently building queries that attempt to use values from more than one cube, resulting in reports with no data. For more information, refer to the IBM Cognos Planning Contributor Administration Guide.

- Using Framework Manager, you can determine how many cubes to expose in a package. By default, you get one cube in each package. However, this may result in a large number of packages in Cognos Connection, which could be difficult to manage. For more information, refer to the Framework Manager User Guide.

IBM Cognos Planning - Contributor Parameters

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>External namespace</td>
<td>Select the external namespace.</td>
</tr>
</tbody>
</table>

IBM Cognos Planning - Series 7

IBM® Cognos® Business Intelligence supports IBM Cognos Planning - Series 7 as a data source.

IBM Cognos Planning - Series 7 Parameters

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server name</td>
<td>Enter the name of the server.</td>
</tr>
</tbody>
</table>
If the cube was created using IBM Cognos Planning - Contributor version 7.3, indicate the Planning Administration Domain (PAD ID).

**Parameter** | **Description**
--- | ---
Planning Administration Domain (PAD ID) | If the cube was created using IBM Cognos Planning - Contributor version 7.3, indicate the Planning Administration Domain (PAD ID).
Port number | Enter the port number. The default is 8800.
External namespace | Select the external namespace for authentication.

### IBM Cognos PowerCubes

IBM® Cognos® Business Intelligence supports PowerCubes generated by Transformer 7.3 and later versions.

You make a PowerCube available to end users by creating a package and publishing it from Transformer or Framework Manager. You can also create PowerCube packages in IBM Cognos BI (see "Packages" (p. 401). You create a data source connection to a PowerCube in Transformer or in Framework Manager while publishing the cube, or in IBM Cognos Administration after the cube is published.

PowerCubes can be created in Linux® operating system and HPUX Itanium environments using Transformer. You can use IBM Cognos security with these types of cubes, but not Series 7 security. However, you can deploy secured Series 7 PowerCubes to Linux and HPUX Itanium computers running as report servers in the IBM Cognos environment if the Cognos content store is running on a Series 7-compliant server.

You cannot build cubes on Linux or HPUX Itanium if you are using Impromptu® Query Definition (.iqd) files as data sources because the Series 7 IQD Bridge is not supported on those platforms.

After a connection to a PowerCube is created, you can:

- create a package for a PowerCube (p. 403)
- deploy updated PowerCubes (p. 230)

For more information about PowerCubes, see the Transformer User Guide.

### Securing PowerCubes

PowerCubes supported by IBM Cognos software can be secured using IBM Cognos security namespaces. Security can be applied to an entire cube or to its custom views. Before accessing a cube secured against an IBM Cognos namespace, you must log on to the applicable namespace.

In production environments, IBM Cognos software supports only PowerCubes secured against a single namespace. Therefore, when you deploy PowerCubes for use in a production environment, you must select the signon option **Restrict PowerCube authentication to a single namespace**.

**Note:** Instead of using IBM Cognos security, you can add password protection to a PowerCube or decide not to use security.
Recommendation - Using PowerCubes in IBM Cognos Software

The following are some recommendations for using PowerCubes in IBM Cognos software:

- When testing the migration of Series 7 PowerCubes to IBM Cognos BI version 10.1, you can select the signon option to authenticate with All applicable namespaces.
  
  This option is only used for the migration of namespaces in Transformer models. It does not change the fact that multiple namespaces are not supported in a production environment.

- When you use Series 7 PowerCubes as data sources, we recommend that you optimize them for IBM Cognos BI.
  
  Optimized PowerCubes provide faster data retrieval at runtime. You optimize PowerCubes using a command line utility named pcoptimizer, which is supplied with IBM Cognos software.
  
  For more information about optimizing PowerCubes, see the Troubleshooting section in this guide.

- When you publish a PowerCube to IBM Cognos Connection and the cube contains custom views, you must be authenticated in IBM Cognos software using a valid user ID and a password.
  
  Anonymous access is not supported in this situation.

PowerCube Connection Parameters

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Read cache size** | The default value for this parameter is 80 MB. You can set this parameter to a value between 1 MB and 1 GB, as required for optimal query performance.  
  The optimal read cache size may be higher or lower than the default value of 80 MB. This is to be expected, as PowerCubes in production vary widely in type and query characteristics.  
  Note that the read cache size has no effect on the initial time required to open a cube.  
  The typical profile for query performance, or processing time, follows a pattern whereby performance increases with the read cache size and then levels off beyond the optimal setting.  
  To determine the optimal setting, we recommend that you lower the default by 10 MB (or 5 MB, or 1 MB, depending on the level of fine tuning desired) and use the resulting query performance results as a guide for establishing whether further reductions, or increases, are required.  
  The optimal read cache size will change as the cube grows and changes in the production environment. As a result, you should review the optimal read cache size when changes to the user’s query performance pattern, or changes in the PowerCube characteristics, occur. |
| **Location**    | If all your report servers are installed on Microsoft® Windows® operating system computers, specify the **Windows location**. If all report servers are installed on UNIX® operating system computers, specify the **Unix or Linux location**.  
  Type the full path and file name for the cube. For example, for a local cube type C:\cubes\sales_and_marketing.mdc. For a network cube type \servername\cubes\sales_and_marketing.mdc.  
  For cubes that reside on UNIX computers, specify the correct UNIX location and type any characters in the Windows location because the Windows location cannot be empty.  
  If the report servers are installed on Windows and UNIX computers, and you want the report server running a request to access the PowerCube in both environments, specify the Windows and UNIX locations. To ensure that the same data is returned regardless of the environment in which the report server accesses the cube, the same cube file must be saved in both locations. |
If you are using IBM Cognos security, click **Restrict PowerCube authentication to a single namespace**, and select a namespace from the list.

If you are connecting to a password-protected PowerCube, click **Cube password**, and type the password in the **Password** and **Confirm password** boxes.

Select **All applicable namespaces (including unsecured PowerCubes)** only if you are migrating Series 7 PowerCubes to IBM Cognos BI in your development or test environment. This setting can also be used for unsecured PowerCubes in a production environment.

For more information, see "Securing PowerCubes" (p. 202).

If a cube password is required, click **Cube password**, then enter the password in the **Password** and **Confirm password** boxes. To create a user ID and password that automatically connects to the data source, click **Create a signon that the Everyone group can use**.

For more information, see "Securing Data Sources" (p. 249).

---

**Oracle Essbase Data Source**

Before connecting to an Oracle Essbase data source, some configuration is required if the data source uses scenario dimensions (p. 206), balanced hierarchies (p. 206), or measures (p. 207).

**Authentication**

When a Oracle Essbase System 9 Data Source is configured with an LDAP namespace, single signon is supported. The user ID and password used to log on to the LDAP namespace automatically connects to the data source. For more information about configuring an LDAP namespace, see the IBM Cognos *Installation and Configuration Guide*.

**Connection Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server name</td>
<td>Enter the name of the server where the database is located. For UNIX® operating system, this can be the TCP/IP address of the server.</td>
</tr>
</tbody>
</table>
For more information on signon, see "Securing Data Sources" (p. 249).

If no authentication is required, click **No authentication**.

For Essbase Server System 9 and IBM Cognos 8.4, single signon is supported if your Essbase server is configured for an LDAP namespace.

- Select **An external namespace** and select LDAP from the list.
- The user ID and password used to log on to the LDAP namespace automatically connects to the data source.

If a user ID and password is required in the connection string, click **Signons**.

- If a password is required, select the **Password** check box and enter the password in the **Password** and **Confirm password** boxes.
- To create a user ID and password that automatically connects to the data source, click **Create a signon that the Everyone group can use**. Enter the **User ID** and then enter the password in the **Password** and **Confirm password** boxes.

### Configure Scenario Dimensions

If you connect to an Oracle Essbase® data source and it contains a scenario dimension, you must manually configure the scenario dimension so that IBM® Cognos® Business Intelligence recognizes it. Otherwise, IBM Cognos BI treats the scenario dimension as a regular dimension.

**Step**

- In the Oracle Essbase, assign a User Defined Attribute (UDA) named COGNOS_SCENARIO_DIMENSION to the scenario dimension.

### Specify Balanced Hierarchies

Oracle Essbase Provider does not determine if a hierarchy is balanced or unbalanced. It considers all hierarchies as being unbalanced by default.

In a balanced hierarchy, each path descends to the same depth while the branches in an unbalanced hierarchy descend to different levels.

**Steps**

1. In the Hyperion Solutions Essbase Administration Services tool, create a special User Defined Attribute (UDA) named COGNOS_HIERARCHY_BALANCED in the outline of the Essbase database. The UDA is created for the root member of the corresponding dimension containing a balanced hierarchy.
2. Set the attribute to 1.
Specify Measure Formats

To improve the readability of the values reported, you can specify an alternative format string for any measure. Define a UDA for the appropriate members in the Account dimension:

\[
\text{COGNOS\_FORMAT=format\_string}
\]

The \textit{format\_string} value can be any one of the predefined number formats listed in the table below. You can use a preset numeric format to show values as millions (M) or thousands (K). For example, 1,801,791 can be shown as 1.8M or 1,801.8K.

The predefined format strings are as follows:

<table>
<thead>
<tr>
<th>Format Option</th>
<th>Sample Value</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>1000000</td>
<td>1000000</td>
</tr>
<tr>
<td>0</td>
<td>1000000</td>
<td>1000000</td>
</tr>
<tr>
<td>#,###0</td>
<td>1000000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>$0</td>
<td>1000000</td>
<td>$1000000</td>
</tr>
<tr>
<td>$#,###0</td>
<td>1000000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>0%</td>
<td>1000000</td>
<td>1000000000%</td>
</tr>
<tr>
<td>%0</td>
<td>1000000</td>
<td>%100000000</td>
</tr>
<tr>
<td>0E+000</td>
<td>1000000</td>
<td>1E+006</td>
</tr>
<tr>
<td>0K</td>
<td>1000000</td>
<td>1000K</td>
</tr>
<tr>
<td>#,###0K</td>
<td>1000000</td>
<td>1,000K</td>
</tr>
<tr>
<td>K0</td>
<td>1000000</td>
<td>K1000</td>
</tr>
<tr>
<td>K#,###0</td>
<td>1000000</td>
<td>K1,000</td>
</tr>
<tr>
<td>$0K</td>
<td>1000000</td>
<td>$1000K</td>
</tr>
<tr>
<td>$#,###0K</td>
<td>1000000</td>
<td>$1,000K</td>
</tr>
<tr>
<td>0M</td>
<td>1000000000</td>
<td>1000M</td>
</tr>
<tr>
<td>#,###0M</td>
<td>1000000000</td>
<td>1,000M</td>
</tr>
<tr>
<td>M0</td>
<td>1000000000</td>
<td>M1000</td>
</tr>
</tbody>
</table>
With the exception of the General format string, you can also preset the number of decimal places to show, using the format_string ~n, where n is the number of decimal places. For example, 1,801,791 can be shown as $1,801,791.00 using the format string $#,#0~2. If you do not want any decimal places, end the format string with ~0.

If your client application uses a different locale, you must replace the Currency ($), Thousands (,) and Decimal (.) symbols in the format_string value for the COGNOS_FORMAT UDA with the corresponding locale symbols in effect for the client application.

If you do not specify the number of decimal places to show, or if the format string does not match one of the predefined values (including locale symbols), the General format string is used by default.

You can apply a different format for each measure. The following illustrates some examples of how you can apply different formatting to different measures:

<table>
<thead>
<tr>
<th>Measure</th>
<th>Applied Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures (Account dimension)</td>
<td>COGNOS_FORMAT=#,#0</td>
</tr>
<tr>
<td>Units</td>
<td>COGNOS_FORMAT=#,#K</td>
</tr>
<tr>
<td>Costs</td>
<td>COGNOS_FORMAT=$#,###</td>
</tr>
<tr>
<td>Profits</td>
<td>COGNOS_FORMAT=0%</td>
</tr>
</tbody>
</table>

### IBM InfoSphere Warehouse Cubing Services

IBM® Cognos® software provides support for accessing the cubing services technology of IBM InfoSphere™ Warehouse for version 9.5.2 and greater. No IBM Cognos components need to be installed on the cubing services server.

### IBM InfoSphere Warehouse Cubing Services Connection Parameters

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).
Informix Data Sources

IBM® Cognos® software provides support for Informix® data sources.

Informix Connection Parameters

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informix database name</td>
<td>Enter the database name.</td>
</tr>
<tr>
<td>Host name</td>
<td>Enter the host name.</td>
</tr>
<tr>
<td>Server name</td>
<td>Enter the server name.</td>
</tr>
<tr>
<td>Collation sequence</td>
<td>Enter the collation sequence to be included in the database connection string.</td>
</tr>
<tr>
<td></td>
<td>Collation sequences are required only in rare cases where there may be sorting discrepancies between IBM Cognos software and a database. We recommend that you contact customer support before using a collation sequence.</td>
</tr>
<tr>
<td>Service</td>
<td>Select or enter the service name that the remote database server uses for incoming requests.</td>
</tr>
</tbody>
</table>
Microsoft Analysis Services Data Sources

IBM® Cognos® software supports connectivity to Microsoft® Analysis Services from a Microsoft® Windows® operating system platform. When you install Microsoft SQL Server, you can choose to add Analysis Services. Connectivity requires the Microsoft Pivot Table client Libraries, which are installed with Microsoft SQL Server client components.

There are three supported versions of the Microsoft SQL Server Client component install, one for each of the following versions of SQL Server:

- Microsoft Analysis Service 2000 (ODBO)
- Microsoft Analysis Service 2005
- Microsoft Analysis Service 2008

You must install a matching version of SQL Server client software on each computer running Application Tier Components for the IBM Cognos Business Intelligence Server or IBM Cognos Framework Manager.

You must enable the TCP protocol for Microsoft SQL Server and Microsoft SQL Server client components.

The IBM Cognos BI Server supports three different types of authentication for Analysis Services data sources:

- "Authentication using Signons" (p. 211)
- "Authentication using Service Credentials" (p. 211)
- "Authentication using an External Namespace" (p. 212)

There are special considerations if you are using Framework Manager. (p. 213) and for multidimensional expression (MDX) queries (p. 213).
Authentication using Signons

When you want to store and maintain credentials to authenticate to Microsoft Analysis Services data sources in IBM Cognos software, use a signon when you create the data source. You can define a signon which is used by everyone (default) or you can grant access to specific users. You can also create multiple signons and use permissions to grant access for specified users, groups or roles.

The signon stores valid Windows domain credentials, which are used to authenticate to Analysis Services. They must be specified in the following syntax:

<DOMAIN>\<USERNAME>

For Microsoft Analysis Services 2005 and 2008, users with credentials should be a part of the local OLAP users group that exists on the computer where Analysis Services is running. This group, which is created when Analysis Services is installed, is called SQLServerMSASUser$<SERVER-NAME>$MSSQLSERVER.

On every installation of an IBM Cognos Application Tier component, ensure that IBM Cognos software is run as a LocalSystem built-in account or that IBM Cognos software is run as a valid domain account which has been granted the Act as part of the operating System privilege in the local security policy.

IBM Cognos users must be granted read and execute permission for that signon.

Authentication using Service Credentials

When you want to use the credentials of the account that is executing the IBM Cognos service to authenticate to Microsoft Analysis Services, use service credentials. Every connection to Microsoft Analysis Services data sources uses the service credentials regardless of which user executes the request.

To use service credentials, IBM Cognos software must be started as a Windows service. The service must be run as a valid Windows domain user. The built-in accounts of LocalSystem or NetworkService are not applicable. For information on how to start the IBM Cognos service under an account, see information about configuring a user account or network service account in the Installation and Configuration Guide.

The account running the IBM Cognos service must fulfill the following requirements:

- The account must either be a member of the same Active Directory Forest as Analysis Services or Forest trust must be established for cross-forest setups.
- The account must be granted the Log on as a service privilege in the local security policy of all Windows computers running IBM Cognos Application Tier components.
- For multi-node setups, the same account must be used on all computers running IBM Cognos Application Tier components.
- For Microsoft Analysis Services 2005 and 2008, the service account must be granted sufficient privileges in SSAS security to attach to the desired cubes and retrieve data.
- For Microsoft Analysis Services 2005 and 2008, the account should be a part of the local OLAP Users group, existing on the computer where Analysis Services is running. This group, which is created when Analysis Services is installed, is called SQLServerMSASUser$<SERVER-NAME>$MSSQLSERVER.
Authentication using an External Namespace

If you want IBM Cognos users to access Microsoft Analysis Services data sources with their own credentials (user pass-through authentication, signon), use an external namespace. The credentials that are used to authenticate to Analysis Services are taken from the specified namespace to which the user authenticated previously.

The credentials provided by a user who is logged on to the namespace are passed to Analysis Services. Due to the authentication methods supported by Analysis Services, you can only choose a namespace of type Microsoft Active Directory.

Depending on how the user is authenticated to the Active Directory namespace specified for external namespace authentication, you can have the following sign-on setups that provide a seamless user experience:

- If a user authenticated explicitly by providing a domain user name and a password, pass-through authentication is possible. The domain credentials that are provided are passed to Analysis Services.
- If a user authenticated to the Active Directory namespace by a signon which is not based on Kerberos, user pass-through authentication is not possible. This applies to setups where IBM Cognos software is integrated with any third-party portal or where the Active Directory Namespace is configured for identity mapping mode.

To configure user pass-through authentication to Analysis Services, ensure that the following conditions are met:

- All computers running IBM Cognos Application Tier components must run IBM Cognos BI as a Windows service under a valid domain account or LocalSystem.
- All computers running IBM Cognos software must have a Microsoft Windows server operating system. (Pass-through authentication is not supported for Windows XP.)
- The computers running Analysis Services and IBM Cognos software must be part of the same Active Directory Forest.
- The domain account (user account) or the computer account (LocalSystem) must be trusted for delegation.
- All user Windows accounts that require access to Analysis Services through IBM Cognos software must not have the Account is sensitive and cannot be delegated property set.

Analysis Services are configured for Kerberos authentication. For details, contact your Analysis Services Administrator.

For SSAS 2005 and SSAS 2008, Windows accounts for all users must be a part of the local OLAP users group on the computer where Analysis Services is running. This group, which is created when Analysis Services is installed, is called SQLServerMSASUser$<SERVERNAME>$MSSQLSERVER.

Note that there is a Microsoft issue that hinders user pass-through authentication when Analysis Services and the clients accessing it are both run on AES-aware operating systems (Windows 2008, Microsoft Vista, Windows 7). Refer to Microsoft documentation for details.
Note that you cannot test a data source which is configured for external namespace authentication. To verify that it is working, access the data source in a query.

**Framework Manager Considerations**

IBM Cognos Framework Manager accesses Analysis Services data sources directly without using the Report or Metadata services. This has important implications, especially for configurations with user pass-through authentication for Analysis Services.

If Kerberos-based signon is enabled for the Active Directory namespace that is configured, as an external namespace authentication source for the Analysis Services data source, ensure that the users running Framework Manager meet the following criterion:

- has the **Act as part of the operating System** privilege set in the local security policy on the computer running Framework Manager or is a member of the Local Administrators group on the Framework Manager computer with the **log on locally** privilege

- is trusted for delegation

**Multidimensional Expression (MDX) Queries**

You must install the following Microsoft Office components for Microsoft Excel Visual Basic for Applications (VBA) functions, such as ROUNDDOWN for MDX queries:

- Office Excel

- Microsoft Visual Basic for Applications (a shared feature in Office)

Install these components on the IBM Cognos Server for MSAS and on the Analysis Services server computer for SSAS 2005 or SSAS 2008, then restart the server machine.

**Microsoft Analysis Services Data Source Connection Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server Name</td>
<td>Enter the server name where the databases are located.</td>
</tr>
<tr>
<td>Named instance</td>
<td>Enter the named instance if one was specified during installation. This parameter applies to Microsoft Analysis Services 2005 and 2008 only.</td>
</tr>
<tr>
<td>Language</td>
<td>Select the language. For Microsoft Analysis Services 2005 and 2008, this is used as a design locale by the report author for retrieving metadata from the cube to display in reports. Once the reports are created, they can be run in any locale. For Microsoft Analysis Services (ODBO), this is also the run locale.</td>
</tr>
</tbody>
</table>
Microsoft SQL Server Data Sources

Depending on the types of Microsoft® SQL Server data sources you are using, there are considerations you should keep in mind when defining some types of authentication. IBM® Cognos® software supports the following types of Microsoft SQL Server data sources:

- ODBC
- OLE DB
- SQL 2005 Native Client
- SQL 2008 Native Client

Authentication Using IBM Cognos Service Credentials

When connecting to Microsoft SQL Server using OLE DB, you can select IBM Cognos software service credentials as the signon type for the data source connection. This property instructs IBM Cognos software to log on to the SQL Server database using the logon specified for the IBM Cognos service. Users do not require individual database signons. However, all users will authenticate to the database with the same credentials and will have the same view of the data. For production environments, individual database signons are generally more appropriate.

You should not use a Microsoft Windows® local system account for the IBM Cognos server logon with a Microsoft SQL Server OLE DB data source.
Authentication Using an External Namespace

You can configure IBM Cognos software to use a Microsoft Active Directory namespace, where users are prompted for credentials as part of the IBM Cognos logon process. You can configure IBM Cognos software to use these same credentials automatically when accessing the Microsoft SQL Server data source. The data source connection for Microsoft SQL Server must be configured for an external namespace and that namespace must be the Active Directory namespace.

You can configure IBM Cognos software to use a Microsoft Active Directory namespace and to authenticate users for IBM Cognos software using Kerberos authentication and delegation. You can configure IBM Cognos software to automatically authenticate the user when accessing the Microsoft SQL Server data source. The following configuration is required:

- The IBM Cognos gateway must be installed on an IIS Web server that is configured for Windows® Integrated Authentication.
- Content Manager must be installed on a Windows 2003 or Windows XP server.
- Content Manager, the report server (Application Tier Components), IIS Web server, and the data source server (Microsoft SQL Server) must belong to the same Active Directory domain.
- The data source connection for Microsoft SQL Server must be configured for an external namespace and that namespace must be the Active Directory namespace.
- The report servers are trusted for delegation.

For more information about installation options for the gateway and Content Manager, as well as configuring the namespace and delegating trust, see the IBM Cognos Installation and Configuration Guide.

Microsoft SQL Server Connection Parameters

The following parameters are used by Microsoft SQL Server (OLE DB).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server name</td>
<td>Enter the server name. If there are multiple instances of Microsoft SQL Server, specify server_name\instance_name.</td>
</tr>
<tr>
<td>Database Name</td>
<td>Enter the database name.</td>
</tr>
<tr>
<td>Application Name</td>
<td>Enter the application name.</td>
</tr>
<tr>
<td>Collation Sequence</td>
<td>Enter the collation sequence to be included in the database connection string. Collation sequences are required only in rare cases where there may be sorting discrepancies between IBM Cognos software and a database. We recommend that you contact customer support before using a collation sequence.</td>
</tr>
</tbody>
</table>
**Parameter** | **Description**
--- | ---
MARS Connection | Select the Multiple Active Results Set (MARS) connection. This parameter is used only by Microsoft SQL Server (SQL 2005 Native Client).

Click **Yes** to allow applications to have more than one pending request per connection and more than one active default result set per connection.

Signon | For more information on signon, see "Securing Data Sources" (p. 249).

If no authentication is required, select **No authentication**.

For more information on IBM Cognos BI, see "Authentication Using IBM Cognos Service Credentials" (p. 214).

If you use a Microsoft Active Directory namespace and you want to support single signon, select **An external namespace**, and select the Active Directory namespace. For more information, see "Authentication Using an External Namespace" (p. 215).

If authentication is required, select **Signons**.

If a user ID and password is required in the connection string, select the **User ID** check box.

If a password is required, select the **Password** check box and enter the password in the **Password** and **Confirm password** boxes.

---

You can include database commands in the connection information for this type of data source. For more information, see "Passing IBM Cognos Context to a Database" (p. 238).

For information about Microsoft SQL Server (ODBC) connection parameters, see "ODBC Data Source Connections" (p. 216).

### ODBC Data Source Connections

IBM® Cognos® software divides ODBC connections into two categories:

- vendor-specific ODBC data sources connections, which use driver-specific capabilities for query creation

- generic ODBC data source connections, which use general capabilities

IBM Cognos software supports the ODBC data sources listed in the following table. The database code appears in the connection string, but can not be edited.

<table>
<thead>
<tr>
<th>ODBC Data Source</th>
<th>Database code</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODBC</td>
<td>OD</td>
</tr>
<tr>
<td>ODBC Data Source</td>
<td>Database code</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Composite (ODBC)</td>
<td>CS</td>
</tr>
<tr>
<td>IBM Cognos Virtual View Manager (ODBC)</td>
<td>VM</td>
</tr>
<tr>
<td>Microsoft® SQL Server (ODBC)</td>
<td>SS</td>
</tr>
<tr>
<td>Netezza (ODBC)</td>
<td>NZ</td>
</tr>
<tr>
<td>Progress OpenEdge (ODBC)</td>
<td>PG</td>
</tr>
<tr>
<td>Red Brick (ODBC)</td>
<td>RB</td>
</tr>
<tr>
<td>Teradata (ODBC)</td>
<td>TD</td>
</tr>
</tbody>
</table>

Any ODBC data source connection not listed should be created using the generic ODBC data source, database code OD.

**Using Virtual View Manager to Retrieve Data**

Virtual View Manager replaces Composite ODBC data source. However, Composite ODBC data sources are still supported for existing customers.

Virtual View Manager is a data query application which provides access to distributed JDBC, LDAP, flat files and WSDL data sources. In addition to providing the functionality to model these data sources into homogeneous views, it allows the views to be modified via calculations, joins, and filters. IBM Cognos software is then used to access the views using the IBM Cognos Virtual View Manager ODBC driver.

**ODBC Connection Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODBC data source</td>
<td>Enter the data source name (DSN) as defined in the ODBC.ini file. For more information about the ODBC.ini file, see the IBM Cognos Installation and Configuration Guide.</td>
</tr>
<tr>
<td>ODBC connect string</td>
<td>Enter any text that must be appended to the connection string. This parameter is typically left blank.</td>
</tr>
<tr>
<td><strong>Parameter</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **Collation sequence**  | Enter the collation sequence to be included in the database connection string.  
Collation sequences are required only in rare cases where there may be sorting discrepancies between IBM Cognos software and a database. We recommend that you contact customer support before using a collation sequence. |
| **Open asynchronously** | Select if you want the connection to process requests independent of each other. Do not select if you want the connection to complete the current request before starting another one.                                      |
| **Unicode ODBC**        | Select if you want IBM Cognos software to use the Unicode data standard to interpret data. Leave it unselected if you want IBM Cognos software to use ANSI to interpret data.  
This selection applies only to Composite, Virtual View Manager, Progress OpenEdge, Teradata, and generic ODBC data source connections. |
| **Timeouts**            | Specify the time in seconds within which you want the database to connect or wait for your reply before timing out.  
Valid entries are zero to 32,767. To have the database have wait indefinitely, enter zero, which is the default. |
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| Signon | For more information on signon, see "Securing Data Sources" (p. 249). For Teradata, Composite, Virtual View Manager, Microsoft SQL, and generic ODBC:  
  - If no authentication is required, select **No authentication**.  
  - If the credentials to the database match the credentials used to logon to the IBM Cognos environment, for single signon, select **An external namespace** and select the appropriate namespace.  
  - If authentication is required, select **Signons**. If a password is required, select the **Password** check box and enter the password in the **Password** and **Confirm password** boxes. To create a user ID and password that automatically connects to the data source, select **Create a signon that the Everyone group can use**. Enter the User ID and then enter the password in the **Password** and **Confirm password** boxes.  

For RedBrick, and Progress OpenEdge:  
  - If a user ID and password are required in the connection string, select the **User ID** check box, then select the **Password** check box and enter the password in the **Password** and **Confirm password** boxes.  
  - To create a user ID and password that automatically connects to the data source, select **Create a signon that the Everyone group can use**. Enter the User ID and then enter the password in the **Password** and **Confirm password** boxes. |

### Oracle Data Sources

IBM® Cognos® software supports Oracle data sources.

**Oracle Connection Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL*Net connect string</td>
<td>Enter the SQL*Net connect string.</td>
</tr>
</tbody>
</table>
**SAP Business Information Warehouse (SAP BW) Data Sources**

IBM® Cognos® software supports access to SAP BW data sources.

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231). The parameter types that you specify are different depending on the type of SAP BW logon you choose:

- Application server logon type (p. 220)
- Destination logon type (p. 221)
- Message server logon type (p. 222)

**Application Server Logon Type Connection Parameters**

If you select Application server as the SAP logon type, specify the parameters in the following table.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application server</td>
<td>Enter the SAP application server name.</td>
</tr>
<tr>
<td></td>
<td>For more information, contact your SAP system administrator.</td>
</tr>
<tr>
<td>System number</td>
<td>Enter the system number.</td>
</tr>
<tr>
<td></td>
<td>For more information, contact your SAP system administrator.</td>
</tr>
</tbody>
</table>
### Parameter | Description
--- | ---
Client number | Enter the client number.  
For more information, contact your SAP system administrator.

SAP server code page | Select the SAP server code page.  
IBM Cognos software follows the SAP internationalization rules, providing a compatible application that supports multiple scripts and languages without modifying SAP BW in IBM Cognos software. For more information, contact your SAP system administrator.

SAP router string | Enter the SAP router string.  
The router string describes the stations of a connection required between two hosts. For more information, contact your SAP system administrator.

Signon | For more information on signon, see "Securing Data Sources" (p. 249).  
If a trusted signon namespace is configured using IBM Cognos Configuration, you can select An external namespace and select the namespace you want to use.  
To create a user ID and password that automatically connects to the data source, select Create a signon that the Everyone group can use. Enter the User ID and then enter the password in the Password and Confirm password boxes.

## Destination Logon Type Connection Parameters

If you select Destination as the SAP BW logon type, specify the parameters in the following table.

### Parameter | Description
--- | ---
Client number | Enter the client number.  
For more information, contact your SAP system administrator.

SAP server code page | Select the SAP server code page.  
IBM Cognos software follows the SAP internationalization rules, providing a compatible application that supports multiple scripts and languages without modifying SAP BW in IBM Cognos software. For more information, contact your SAP system administrator.
If a trusted signon namespace is configured using IBM Cognos Configuration, you can select **An external namespace** and select the namespace you want to use.

To create a user ID and password that automatically connects to the data source, select **Create a signon that the Everyone group can use**. Enter the **User ID** and then enter the password in the **Password** and **Confirm password** boxes.

### Message Server Logon Type Connection Parameters

If you select **Message server** as the **SAP BW logon type**, specify the parameters in the following table.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System ID</td>
<td>Enter the system ID of the SAP system that you want to connect to. For more information, contact your SAP system administrator.</td>
</tr>
<tr>
<td>Logon Group</td>
<td>Enter the SAP group. For more information, contact your SAP system administrator.</td>
</tr>
<tr>
<td>Client number</td>
<td>Enter the client number. For more information, contact your SAP system administrator.</td>
</tr>
<tr>
<td>Signon</td>
<td>For more information on signon, see &quot;Securing Data Sources&quot; (p. 249). If a trusted signon namespace is configured using IBM Cognos Configuration, you can select <strong>An external namespace</strong> and select the namespace you want to use. To create a user ID and password that automatically connects to the data source, select <strong>Create a signon that the Everyone group can use</strong>. Enter the <strong>User ID</strong> and then enter the password in the <strong>Password</strong> and <strong>Confirm password</strong> boxes.</td>
</tr>
</tbody>
</table>

---

**Sybase Adaptive Server Enterprise Data Sources**

IBM® Cognos® software supports the following Sybase Adaptive Server Enterprise data sources:

- CT-Lib
- CT-15
### Sybase Adaptive Server Enterprise Connection Parameters

You specify connection parameters when you create a data source or modify a data source connection.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Server name</strong></td>
<td>Enter the name of the server.</td>
</tr>
<tr>
<td><strong>Database name</strong></td>
<td>Enter the database name. Select <strong>Master</strong> if you want the Sybase server to determine the default database. To override the default, enter a valid database name.</td>
</tr>
<tr>
<td><strong>Application name</strong></td>
<td>Enter the application name. If you leave this blank, the default is the name of the Cognos executable, for example, BiBustkserver-main or DataBuild.</td>
</tr>
<tr>
<td><strong>Collation sequence</strong></td>
<td>Enter the collation sequence to be included in the database connection string. Collation sequences are required only in rare cases where there may be sorting discrepancies between IBM Cognos software and a database. We recommend that you contact customer support before using a collation sequence.</td>
</tr>
<tr>
<td><strong>Packet size</strong></td>
<td>Enter the packet size. For CT-Lib, the default is 512. For CT-15, the default is 2048. Increase the packet size to reduce the number of packets that must be sent. Decrease the packet size if larger packet size is an issue. The size that you can request can not be larger than the Sybase server allows. Contact your database administrator for more information.</td>
</tr>
<tr>
<td><strong>Asynchronous levels</strong></td>
<td>Select the asynchronous level.</td>
</tr>
<tr>
<td><strong>Polling time slice</strong></td>
<td>Enter the polling time slice. The default is 100.</td>
</tr>
<tr>
<td><strong>Timeouts</strong></td>
<td>Specify the time in seconds within which you want the database to connect or wait for your reply before timing out. Valid entries are zero to 32,767. To have the database wait indefinitely, enter zero, which is the default.</td>
</tr>
</tbody>
</table>
For more information on signon, see "Create or Modify a Data Source Signon" (p. 234)

If a user ID or password are required in the connection string, select the User ID check box.

If a password is required, select the Password check box and enter the password in the Password and Confirm password boxes.

To create a user ID and password that automatically connects to the data source, select Create a signon that the Everyone group can use. Enter the User ID and then enter the password in the Password and Confirm password boxes.

---

**TM1 Data Sources**

IBM® Cognos® software provides support for accessing TM1® servers and cubes. You must install the TM1 client on the same computer as the IBM Cognos Business Intelligence installation. When you create a TM1 data source connection, consider how you would like to set up authentication.

**Authentication**

Your choice must meet the TM1 server authentication requirement. For example, if you do not create a user ID and password, but the TM1 server requires a log on, the user is prompted to log on.

You can use an external namespace (third-party directory service provider) as an authentication method. The TM1 server must be configured to authenticate with IBM Cognos BI. For more information, see your TM1 documentation on Cognos Access Manager Authentication.

**TM1Connection Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration Host</td>
<td>Enter the name of a machine that can be identified by the network.</td>
</tr>
<tr>
<td>Server Name</td>
<td>Enter the server name as configured in the TM1S.cfg file. For more information, see your TM1 documentation.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Signon</td>
<td>For more information on signon, see &quot;Securing Data Sources&quot; (p. 249). If no authentication is required, select <strong>No authentication</strong>. If an external namespace is used, select <strong>An external namespace</strong> and then select the namespace. If authentication is required, select <strong>Signons</strong>. If a user ID is required in the connection string, select the <strong>User ID</strong> check box. If a password is required, select the <strong>Password</strong> check box and enter the password in the <strong>Password</strong> and <strong>Confirm password</strong> boxes. To create a user ID and password that automatically connects to the data source, select <strong>Create a signon that the Everyone group can use</strong>. Enter the <strong>User ID</strong> and then enter the password in the <strong>Password</strong> and <strong>Confirm password</strong> boxes.</td>
</tr>
</tbody>
</table>

**Limited Security with TM1 Data Sources**

In TM1 data sources, administrators can secure elements within a dimension so that they are visible only to certain users. However, in IBM Cognos software, a visible path must exist from each element to the root of the hierarchy. It is possible to secure sub-trees of a TM1 data source hierarchy, but each element in the sub-tree must be secured.

For example, consider the following hierarchy for Total Business Unit:

- Europe
  - UK
  - Germany
- North America
  - Canada
  - United States
- Asia Pacific
  - Australia
  - Japan

In this example, if only the **North America** element is secured, leaving the **Canada** and **United States** elements visible to all users, the path of accessible elements is impeded. IBM Cognos BI users may receive messages explaining that inaccessible members were encountered.

If the entire sub-tree of **North America**, **Canada**, and **United States** is secured, IBM Cognos BI will report correctly because there is a direct, visible path from the lowest level of data in the hierarchy to the highest level of data.
To reliably detect this situation, please install TM1 build number 9.4.00001.576.

**Unexpected Results When Using Aggregation with TM1 Data Sources**

TM1 data sources can include rule-derived cells. IBM Cognos BI cannot identify these rule-derived cells ahead of time, so performing an aggregation on these cells may yield unexpected results. For example, aggregating a set containing a rule-derived value may produce unexpected results in Report Studio and Analysis Studio.

**Note:** Explicit aggregation operations like sum, average, count, minimum, and maximum are not affected.

If you are using TM1 data cubes with rule-derived cells in IBM Cognos BI, we recommend that you install TM1 build number 9.4.00001.576, which identifies aggregation errors by marking the error cells with dashes (--).

**XML Data Sources**

When you create an XML data source, you must use XML as the type of connection and specify the location of the XML document in the connection string.

You can specify the connection string for an XML data source as:

- an HTTP URL that identifies the content store required to connect to the XML document.
  
  An example is HTTP://xmltestserver.cognos.com/XML/country.xml.

  Ensure that you create a Web alias for the directory that contains the XML file and that you enable directory browsing.

- a file path
  
  A Microsoft® Windows® operating system file path example is \servername\XML\country.xml.

  A UNIX® operating system file path example is /mount name/XML/country.xml.

- a local file
  
  An example is C:\XML\country.xml;VALIDATE=ON.

To access a local file, use a file path that uses platform-specific syntax.

To test an XML connection string, you must type the following code at the end of the string:

```plaintext
;VALIDATE=ON
```

The text of this code is not case sensitive.

**Parameterized XML Connection Strings**

In an HTTP URL connection string for an XML data source, you can use parameters to send additional information. You can embed a prompt definition string in the parameter component.

If the prompt definition is specified in the report, that value is used. Otherwise, the user is prompted to supply a value. Prompting is not supported for other types of connection strings.

An example of a URL component is `addressing_scheme://network_location/path;parameters?query#fragment_identifier`
Encode the parameter component with the definition string in between two sets of question marks. A prompt cannot cross a component boundary.

An example of a parameterized XML string is http://My_Network_Location/My_Path/myxml.asp?countrysid=??CanadaPrompt??

Parameterized XML connection strings have these restrictions:

- When a URL component is a prompt, it cannot contain other data.
- Prompts embedded in XML connection strings do not work in Framework Manager. You cannot import data from a parameterized XML connection string.
- When you set up a parameterized XML connection string in IBM® Cognos® Connection, the Test button does not work.
- Validation of the query specification in Report Studio does not work if you are connected to a parameterized XML connection string.

**XML Data Source Connection Parameters**

You specify connection parameters when you create a data source (p. 227) or modify a data source connection (p. 231).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection string</td>
<td>Enter the connection string.</td>
</tr>
</tbody>
</table>

**Create a Data Source**

A data source defines the physical connection to a database. A data source connection specifies the parameters needed to connect to a database, such as the location of the database and the timeout duration. These parameters form a connection string for the data source.

You can create data sources in the portal or in Framework Manager. Because they are stored on the server, data sources appear in both places, regardless of where they were created. Existing data source connections can be edited only in the portal.

If you are an administrator, you can set up all required data sources before models are created in Framework Manager so that all connections are available in the Framework Manager Metadata wizard.

Data sources are stored in the Cognos® namespace and must have unique names. For example, you cannot use the same name for a data source and a group.

You can include authentication information for the database in the data source connection by creating a signon. Users need not enter database authentication information each time the connection is used because the authentication information is encrypted and stored on the server. The signon produced when you create a data source is available to the Everyone group. Later, you can modify who can use the signon or create more signons.
Before creating data sources, you must have write permissions to the folder where you want to save the data source and to the Cognos namespace. You must also have execute permissions for the **Data Source Connections** secured feature.

**Recommendation - Use Network Paths For File-Based Data Sources**

If you have a distributed installation with several servers, we recommend that you use network paths for all file-based data sources rather than local paths. This ensures that the data sources can be accessed by the services that require them, regardless of which server requires the data.

When you create a connection to a file-based data source, such as a PowerCube, you enter a path and file name. To point to the file, use a local path, such as C:\cubes\Great Outdoors Company.mdc, or a network path, such as \servername\cubes\Great Outdoors Company.mdc.

In a distributed installation, where report servers are running on different computers, using a local path requires that the file and path be valid on each computer where a report server is running. Alternatively, if you use a network path to point to a file, each report server points to the same file on the network without having the file available locally. Also, to ensure that the file is always available, we recommend that you store it in a shared directory that can be accessed on your network.

If you installed IBM Cognos Business Intelligence components on UNIX® operating system servers, we recommend that you also locate the file-based data source on a UNIX server. You should then use a UNIX path, such as /servername/cubes/Great Outdoors Company.mdc to access the file.

If you have installed all components on a single computer, you can use local paths, but you must ensure that the services requesting the data have the appropriate access to the data files on the computer.

For Microsoft® Windows® operating system distributed installations, we recommend that you use UNC paths to shared directories for any file based data source, such as PowerCubes or XML files.

**Steps**

1. In IBM Cognos Connection, in the upper-right corner, select **Launch, IBM Cognos Administration**.
2. On the **Configuration** tab, select **Data Source Connections**.
   - **Tip:** To remove a data source, select the check box for the data source and select the delete button.
3. Select the new data source button ☰.
4. In the name and description page, type a unique name for the data source and, optionally, a description and screen tip, and then select **Next**.
5. In the connection page, from the **Type** drop-down list, select the type of data source that you want to create.
   - **DB2**
   - **Microsoft SQL Server**
   - **Netezza**
- Oracle
- Teradata

If your data source is not listed, click Other type.

6. Specify the Isolation level.
   - If Isolation level does not appear, select Next.
   - If Isolation level also appears, select the default object gateway or specify a value, and then select Next.

7. Specify the connection parameters for the data source.
   For information about connection parameters for the type of data source that you are using, click the associated item in the following list:
   - IBM Cognos Finance
   - IBM Cognos Now! - Real-time Monitoring Cube
   - IBM Cognos Planning - Contributor
   - IBM Cognos Planning - Series 7
   - IBM Cognos PowerCube
   - Composite (ODBC)
   - IBM Cognos Virtual View Manager (ODBC)
   - DB2
   - Oracle Essbase Server
   - IBM InfoSphere Warehouse Cubing Services
   - Informix
   - Microsoft SQL Server (ODBC)
   - Microsoft SQL Server (OLE DB)
   - Microsoft SQL Server (SQL 2005 Native Client)
   - Microsoft SQL Server (SQL 2008 Native Client)
   - Microsoft Analysis Services (ODBO)
   - Microsoft Analysis Services 2005
   - Microsoft Analysis Services 2008
   - ODBC
   - Oracle
   - Progress OpenEdge
Chapter 8: Data Sources and Connections

- Red Brick (ODBC)
- SAP BW
- Sybase Adaptive Server Enterprise
- Teradata (ODBC)
- TM1
- XML

8. Select **Test the connection**, and then **Test** to test whether parameters are correct.
   In the **Status** column, you can see if the connection was successful. If it was unsuccessful, select **Close**, return to the previous steps, and verify your connection parameters. If it was successful, go to the next step.

9. Click **Finish**.
   If you selected a data source other than IBM Cognos PowerCube or SAP BW, the new data source appears in **Data Source Connections** on the **Configuration** tab, and can be selected when using the Metadata Wizard in Framework Manager.
   If you selected IBM Cognos PowerCube or SAP BW, go to the next step.

10. Click **OK** to return to **Data Source Connections**, or for some data sources, you can click **Create a Package** and **OK**.
    **Note:** You can create a package with your new data source now or later. For more information, see (p. 402). The **Create a Package** check box is only available if you have the appropriate capabilities "Secured Functions and Features" (p. 283).

    If you created a signon, you can now modify or add more signons (p. 234). You can also add more connections (p. 231).

**Deploy Updated PowerCubes**

After you rebuild or update a PowerCube, you can use various methods to deploy the cube to the production environment.

To deploy an updated IBM® Cognos® Transformer PowerCube, use the Copy and Activate method in IBM Cognos Transformer (this is the recommended method), or copy the PowerCube yourself, and use the `pcactivate` command line utility.

To deploy an updated Series 7 Transformer PowerCube, you must copy the PowerCube first. Then, use the `pcactivate` command line utility to activate the cube.

For more information, see the section Copy and Activate a Newer Version of a Published PowerCube in the IBM Cognos Business Intelligence Transformer User Guide.

**Steps to Run the pcactivate Command**

1. Copy the Transformer PowerCube to the production environment.
The name of the destination directory in the production environment must be the same as the PowerCube name. For example, if the cube is named production.mdc, the destination directory must be named production.

The destination directory must be located in the same directory as the PowerCube. For example, if the data source connection specifies that the PowerCube location is D:\Cubes\production.mdc, the destination directory, named production, must be D:\Cubes\production.

For example, copy the PowerCube to D:\Cubes\production\production.mdc.

2. At the command line prompt, type the `pcactivate` command using the following syntax:

   `pcactivate cube_name.mdc destination_location destination_location`

   You can type more than one destination location.

   For example, type
   
   - `pcactivate TheCube.mdc d:\deploy\cubes`
   - `pcactivate production.mdc D:\Cubes`
   - `pcactivate sales.mdc \server_1\cubes \server_2\cubes`
   - `pcactivate "Production Cube.mdc" "d:\Program Files\cognos\c10\webcontent\cubes"`

   Note: If you include a path in the `cube_name` parameter, the path is removed and ignored.

Add or Modify a Data Source Connection

You can add new data source connections or edit string parameters for existing connections.

You can also add multiple connections to an existing data source. For example, you want a data source to have two or more connections to the same database that have different properties, such as different timeout values or access permissions.

You can also add connections to a data source that point to different databases, but the databases must contain the same schema.

When you create a data source connection, you can create a signon that the Everyone group can use to access the database. Later, you can modify who can use this signon or create more signons. For example, you can control access to data by setting the permissions for each data source connection. For more information, see "Set Access Permissions for an Entry" (p. 278).

To add or modify a data source connection, you must have access to the required capabilities to administer data sources (p. 283).

If you are creating an Oracle, DB2®, or Microsoft® SQL Server data source, you can include database commands in the connection information. For more information, see "Passing IBM Cognos Context to a Database" (p. 238).

If you select Microsoft Analysis Services 2005 or 2008 as the connection type, you can have more than one instance on the same server.
Steps to Create a New Connection
1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Data Source Connections.
3. Click the data source for which you want to add a new connection.
   Tip: To remove a data source connection, select its check box and click the delete button.
4. Click the new connection button.
5. In the name and description page, type a unique name for the connection and, optionally, a description and screen tip, and then click Next.
6. Proceed with steps 5 to 10 for creating a data source.

If you created a signon, you can now modify or add more signons (p. 234).

Steps to Modify a Connection
1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Data Source Connections.
3. Click the data source for which you want to modify the connection.
4. Click the set properties button for the connection you want to modify.
5. Click the Connection tab.
6. If you want to change the data source type, click an item in the Type drop-down list.
7. Click the edit icon to modify the connection string.
8. Proceed with steps 5 to 10 for creating a data source.

Manage Data Source Connections
Each instance of the report server has an established pool of database connections. The connections are reused for new requests that match the database, user, and password. Entries remain in the pool until they are idle for a timeout period and then are closed. Once a pool is full, no further connection are added. This results in a request failure.

PoolSize
Set the maximum number of data source connections available to the report server by modifying the PoolSize variable.
**Timeout**
Set the duration for retaining connections by modifying the Timeout variable. Connections are examined once per minute and any connection that has been inactive longer than the timeout value is removed. The default timeout value is 900 seconds.

**Reusable Data Connections**
Data source connections are reusable only when the database credentials of the connection match those of the new request. Inactive data source connections can be claimed by a new request. This occurs when the maximum number of connections has been reached and none of the inactive connections can be used by the new request. In this case, the oldest inactive connection is terminated and a new connection is created.

When the maximum number of connections is reached, and all are active, then additional requests fail. The server must be configured to ensure that the concurrent report requests do not exceed the request pool size.

For more information about report service requests, see "Set the Maximum Number of Processes and Connections" (p. 166).

**Steps**

1. On each computer where IBM® Cognos® Business Intelligence is installed, open the \c10_location\configuration/CQEConfig.xml.sample file in a text editor.
   Ensure that your editor supports saving files in UTF-8 format.

2. Find the **Timeout** and **PoolSize** parameter and edit them as follows:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<configuration company="Cognos" version="#.#" rendition="###">
   <component name="CQE">
      <section name="DBConnectionPool">
         <!-- Description: Database connection timeout. Default is 900 seconds (15 minutes) -->
         <entry name="Timeout" value="number_of_seconds"/>
         <!-- -->
         <!-- Description: Database connection pool size. -->
         <!-- Maximum number of connections managed by the report server. Default=50 -->
         <entry name="PoolSize" value="number_of_connections"/>
      </section>
   </component>
</configuration>
```

3. Save the file as CQEConfig.xml to the \c10_location\bin directory.

4. Using IBM Cognos Configuration, stop and then restart the services.
   For information about stopping services, see the IBM Cognos BI Installation and Configuration Guide.
Create or Modify a Data Source Signon

You add signons to existing data source connections so that users do not have to enter database credentials when they run reports. When you create a signon, you specify the users and groups that can access the signon. The user ID and password that make up the signon must already be defined in the database.

For information about creating groups, see "Users, Groups, and Roles" (p. 269).

You can modify an existing signon if the credentials used to log on to the database change, or if you want to change who can use the signon.

For data source configurations that require each user to have their own signon, it can be unwieldy to administer them all. For information on how users can manage their own data source credentials, see "Manage Your Own Data Source Credentials" (p. 281).

Steps to Create a Signon

1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Data Source Connections.

3. Click the data source, and then click the connection to which you want to add a new signon.

4. Click the new signon button.

5. In the name and description page, type a unique name for the data source signon and, if you want, a description and screen tip, and then click Next.

6. Type the User ID and Password to connect to the database, and click Next.

   The Select the users page appears.

7. To add users and groups that can use the signon, and click Add.

   • To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, or roles.

   • To search for entries, click Search and in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.

   • To type the name of entries you want to add, click Type and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:

     namespace/group_name;namespace/role_name;namespace/user_name;

     Here is an example:

     Cognos/Authors;LDAP/scarter;

8. Click the right-arrow button and when the entries you want appear in the Selected entries box, click OK.
Tip: To remove entries from the Selected entries list, select them and click Remove. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click Show users in the list.

9. Click Finish.

The new data source signon appears under the connection.

Steps to Modify a Signon

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Data Source Connections.

3. Click the data source, and then click the connection for which you want to modify the signon.
   Tip: To remove a signon, select its check box and click the delete button.

4. Click the set properties button for the signon you want to modify.

5. Click the Signon tab.

   A list of users and groups that can use the signon appears.

6. If you want to change the user ID and password that make up the signon click Edit the signon, type the new credentials, and click OK.

7. If you want to add users or groups to the signon list, click Add, and choose how to select users and groups:
   • To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, or roles.
   • To search for entries, click Search and in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.
   • To type the name of entries you want to add, click Type and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:
     namespace/group_name;namespace/role_name;namespace/user_name;
     Here is an example:
     Cognos/Authors;LDAP/scarter;

8. Click the right-arrow button and when the entries you want appear in the Selected entries box, click OK.
   Tip: To remove entries from the Selected entries list, select them and click Remove. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click Show users in the list.

9. Click OK.
Specifying Isolation Levels

The isolation level specifies how transactions that modify the database are handled. By default, the default object gateway is used. Not all types of databases support each isolation level. Some database vendors use different names for the isolation levels.

Queries that are executed by reports and analysis are intended to be read-only operations. The queries execute with a unit of work at the data source known as a transaction with either a default or administrator-defined isolation level. Report authors should not assume that queries that execute stored procedures commit any data written by the procedure. In some environments, changes made by a procedure may be committed due to features of the database. A stored procedure that is marked for-write in Framework Manager commits changes but can only be used by Event Studio.

If you need specific queries to run with different isolation levels, you must define different database connections.

For OLAP data sources, including SAP BW, the transaction unit of work is read-only.

The following isolation levels are in increasing order of isolation:

- **Read Uncommitted**
  
  Changes made by other transactions are immediately available to a transaction.

<table>
<thead>
<tr>
<th>Database type</th>
<th>Equivalent isolation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DB2®</td>
<td>Uncommitted read</td>
</tr>
<tr>
<td>Microsoft® SQL Server</td>
<td>Read uncommitted</td>
</tr>
<tr>
<td>Sybase Adaptive Server Enterprise</td>
<td>Read uncommitted</td>
</tr>
<tr>
<td>Informix®</td>
<td>Dirty read</td>
</tr>
</tbody>
</table>

- **Read Committed**
  
  A transaction can access only rows committed by other transactions.

<table>
<thead>
<tr>
<th>Database type</th>
<th>Equivalent isolation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>Read committed</td>
</tr>
<tr>
<td>DB2</td>
<td>Cursor stability</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>Read committed</td>
</tr>
<tr>
<td>Sybase Adaptive Server Enterprise</td>
<td>Read committed</td>
</tr>
</tbody>
</table>
### Cursor Stability

Other transactions cannot update the row in which a transaction is positioned.

<table>
<thead>
<tr>
<th>Database type</th>
<th>Equivalent isolation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DB2</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sybase Adaptive Server Enterprise</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Informix</td>
<td>Cursor stability</td>
</tr>
</tbody>
</table>

### Reproducible Read

Rows selected or updated by a transaction cannot be changed by another transaction until the transaction is complete.

<table>
<thead>
<tr>
<th>Database type</th>
<th>Equivalent isolation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DB2</td>
<td>Read stability</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>Repeatable read</td>
</tr>
<tr>
<td>Sybase Adaptive Server Enterprise</td>
<td>Repeatable read</td>
</tr>
<tr>
<td>Informix</td>
<td>Repeatable read</td>
</tr>
</tbody>
</table>

### Phantom Protection

A transaction cannot access rows inserted or deleted since the start of the transaction.

<table>
<thead>
<tr>
<th>Database type</th>
<th>Equivalent isolation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>Not applicable</td>
</tr>
<tr>
<td>DB2</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Database type</td>
<td>Equivalent isolation level</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sybase Adaptive Server Enterprise</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Informix</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

- **Serializable**

A set of transactions executed concurrently produces the same result as if they were performed sequentially.

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Equivalent isolation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>Serializable</td>
</tr>
<tr>
<td>DB2</td>
<td>Repeated read</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>Serializable</td>
</tr>
<tr>
<td>Sybase Adaptive Server Enterprise</td>
<td>Serializable</td>
</tr>
<tr>
<td>Informix</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Passing IBM Cognos Context to a Database**

Database administrators want to know details about applications that connect to their database systems. They use this information for auditing, workload management, and troubleshooting. IBM® Cognos® software can provide details about its reporting applications and the users accessing them. These details include the default set of information about authenticated users that is retrieved from authentication providers. This information can be extended by specifying custom namespace mappings in IBM Cognos Configuration. For more information about the mappings, see the *Installation and Configuration Guide*.

Using the mechanisms built into your database and IBM Cognos software, you can implement the most appropriate methods of passing Cognos context to the database. These methods include:

- **Using IBM Cognos command blocks (p. 239)**
  This method applies to all databases that support command blocks, specifically Oracle, DB2®, Microsoft® SQL Server, and Teradata data sources

- **Using DB2 CLI connection attributes (p. 245)**
  This method applies to DB2 only.

- **Adding application context to dynamic SQL (p. 245)**
This method applies to all database applications that support comments within a dynamic SQL statement.

**Support for Macro Functions**

The macro functions available in IBM Cognos software can provide information in a command block about users and reporting application objects, such as packages, reports, or queries. All macro functions can return values when referenced from a command block, which allows for application context to be passed to the database from a command block. Macro functions that reference parameter maps in a model may also be used.

**Using Command Blocks**

You can use database commands for Oracle (OR), DB2® (D2), Microsoft® SQL Server (SS), and Teradata (TD) data sources. Use the connection wizard to specify database commands that run when an Oracle connection or session is opened or closed, or when a DB2, Microsoft SQL Server, or Teradata session is opened.

For example, use a database command to set up proxy connections (p. 242) or virtual private databases (p. 243) for an Oracle database.

You can use commands to run native SQL commands when you open a session, such as running a stored procedure.

**When to Use Command Blocks**

Command blocks execute as IBM® Cognos® software opens and closes database connections or a session on a connection. You can use the IBM Cognos session variables and macro functions to parameterize the commands.

As an administrator, you must know when a command block executes for a database connection. It is often best to define the database statements in an open session command block. Open database connections execute less frequently because IBM Cognos pools and re-uses a database connection. Use open session command blocks if the application context of a database connection changes frequently.

If a database connection times out during testing, it may not indicate that another open database connection is needed. Consider the following questions when deciding how frequently to use open database command blocks:

- What are the database connection pool settings specified for the report servers in the CQEConfig.xml file?
- Does the database have aggressive idle connection timeout settings?
- Does the query engine have aggressive idle connection timeout settings?
- Is the period between requests longer than the timeout settings?
- Are there any requests routed to different report servers that have to create new connections?
**Example of interaction between command blocks**

Database commands are included in command blocks which are formatted using XML. The following diagram shows an example of the interaction between four command blocks, assuming that a connection to the database does not exist.

Query for user 1 arrives

- Run open connection command block
- Run open session command block
- Run query 1
- User idle for specified period of time
- Run close session command block
- Mark connection as reusable for other users
- Connection idle for predefined period of time
- Run close connection command block
- Connection required by user 2

**Notes**

- You cannot test the command blocks for connections using the **Test the connection** link on the connection string page. If you have Software Development Kit installed, you can ensure that your XML code validates against the schema file named `c10_location/webapps/p2pd/WEB-INF/classes/DataSource.xsd`.

- The command structure is the same for all data sources. However, the specific database commands can vary depending on which database you are using. In this section, the examples use Oracle and DB2 commands.

- The commands in the blocks are vendor-specific and must be included in an `<sqlCommand>` tag.
Depending on your settings, the query engine may open new connections more rapidly than may occur in a normally loaded application. This may create the false impression that information is being reset for each request that is executed.

**Example - Open Connection Command Block**
The following sets French as the language for an Oracle connection:

```xml
<commandBlock>
  <commands>
    <sqlCommand>
      <sql>ALTER SESSION SET NLS_LANGUAGE = FRENCH</sql>
    </sqlCommand>
  </commands>
</commandBlock>
```

**Example - Close Connection Command Block**
The following re-sets the language to English before disconnecting from an Oracle database:

```xml
<commandBlock>
  <commands>
    <sqlCommand>
      <sql>ALTER SESSION SET NLS_LANGUAGE = ENGLISH</sql>
    </sqlCommand>
  </commands>
</commandBlock>
```

**Example - Passing Request Information**
This DB2® example of an open session command block, when executed, generates a set of parameters to be passed to a user-defined procedure. The example combines macro functions to ensure that the values are generated as valid string literals and string concatenations with some literals. The modelPath variable is an example of how to access properties of a request that was processed when the block was executed.

```xml
<commandBlock>
  <commands>
    <sqlCommand>
      <sql> CALL myproc(#sq($current_timestamp) + ',' + sq($machine) + ',' + sq(#$modelPath}#) + 'Constant1''''#)
    </sqlCommand>
  </commands>
</commandBlock>
```

After the macro is expanded, the database administrator obtains the following information about the query:

`CALL myproc('2009-05-27 08:13:33.425-05:00', 'USERCOMPUTERNAME', '/content/package [@name=''EAPPS'']/model[@name=''model''], 'Constant1', '')`

**Example - Using Parameter Maps**
This DB2® example shows how a database administrator can obtain model information. An application standard might be to define a parameter map that appears in all models. The parameter map
defines context information about the IBM® Cognos® application. This approach requires that any application that uses the connection must provide this information to avoid errors.

```xml
<commandBlock>
  <commands>
    <sqlCommand>
      <sql> CALL myproc(#sq($APP_INFO{APPNAME}) + ',' + sq($APP_INFO{'APPMAJOR'}) + ',' + sq($APP_INFO{'APPMINOR'}) + ',' + sq($APP_INFO{'APPCONTACT'}) + ', ''Constant1'' #' +
      </sql>
    </sqlCommand>
  </commands>
</commandBlock>
```

After the macro is expanded, the database administrator obtains the following information about the query:

```
CALL myproc('ApplicationName','10','1','TradingApp@email.com','Constant')
```

**Example - Passing Authentication Provider Details**

This DB2® example shows how to include session information, sourced from an authentication provider, into the information passed to the database. The command block invokes the DB2 procedure SYSPROC.WLM_SET_CLIENT and passes down values derived from the available session variables. This information can be used by database administrators when defining workload management rules in the database that give higher priority to specific user groups when a database connection is shared by multiple user groups.

```xml
<commandBlock>
  <commands>
    <sqlCommand>
      <sql> CALL SYSPROC.WLM_SET_CLIENT_INFO(#$account.personalInfo.userName#, 'UserComputerName', #$account.parameters.var1#, 'ApplicationName', 'AUTOMATIC')
      </sql>
    </sqlCommand>
  </commands>
</commandBlock>
```

**Example - Using Command Blocks for Proxy Connections**

If you are using proxy connections, you can use an existing idle connection with signons for proxy connections. The physical connection can be used by more than one user. Because the proxy connections run on top of the existing physical connection, fewer physical connections are required.

To create a proxy connection, you create open session command blocks in XML.

The following is a simple example of an open session command block that creates a proxy connection for User1 (Oracle) or switches to User1 (DB2®). Note that the sessionStartCommand can only be used with Oracle and DB2.

```xml
<commandBlock>
  <commands>
    <sessionStartCommand>
      <arguments>
        <argument>
          <name>OCI_ATTR_USERNAME</name>
          <value>PROXY_USER1</value>
        </argument>
      </arguments>
    </sessionStartCommand>
  </commands>
</commandBlock>
```
Another example is a macro that can be substituted if authentication userNames are equivalent to the proxy userid or trusted context user.

The following is a simple example of a close session command block for a proxy session. The current proxy connection is terminated. Note that sessionEndCommand ends an OCI_session in Oracle and switches the user back to the trusted context owner for DB2.

Example - Using Command Blocks for Virtual Private Databases for Oracle

Typically, Oracle uses signons to determine the database information that users can access. A virtual private database determines which users can access which information, without further signon information required.

You create a command block for the connection using macros that are substituted at run time for the logged on user. The macros identify the user so that the user need not re-enter signon information.

If all users who access the database are defined as database users and user accounts are used for connections, you can set up the context automatically when the connection is established. For example, the macro can be substituted for the userName.

The XML command block stores a series of commands that are run in the stated sequence. This may include the commands that are described in "Schema for Data Source Commands" (p. 911).

The following example shows an XML command block for a virtual private database.

This command block sets up a context (virtual private database) within the connection based on the passed parameter. The passed parameter is retrieved from the environment, which is related to the user's logon at the portal level. These variables can be modified in the configuration tool. Their values are user specific and obtained using the security control mechanism (CAM).
This example shows account parameter substitution. You must specify account information as custom properties. For information about session properties, see the Framework Manager User Guide.

Note: Command blocks for Oracle proxy connections and virtual private databases at the data source level apply to all connections to that data source.

**Trusted Database Connections**

You can establish a connection between the database and IBM® Cognos® software where multiple users connect to the database using the database trusted connection feature.

A data source that is used for trusted application connections should define open session blocks for any user-specific database state that must be defined prior to the proxy users queries being issued. The associated Open Connection block is only executed once when the trusted connection is attempted, while Open Session blocks may execute many times for different users.

The information that a connection is going to proxy a request on behalf of a user, who is allowed to use proxy logons, is provided to the database using the following session command block attached to the trusted database connection:

```xml
<commandBlock>
  <commands>
    <sessionStartCommand>
      <arguments>
        <argument>
          <name>OCI_ATTR_USERNAME</name>
          <value>#$account.defaultName#</value>
        </argument>
      </arguments>
    </sessionStartCommand>
  </commands>
</commandBlock>
```

**Add Command Blocks While Creating a Data Source**

You add command blocks using the connection wizard.

By default, connections acquire properties from the parent data source. You can modify this later.

**Steps**

1. Create a data source, choosing Oracle, DB2, or Microsoft SQL Server as the data source type.
2. Click Next.
3. In the specify commands page, click Set next to the command string that you want to specify.
4. In the set command page, add an XML command block, and click OK.

Note: If you are using DB2® or Microsoft® SQL Server, you can only add commands block for opening a session.
5. Continue adding command blocks, as required.

6. Click Finish.

**Add or Modify Command Blocks for a Connection**

Connections acquire properties from their parent data source. If you have added a command block for a data source, then that command block will be available to Oracle, DB2®, or Microsoft® SQL Server connections in that data source.

You can change a command block for a specific connection, and you can remove the command block if you do not want it used for the connection.

**Steps**

1. Create a connection or modify a connection (p. 232), choosing Oracle, DB2, or Microsoft SQL Server as the data source type.

2. Click Next.

3. Click Set or Edit next to the command block that you want to modify.

   The Acquired column shows Yes or No to indicate whether the connection acquires properties from its parent data source.

4. In the set command page, add or modify the XML code command block, and click OK.

   Tip: You can reset command blocks by selecting the check box next to the connections clicking Reset to parent value or Clear.

   If you are using DB2 or Microsoft SQL Server, you can only add commands block for opening a session.

5. Continue adding or modifying command blocks, as required.

6. Click Finish.

**Using DB2 CLI Connection Attributes for DB2**

DB2® Call Level Interface (DB2 CLI) is a callable SQL interface to DB2 LUW, DB2 for z/OS and DB2 for i. IBM® Cognos® Business Intelligence can change some of the DB2 CLI connection attributes to pass application context to DB2 in a format acceptable to the components of IBM Optim Integrated Data Management. This information can later be retrieved from DB2 special registers using SQL statements.

To enable this functionality in IBM Cognos BI, you must modify the CQEConfig.xml file on each IBM Cognos report server computer configured for your IBM Cognos environment (p. 246). Because this functionality is set up at the query level, the information associated with the connection attributes is automatically updated every time the report runs.

The following list shows the DB2 CLI connection attributes that can be changed by IBM Cognos BI, and the type of information that these attributes can pass to DB2:

- SQL_ATTR_INFO_USERID
Specifies the name of the user running a report.

- **SQL_ATTR_INFO_WRKSTNNAME**
  Specifies the address of the system on which the user's browser is installed.

- **SQL_ATTR_INFO_APPLNAME**
  Specifies the package name associated with the query. If the string is longer than 32 characters, it overflows to $SLOT2 in the accounting string.

- **SQL_ATTR_INFO_ACCTSTR**
  Specifies the prefix or string that associates the request with IBM Cognos BI. The values are:

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COG</td>
<td>Associates the request with IBM Cognos products in IBM Optim Integrated Data Management.</td>
</tr>
<tr>
<td>ccc</td>
<td>Associates the request with an IBM Cognos solution. For version 8.4, this is set to BI.</td>
</tr>
<tr>
<td>vr</td>
<td>Specifies the version of IBM Cognos product, such as 8.4.</td>
</tr>
</tbody>
</table>

Additional accounting information

This information is divided into the following fields (slots):
- $SLOT2 - $packageName (overflow section for $SLOT1)
- $SLOT3 - $reportName
- $SLOT4 - $queryName
- $SLOT5 - $reportPath

Each slot has a fixed length that accepts strings containing no more than 46 bytes, padded with blanks if necessary. Because report paths, model paths, and so on, are often long, the strings may be shortened to adjust to the space limitations.

**Note:** In DB2, values passed to the API cannot contain single quote characters, which are converted to spaces. If the character set encoding is using multiple bytes per character, the character is converted to "?" in order to avoid overflow. This is important where Unicode is used and a character may require more than 2 bytes.

**Steps to Enable Support for DB2 CLI Connection Attributes**

1. Copy the `c10_location/configuration/CQEConfig.xml.sample` file to `c10_location/bin` and rename it to `CQEConfig.xml`. 

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Note: If the CQEConfig.xml was used for other purposes, for example to disable session caching, it may already exist in the c10_location/bin directory. In this situation, use the existing CQEConfig.xml file to perform the remaining steps.

2. Open the c10_location/bin/CQEConfig.xml in an editor.

   Ensure that your editor supports saving files in UTF-8 format.

3. Locate the <section name="QueryEngine"> element and add the DB2WFM entry with a value of 1, as shown below:

   <section name="QueryEngine">
     <entry name="DB2WFM" value="1"/>
     ...
   </section>

   To disable this functionality, set the value to zero or remove the element.

4. Save the CQEConfig.xml file.

5. Repeat the steps for each report server computer configured for your IBM Cognos environment.

6. Restart the IBM Cognos service.

Add Application Context to Dynamic SQL

Database server administrators can log and analyze the dynamic SQL workload generated by IBM® Cognos® software.

As an IBM Cognos administrator, you can define a custom string that includes application context that is added as a comment marker within SQL generated by the application. You can use literals, macros, and session variables, such as a user name, server name, qualified report path, and so on, to customize the comment generated by Cognos software.

Note: The Database administrator should check to see if their database client strips comments from statements prior to sending to the server. This option is probably configurable, check with your database client provider.

By using the applicable session variables, you can configure the format of the string for specific tools and products that can extract comments from dynamic SQL. IBM Cognos software includes the comments within any dynamic SQL it generates to a Relational Database Management System (RDBMS) if the vendor supports this functionality.

Use the CQEConfig.xml.sample file included with the product to customize the string specifications. The macro in this file shows the default entries that IBM Cognos software uses for generating the comments. However, you can add other entries as well.

The following example shows kinds of session variables you can specify in the macro in the CQE-Config.xml.sample file:

<configuration company="Cognos" version="0.1" rendition="cer2">
  <component name="CQE">
    <section name="QueryEngine">
      <entry name="GenerateCommentInNativeSQL" value="1"/>
      <!-- (default(off)=0, on=1) -->
      <entry name="GenerateCommentInCognosSQL" value="1"/>
      <!-- (default(off)=0, on=1) -->
      <!-- The content of the comments is controlled with two entries, their
defaults are specified in the value attribute -->
<entry name="NativeCommentMacro" value="# 'NC user=' + $account.defaultName + 'report=' + $report + 'start=' + $startTime + 'modelPath=' + $modelPath + 'requestID=' + $requestID + 'sessionID=' + $sessionID + ' REMOTE_ADDR=' + $REMOTE_ADDR + 'HTTP_HOST=' + $HTTP_HOST + 'SERVER_NAME=' + $SERVER_NAME + ' queryName=' + $queryName + ' reportPath=' + $reportPath + ' modelPath=' + $modelPath + 'reportPath=' + $reportPath + ' queryName=' + $queryName + ' REMOTE_ADDR=' + $REMOTE_ADDR + 'HTTP_HOST=' + $HTTP_HOST + 'SERVER_NAME=' + $SERVER_NAME + ' requestID=' + $requestID + 'sessionID=' + $sessionID + ' #"/>
<entry name="CognosCommentMacro" value="# 'CC user=' + $account.defaultName + 'report=' + $report + 'start=' + $startTime + 'modelPath=' + $modelPath + 'requestID=' + $requestID + 'sessionID=' + $sessionID + ' #"/>
</section>
</component>
</configuration>

At run time, the macro used in the above example would add the following comment to the automatically-generated SQL, or native SQL:

/* CC user=Anonymous report=REPORT1 start=2008-08-28T01:59:35.403Z modelPath=/content/package[@name='New Package']/model[@name='model']/reportPath=/content/package[@name='New Package']/report[@name='REPORT1'] queryName=Query1 REMOTE_ADDR=127.0.0.1 HTTP_HOST=localhost SERVER_NAME=localhost requestID=wq2lshM9jGhqdMj9h92Mg1qvdlhyM1Gq9lyG9sq sessionID=010:0d159165-745a-11dd-ac9f-b741aea4631:2789499633 */
select distinct
  ALL_TIME.CALENDAR_WEEKDAY as CALENDAR_WEEKDAY
from
  EAPPS..EAPPS.ALL_TIME ALL_TIME

Not all information in the generated comment is meaningful in all situations. The request and session ID information provides a link to the auditing facility, perfQFS performance information, and other traces in IBM Cognos 8.4. However, the name of a query in a report and the report itself may be meaningless, for example, when a user is performing an ad-hoc query or analysis as opposed to running a saved query, analysis or report.

By default, an anonymous user cannot see all session variables in the generated comments.

**Steps for Using the CQEConfig.xml.sample File**

1. Copy the c10_location/configuration/CQEConfig.xml.sample file to c10_location/bin and rename it CQEConfig.xml.

   Note: If the CQEConfig.xml was used for other purposes, for example to disable session caching, it may already exist in the c10_location/bin directory. In this situation, use the existing CQEConfig.xml file to perform the remaining steps.

2. Open the c10_location/bin/CQEConfig.xml in an editor.

   Ensure that your editor supports saving files in UTF-8 format.

3. Locate and uncomment the lines of code that begin with:

   entry name="GenerateCommentInNativeSQL"

   entry name="GenerateCommentInCognosSQL"

   entry name="NativeCommentMacro"

   entry name="CognosCommentMacro"
4. If you want, you can modify `NativeCommentMacro` and `CognosCommentMacro` by specifying the required parameter values and deleting the parameters that you do not need. If you leave a parameter value empty, the parameter will not appear in the generated comment.

5. Save the CQEConfig.xml file.

6. Restart the IBM Cognos service.

**Securing Data Sources**

You can secure data sources using IBM® Cognos® security or data source-specific security. The IBM Cognos security for a data source does not override security policies that already exist for the data source. For example, for IBM Cognos cubes, the security may be set at the cube level. For Microsoft® Analysis Server data sources, the security may be set using cube roles.

Depending on the data source, one or more of the following authentication methods are available:

- **no authentication**
  IBM Cognos software logs on to the data source without providing any signon credentials.

- **IBM Cognos service credentials**
  IBM Cognos software logs on to the data source using the logon specified for the IBM Cognos service. Users do not require individual database signons. For production environments, however, individual database signons are generally more appropriate.

- **external namespace**
  IBM Cognos software logs on to the data source with the credentials used to authenticate to the specified authentication namespace. The namespace must be active, users must be logged on prior to accessing the data source, and the authentication credentials used for the namespace must be relevant for the data source authentication.

All data sources also support data source signons defined for the Everyone group or for individual users, groups, or roles (p. 269). If the data source requires a signon, but you do not have access to a signon for this data source, you are prompted for authentication each time you access the data source.
The query service supports the IBM® Cognos® Business Intelligence dynamic query mode. For more information, see "Data Sources and Connections" (p. 197).

Using Cognos Administration, you can perform the following query service administration tasks:

- set query service properties (p. 251)
- administer query service caching (p. 253)

In addition, you can set the audit logging level for the query service. For more information, see "Setting Up Audit Reporting" (p. 107).

You must have the required permissions to access IBM Cognos Administration. For more information, see "Access Permissions and Credentials" (p. 275). You must also have the query service administration capability. For more information, see "Secured Functions and Features" (p. 283).

### Set Query Service Properties

The following table describes the properties that you can set for the query service.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable query execution trace?</td>
<td>Enables or disables a query execution trace (run tree trace). A query execution trace lets you view queries that are executed against a data source and is used to troubleshoot query-related issues.</td>
</tr>
<tr>
<td></td>
<td>Select Yes or No. The default is No.</td>
</tr>
<tr>
<td></td>
<td>You can find execution trace logs in the following location: c10_location/logs/XQE/reportName/runtreeLog.xml. You can view and analyze runtreeLog.xml files using the Dynamic Query Analyzer. For more information, see the IBM Cognos 10 Dynamic Query Cookbook in the Proven Practices section of the IBM Cognos Customer Service Center: <a href="http://www.ibm.com/software/data/cognos/customercenter/">http://www.ibm.com/software/data/cognos/customercenter/</a></td>
</tr>
</tbody>
</table>
Table of Parameters:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable query planning trace?</td>
<td>Enables or disables query plan tracing (plan tree), which captures the transformation process of a query. You can use this information to gain an advanced understanding of the decisions and rules that are executed to produce an execution tree.</td>
</tr>
<tr>
<td></td>
<td>Select Yes or No. The default is Yes. The query planning trace is logged for every query that is executed using dynamic query mode. You can find planning trace logs in the following location: c10_location/logs/XQE/reportName/plantreeLog.xml</td>
</tr>
<tr>
<td></td>
<td>Since planning logs are large, there is an impact on query performance when this setting is enabled.</td>
</tr>
<tr>
<td>Disable query plan caching</td>
<td>Specifies whether the service caches query plans for possible re-use. Caching the query plan takes additional resources and might not be suitable for your environment.</td>
</tr>
<tr>
<td></td>
<td>Select Yes or No. The default is No.</td>
</tr>
<tr>
<td>Idle connection timeout</td>
<td>Specifies the number of seconds to maintain an idle data source connection for re-use. The default setting is 300. Valid entries are 0 to 65535. Lower settings reduce the number of connections at the expense of performance. Higher settings might improve performance but raise the number of connections to the data source.</td>
</tr>
<tr>
<td>Write model to file</td>
<td>Specifies if the query service should write the model to a file when a query is executed. The file is used only for troubleshooting purposes, under the guidance of Customer Support.</td>
</tr>
<tr>
<td></td>
<td>Select Yes or No. The default is No. You can find the file in the following location: c10_location/logs/model/packageName.txt</td>
</tr>
</tbody>
</table>

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Dispatchers and Services.
4. Click the dispatcher to see a list of services.
5. Next to QueryService, click the set properties button.

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6. Click the **Settings** tab.

7. In the **Value** column, type or select the value for the settings that you want to change.

8. Click **OK**.

### Query Service Caching Administration

Caching reuses previously executed results and, when possible, avoids new queries to the database. Caching can improve performance when reports are re-run with small modifications, analyses are performed within the same cube, and repetitive master-detail requests are performed for large reports. The cache maintains the security permissions of the user who executes the request.

In IBM® Cognos® Administration, you can:

- clear the cache (p. 253)
- analyze cache usage (write cache state to file) (p. 254)
- schedule query service caching tasks (p. 254)

### Clear Everything in the Cache

To avoid using outdated data that might be stored in the cache, you can clear the cache. You might want to clear the cache manually if your data source metadata changes infrequently or if you want to clear the cache in between automatically scheduled cache clearing. When you clear the cache using the following steps, it clears everything in the cache.

If you want to clear the cache for a specific data source, catalog, or cube, create a query service administration task. You might also want to create a query service administration task if your data source metadata changes regularly and you want to set an automatic cache clearing schedule. For example, you might want to set a schedule to clear the cache hourly, daily, or weekly. For more information, see "Create and Schedule Query Service Administration Tasks" (p. 254).

### Steps

1. Start IBM® Cognos® Connection.

2. In the upper-right corner, click **Launch, IBM Cognos Administration**.

3. On the **Configuration** tab, click **Query Service Caching**.

4. Select the server groups for cache clearing.

5. Click **Clear cache**.

   The status of the **Clear cache** command is displayed.

   If a cache is being used by one or more pending reports or queries, it is internally flagged as “stale” by this command and is automatically cleared as soon as this usage completes.

6. Click **Close**.


## Analyze Cache Usage

You can analyze cache usage by producing a time-stamped XML file showing the state of specified cube caches (number of cache hits and cache misses for different levels of a cube).

This is useful to find out which cubes are in the cache at any point in time. The file includes a list of the data source name, catalog name and cube name for cubes that are currently cached. This can help you decide when to clear the cache.

The report is stored in the `c8_location/logs` directory. The filename has the format `SALDump_prefix_datasource_name_category_name_cube_name_timestamp.xml`.

You can also schedule the cache state writing to run automatically. For more information, see "Create and Schedule Query Service Administration Tasks" (p. 254).

### Steps

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Query Service Caching.
4. Select the server groups for cache clearing.
5. Click Write cache state.
   
   The status of the Write cache state command is displayed.
6. Click Close.

## Create and Schedule Query Service Administration Tasks

You can create query service administration tasks to do the following:

- schedule cache clearing and clear the cache to control memory usage by a specific data source or cube
- schedule the generation of a time-stamped report (write cache state)

You can also clear the entire cache manually (p. 253) and write the cache state to a report manually (p. 254).

You can create query service administration tasks and run them on demand. You can run them at a scheduled time "Schedule Management" (p. 365) or based on a trigger, such as a database refresh or an email (p. 371). You can schedule them as part of a job (p. 368). You can also view the run history of query service administration tasks (p. 359).

### Steps

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Content Administration.
4. Click the New Query service administration task button in the upper-right corner.
5. Specify a name, description, screen tip, and location. Click Next.

6. Select an operation, either Clear Cache or Write Cache State.

7. Enter the data source, catalog, and cube. Click Next.
   Enter an asterisk (*) as a wildcard to specify all.

8. Choose the action that you want:
   - To run the task now or later, click Save and run once and click Finish. Specify a time and date for the run, and then click Run. Review the run time and click OK.
   - To schedule the task at a recurring time, click Save and schedule and click Finish. Then, select frequency and start and end dates. Click OK.
     Tip: To temporarily disable the schedule, select the Disable the schedule check box. To view the schedule status, see "Manage Scheduled Activities" (p. 357).
   - To save the task without scheduling or running, click Save only and click Finish.
Chapter 10: Back Up Data

We recommend that you regularly back up your IBM Cognos software data and configuration settings, and your Framework Manager projects and models. This prevents the loss of your data should your computer be damaged or stolen. After your computer is operational, you can restore your data.

Because backing up consumes system resources, if IBM Cognos software is running while the database is backed up, its performance will be affected.

If you changed the location of the encryption and signing key settings from the default location, ensure that you back up the directory that contains them. Also, if the key stores are secured with passwords, ensure that you retain these passwords.

Data you back up is meant to be restored to the same computer. For information about moving data from one computer to another, see "Deployment" (p. 375).

For information about backing up data before you upgrade your software, see the upgrade topic in the IBM Cognos Business Intelligence Installation and Configuration Guide.

If you use a source control system to store your Framework Manager projects, you do not need to back up your projects.

If you customized any information in IBM Cognos Configuration or in the content store, ensure that it is backed up correctly.

Steps to Back Up the Content Store

1. Back up the content store.
   For more information, see your database documentation.

2. Copy the c10_location/configuration directory to the backup location.
   This directory contains the configuration settings.

   If you must ever restore the configuration settings, you can copy the backed-up directory to the correct location.

   For information about restoring the content store, see your database documentation.

Step to Back Up Framework Manager Projects and Models

- Copy the Framework Manager project directory and its subdirectories to the backup location.

  By default, the projects and models are located in My Documents/My Projects.

   If you must ever restore the Framework Manager projects and models, you can copy the backed-up directories to the correct location.
Chapter 11: Data Movement Entries

The main purpose of Data Manager is to create data warehouses and data repositories for reporting, analysis, and performance management. Data Manager does this by:

- extracting operational data from multiple sources
- transforming and merging the data to facilitate enterprise-wide reporting and analysis
- delivering the transformed data to coordinated data marts

Data Manager can be used to transfer data into single database tables and, where more complex transformations are required, to populate data warehouse fact tables and dimension tables.

Data Manager integrates with other IBM® Cognos® Business Intelligence products by delivering metadata to Framework Manager. This allows target data warehouse and data repositories to be modeled and used in IBM Cognos Business Intelligence and Performance Management projects.

For more information, see the Data Manager User Guide.

In IBM Cognos software, Data Manager tasks are contained in a data movement entry. After a data movement entry is published to IBM Cognos software, use IBM Cognos Connection to do the following:

- run the entry (p. 260)
- change default properties (p. 260)
- create a data movement view (p. 261)

You can schedule data movement entries to run at a specified time or based on a trigger, such as a database refresh or an email (p. 365). If you want to use an agent (p. 461) for a data movement entry, include the entry as part of a job (p. 368), and then include the job in an agent.

You can view the run histories for data movement entries (p. 359), and rerun failed data movement entries (p. 362).

Variables

A user-defined variable is a name and value pair that affects the operation of Data Manager programs, stores values for use in builds and JobStreams, and controls the flow of JobStreams. You can edit existing variables and add new variables for data movement entries in IBM Cognos software using the Variables tab when you set properties for the entry. For example, you might have a name/value pair of “ROWS/100” that returns 100 rows for a data movement entry.

The name of a variable must:

- start with an alphabetic character
- contain only alphanumeric characters, and underscores

Names of variables are not case sensitive and you can use a mixture of uppercase and lowercase characters in the name of a variable.
Run a Data Movement Entry

You can manually run a data movement entry at any time to perform the Data Manager tasks that it includes.

You can also schedule data movement entries. For more information, see "Schedule Management" (p. 365).

You must have the required permissions for the data movement entry. For more information, see "Secured Functions and Features" (p. 283).

Steps

1. In IBM® Cognos® Connection, click the run with options button on the actions toolbar next to the data movement entry you want to run.

2. Under Time, select Now to run the data movement entry now, or Later to specify a later date and time.

3. Click Run.

   The confirmation page appears.

4. Click OK.

Change Default Data Movement Entry Properties

You can change the defaults that are set for data movement entries in Data Manager, such as the owner, the language, and the variables (p. 259).

You can run a data movement entry, schedule a data movement entry, and set the number of occurrences and duration of the run history. For more information, see "Schedule Management" (p. 365). You can disable the entry (p. 317).

You can view the location and ID of the entry in the portal (p. 307).

You must have the required permissions for the data movement entry. For more information, see "Secured Functions and Features" (p. 283).

Steps

1. In IBM® Cognos® Connection, click the set properties button on the actions toolbar next to the data movement entry that you want to run.

2. Click the General tab.

3. If you want to make yourself the owner of the entry, click Make me the owner.

4. If you want to set a contact or an email address for the entry, click Set the contact and then click either Select the contact or Enter an email address.

5. If you want to change the icon associated with the entry, click Edit, specify the new icon for the entry, and click OK.
6. If you want to select a different language, select from the Language menu.

7. If you want, you can enter or change the Name, Description, and Screen tip for the data movement entry.

8. If you want to set Run history options, click Number of occurrences, and set the number of run repetitions, or click Duration, and set the number of days to run the entry.

9. Click OK.

The next time the data movement entry runs, it uses these properties instead of the original defaults.

**Create a Data Movement View**

You can create a data movement view, which uses the same specifications as the source data movement entry, but has different properties such as schedules and variables (p. 259).

Creating a data movement view does not change the original data movement entry. You can determine the source data movement entry by viewing the properties of the data movement view. The properties also provide a link to the properties of the source entry.

If the source entry is moved to another location, the data movement view link is not broken. If the source entry is deleted, the view icon changes to indicate a broken link [broken link icon], and the properties link to the source entry is removed.

You can run a data movement view, schedule a data movement view, and set the number of occurrences and duration of the run history. For more information, see "Schedule Management" (p. 365). You can disable the entry (p. 317).

You must have the required permissions for the data movement entry. For more information, see "Secured Functions and Features" (p. 283).

**Steps**

1. In IBM® Cognos® Connection, locate the data movement entry that you want to use to create the data movement view.

2. Under Actions, click the data movement view button [create view button] next to the data movement entry.

3. In the Name box, type the name of the entry.

4. If you want, in the Description and in the Screen tip box, type a description of the entry.

   The description appears in the portal when you set your preferences to use the details view (p. 325). The screen tip, which is limited to 100 characters, appears when you pause your pointer over the icon for the entry in the portal.

5. If you do not want to use the target folder shown under Location, click Select another location and select the target folder and click OK.

6. Click Finish.
The data movement view has the same run options and properties as the original entry. To change the default properties, see "Change Default Data Movement Entry Properties " (p. 260).
IBM® Cognos® software security is designed to meet the need for security in various situations. You can use it in everything from a proof of concept application where security is rarely enabled to a large scale enterprise deployment.

The security model can be easily integrated with the existing security infrastructure in your organization. It is built on top of one or more authentication providers. You use the providers to define and maintain users, groups, and roles, and to control the authentication process. Each authentication provider known to IBM Cognos software is referred to as a namespace.

In addition to the namespaces that represent the authentication providers, IBM Cognos software has a built-in namespace named Cognos. The Cognos namespace enhances your organization security policies and deployment ability of applications.

Security in IBM Cognos software is optional. If security is not enabled it means that no authentication providers are configured, and therefore all user access is anonymous. Typically, anonymous users have limited, read-only access.

## Authentication Providers

User authentication in IBM® Cognos® software is managed by authentication providers. Authentication providers define users, groups, and roles used for authentication. User names, IDs, passwords, regional settings, personal preferences are some examples of information stored in the providers.

If you set up authentication for IBM Cognos software, users must provide valid credentials, such as user ID and password, at logon time. In an IBM Cognos software environment, authentication providers are also referred to as namespaces, and they are represented by namespace entries in the user interface.

IBM Cognos software does not replicate the users, groups, and roles defined in your authentication provider. However, you can reference them in IBM Cognos software when you set access permissions to reports and other content. They can also become members of Cognos groups and roles.

The following authentication providers are supported in this release:

- Active Directory Server
- IBM Cognos Series 7
- Custom Java™ Provider
- eTrust SiteMinder
- LDAP
- NTLM
- SAP
RACF

You configure authentication providers using IBM Cognos Configuration. For more information, see the Installation and Configuration Guide.

Multiple Namespaces

If multiple namespaces are configured for your system, at the start of a session you must select one namespace that you want to use. However, this does not prevent you from logging on to other namespaces later in the session. For example, if you set access permissions, you may want to reference entries from different namespaces. To log on to a different namespace, you do not have to log out of the namespace you are currently using. You can be logged on to multiple namespaces simultaneously.

Your primary logon is the namespace and the credentials that you use to log on at the beginning of the session. The namespaces that you log on to later in the session and the credentials that you use become your secondary logons.

When you delete one of the namespaces, you can log on using another namespace. If you delete all namespaces except for the Cognos namespace, you are not prompted to log on. If anonymous access is enabled, you are automatically logged on as an anonymous user. If anonymous access is not enabled, you cannot access the IBM Cognos Connection logon page. In this situation, use IBM Cognos Configuration to enable anonymous access.

Hiding Namespaces

You can hide namespaces from users during logon. This lets you have trusted signon namespaces without showing them on the namespace selection list that is presented when users log on.

For example, you may want to integrate single signon across systems, but maintain the ability for customers to authenticate directly to IBM Cognos software without being prompted to choose a namespace.

You can hide Custom Java Provider and eTrust SiteMinder namespaces that you configured.

For more information, see the Installation and Configuration Guide.

Deleting or Restoring Unconfigured Namespaces

You can preserve namespaces and all their contents in the content store even if they are no longer configured for use in IBM® Cognos® software. When a namespace is not configured, it is listed as inactive in the directory tool.

An inactive namespace is one that was configured, but later deleted in IBM Cognos Configuration. The namespace can be deleted from the content store by members of the System Administrators role. You cannot log on to an inactive namespace.

If a new version of IBM Cognos software detects a previously configured namespace that is no longer used, the namespace appears in the directory tool as inactive. You can configure the namespace again if you still require the data. If the namespace is not required, you can delete it.

When you delete a namespace, you also delete all entries in My Folders that are associated with that namespace, and their contents.
An active namespace cannot be deleted, but can be updated.

To recreate a namespace in IBM Cognos Configuration, you must use the original ID of the namespace. For information about configuring and recreating namespaces, see the *Installation and Configuration Guide*.

### Delete an Inactive Namespace

If a namespace was removed from IBM® Cognos® Configuration and is no longer required, a member of the System Administrators role can delete it permanently in the directory tool. Deleting a namespace also deletes all the entries in My Folders that are associated with the namespace.

To access the directory administration tool, you must have execute permissions for the Data Source Connections secured feature and traverse permissions for the administration secured function.

#### Steps

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

   - If the namespace you want to delete does not have a check mark in the Active column, it is inactive and can be deleted.

3. In the Actions column, click the delete button.
   - If the namespace is active, the delete button is not available.

The namespace is permanently deleted. To use the namespace again in IBM Cognos software, you must add it using IBM Cognos Configuration.

### Authorization

Authorization is the process of granting or denying access to data, and specifying the actions that can be performed on that data, based on a user identity.

IBM® Cognos® software authorization assigns permissions to users, groups, and roles that allow them to perform actions, such as read or write, on content store objects, such as folders and reports. The content store can be viewed as a hierarchy of data objects. These objects include not only folders and reports, but packages for report creation, directories, and servers.

When IBM Cognos administrators distribute reports to users, they can set up folders in which reports and other objects can be stored. They can then secure those folders so that only authorized personnel can view, change, or perform other tasks using the folder contents.

For information about setting access permissions to the IBM Cognos entries, see "Access Permissions and Credentials" (p. 275). For information about the Content Manager hierarchy of objects and the initial access permissions, see "Initial Access Permissions " (p. 851).
Cognos Namespace

The Cognos® namespace is the IBM® Cognos software built-in namespace. It contains the IBM Cognos objects, such as groups, roles, data sources, distribution lists, and contacts.

During the content store initialization, built-in and predefined security entries are created in this namespace (p. 297). You must modify the initial security settings for those entries and for the Cognos namespace immediately after installing and configuring IBM Cognos software (p. 300).

You can rename the Cognos namespace using IBM Cognos Configuration, but you cannot delete it. The namespace is always active.

When you set security in IBM Cognos software, you may want to use the Cognos namespace to create groups and roles that are specific to IBM Cognos software. In this namespace, you can also create security policies that indirectly reference the security entries in authentication providers so that IBM Cognos software can be more easily deployed from one installation to another (p. 376).

The Cognos namespace always exists in IBM Cognos software, but the use of Cognos groups and roles it contains is optional. The groups and roles created in the Cognos namespace repackage the users, groups, and roles existing in the authentication providers to optimize their use in the IBM Cognos environment. For example, in the Cognos namespace, you can create a group called HR Managers and add to it specific users and groups from your corporate IT and HR organizations defined in your authentication provider. Later, you can set access permissions for the HR Managers group to entries in IBM Cognos software.

IBM Cognos Application Firewall

IBM® Cognos® Application Firewall is a security tool used to supplement the existing IBM Cognos software security infrastructure at the application level. Cognos Application Firewall analyzes, modifies, and validates HTTP and XML requests before the gateways or dispatchers process them, and before they are sent to the requesting client or service. It acts as a smart proxy for the IBM Cognos product gateways and dispatchers, and prevents the IBM Cognos components from malicious data. The most common forms of malicious data are buffer overflows and cross-site scripting (XSS) attacks, either through script injection in valid pages or redirection to other Web sites.

Cognos Application Firewall provides IBM Cognos components with security features that include data validation and protection (p. 266), logging and monitoring (p. 267), and output protection.

Cognos Application Firewall is enabled by default, and should not be disabled.

You can update Cognos Application Firewall independently of the other IBM Cognos components. For more information about Cognos Application Firewall, see the Installation and Configuration Guide, and the Architecture and Deployment Guide.

Data Validation and Protection

Validation of input data ensures that the data is in the expected format, based on a set of pre-defined variable rules. HTML variables, XML data, cookie values, and parameters are checked against this set of rules.
IBM® Cognos® Application Firewall performs positive validation of parameters instead of only searching for known script injection tags or common SQL injection signatures. Each parameter is validated against a rule that expects a certain data type in a certain format. If the data does not match the Cognos Application Firewall rule, it is rejected.

To provide even stronger validation, Cognos Application Firewall matches regular expression patterns to protect data inputs that use complicated formats.

**Valid Domain or Host List**

A common type of attack is to trick a user into going to a harmful site by modifying the form parameters. The back button and error URL features of a product provide a prime target for this type of attack.

Cognos Application Firewall limits the list of hosts and domains that a back URL can access. Cognos Application Firewall can be configured with a list of host names, including port numbers and domains. If a back URL contains a host or a domain that does not appear in the list, the request is rejected. By default, the host name of the dispatcher is added to the list. You can configure the list using IBM Cognos Configuration.

For more information, see the *Installation and Configuration Guide*.

**Logging and Monitoring**

IBM® Cognos® Application Firewall can monitor and log all access to IBM Cognos gateways and dispatchers. Use logging to track possible attacks or misuse of your IBM Cognos applications.

You can configure Cognos Application Firewall to log access to a specific file or to use IBM Cognos log application (IPF) logging. If logging is enabled, all requests that fail validation by Cognos Application Firewall are logged.

For more information, see the *Installation and Configuration Guide*.

**Tip:** You can use the Web server request log to obtain detailed information about the IP address of the source client in a suspected attack.

**Cross-Site Scripting (XSS) Encoding**

Many customers use other applications, such as eTrust SiteMinder, to check for cross-site scripting vulnerabilities. These products block HTTP get requests that contain specific characters.

Cognos Application Firewall encodes characters in Cascading Style Sheets (CSS) with URLs to prevent other cross-site scripting tools from blocking the characters.

The Cognos Application Firewall XSS encoding feature applies only to customers who use the IBM Cognos Connection portal.

Cognos Application Firewall XSS encoding is disabled by default. To enable this feature, use IBM Cognos Configuration.

For more information, see the *Installation and Configuration Guide*. 
Filtering of Error Messages

Some error messages may contain sensitive information, such as server names. By default, error message details in IBM Cognos software are routed to IPF log files, and the secure error message option is enabled. The information presented to users indicates only the occurrence of an error, without any details.

You can specify who can retrieve full error details that may include sensitive information by changing the Detailed Errors capability in IBM Cognos administration. Typically, this capability is assigned to directory administrators, but you can assign it to other users as well. For more information, see "Secured Functions and Features" (p. 283).

For information about retrieving full error details, see "View Full Details for Secure Error Messages" (p. 113).

Parameter Signing

Parameter signing protects parameter values against tampering when they are sent to a Web browser. Cognos Application Firewall can sign parameters or specific parts of data. Signing is used only in specific situations. It is enabled when CAF is enabled.
Chapter 13: Users, Groups, and Roles

Users, groups, and roles are created for authentication and authorization purposes. You can use groups and roles created in IBM® Cognos® software, and users, groups, and roles created in authentication providers. The groups and roles created in IBM Cognos software are referred to as Cognos groups and Cognos roles.

Users

A user entry is created and maintained in an authentication provider to uniquely identify a human or a computer account. You cannot create user entries in IBM® Cognos® software.

Information about users, such as first and last names, passwords, IDs, locales, and email addresses, is stored in the providers. However, this may not be all the information required by IBM Cognos software. For example, it does not specify the location of the users’ personal folders, or format preferences for viewing reports. This additional information about users is stored in IBM Cognos software, but when addressed in IBM Cognos software, the information appears as part of the external namespace.

Series 7 Users

If you configured the IBM Cognos Series 7 authentication provider (p. 263), a user from that namespace must belong to at least one Access Manager user class for the user to be usable in IBM Cognos software.

For example, if you create a new user in Series 7 Access Manager and assign the user to a user class, but then remove the user from that user class, you cannot log on as that user in IBM Cognos software.

Deleting and Recreating Users

For Series 7 and NTLM authentication providers, you cannot maintain associated properties and items when you delete and re-create a user. For example, if a user creates an object in My Folders, and then that user is deleted, the My Folders objects are no longer associated with that user. If a user with the same name is re-created, the objects are not reinstated.

If you use an LDAP server, the stability of My Folders objects depends on how you use the IDs. If the configuration of the LDAP provider uses the default attribute of dn for the Unique identifier parameter, a reinstated user with the same name keeps the My Folders objects of the original user. If you change the Unique identifier parameter to a unique attribute set by the LDAP server, for example, nsuniqueid for Sun Java™ System, the association of My Folders objects is lost for a deleted user and a new My Folders will be created for a user of the same name.

You can delete, copy, and change user profiles. For more information, see "Managing User Profiles" (p. 409).
**User Locales**

A locale specifies linguistic information and cultural conventions for character type, collation, format of date and time, currency unit, and messages. You can specify locales for individual products, content, servers, authors, and users in IBM® Cognos® software.

User locale refers to the product and content locales for each IBM Cognos user. Requests from users arrive with an associated locale. IBM Cognos software must determine the language and locale preferences of users and enforce an appropriate response locale when you distribute reports in different languages.

A user locale specifies the default settings that a user wants to use for formatting dates, times, currency, and numbers. IBM Cognos software uses this information to present data to the user.

IBM Cognos software obtains a value for user locale by checking these sources, in the order listed:

- **user preference settings**
  
  If the user sets the user preference settings in IBM Cognos Connection, IBM Cognos software uses these settings for the user’s product and content locale and for default formatting options. The user preference settings override the values obtained from the authentication provider.

- **authentication provider**
  
  If the authentication provider has locale settings that are configured, IBM Cognos software uses these values for the user’s product and content locale.

- **browser setting**
  
  Anonymous and guest users cannot set user preference settings. For these users, IBM Cognos software obtains a user locale from the browser stored on the user’s computer.

**Groups and Roles**

Groups and roles represent collections of users that perform similar functions, or have a similar status in an organization. Examples of groups are Employees, Developers, or Sales Personnel. Members of groups can be users and other groups. When users log on, they cannot select a group they want to use for a session. They always log on with all the permissions associated with the groups to which they belong.

Roles in IBM® Cognos® software have a similar function as groups. Members of roles can be users, groups, and other roles.

The following diagram shows the structure of groups and roles.
Users can become members of groups and roles defined in IBM Cognos software, and groups and roles defined in authentication providers. A user can belong to one or more groups or roles. If users are members of more than one group, their access permissions are merged.

You create Cognos groups and roles when

- you cannot create groups or roles in your authentication provider
- groups or roles are required that span multiple namespaces
- portable groups and roles are required that can be deployed

You create the required groups and roles in your authentication provider, and add them to the appropriate Cognos groups and roles.

- you want to address specific needs of IBM Cognos administration
- you want to avoid cluttering your organization security systems with information used only in IBM Cognos software

**Series 7 Roles**

If you have configured the IBM Cognos Series 7 authentication provider, user collections known as user classes in Series 7 appear as roles in IBM Cognos software. You can access Series 7 and IBM Cognos software using a single logon. If you start your session by logging on to Series 7, and then access IBM Cognos software, you automatically assume the roles that were in effect for you in Series 7 when you first logged on. You cannot assume different Series 7 roles.

Users can assume different roles in Series 7 after they access IBM Cognos software.

**Roles Used to Run Reports and Jobs**

The roles used to run reports and jobs are associated with the users who run the reports interactively, who are the report owners, and whose credentials are used to run scheduled reports and jobs. Depending on the options selected to run reports, different roles can be assumed by the process.

- When a report runs that has the run as the owner option selected, the process assumes all the roles associated with the report owner.
- When a scheduled report or job runs, the session assumes all the roles associated with the user whose credentials were used to process the request.

**Distribution Lists as Members of Groups and Roles**

In some namespaces, such as Microsoft Active Directory, a distribution list may appear on the Members tab of the Set properties page for a group or role. However, you cannot add distribution lists to a group or role membership, and you cannot use them to set access permissions for entries in the IBM Cognos user interface.

You can add an IBM Cognos distribution list to a Cognos group or role membership using the Software Development Kit. However, the Software Development Kit cannot be used to add an Active Directory distribution list to an Active Directory group. The Active Directory management tools must be used to do this.
IBM Cognos Controller Groups and Roles

For IBM Cognos software, use IBM Cognos Controller groups and roles to configure security. For information about using these groups and roles to configure security, see the IBM Cognos Controller Installation and Configuration Guide.

Create a Cognos Group or Role

The members of Cognos® groups can be users or other groups. The members of Cognos roles can be users, groups, or other roles. You can add entries from multiple namespaces, created both in the authentication providers and in IBM® Cognos software, as members of Cognos groups. You can also create empty groups that do not have any members.

If you plan to create groups or roles that reference entries from multiple namespaces, you must log on to each of those namespaces before you start your task. Otherwise, you will not have full administrative rights for the entries you want to reference.

We recommend that you use the Cognos groups and roles when you set up access permissions to entries in IBM Cognos software because it simplifies the process of deployment (p. 376).

When you delete a Cognos group or role, users’ access permissions based on it are no longer active. You cannot restore access permissions by creating a group or role with the same name.

To administer users, groups, and roles, you must have execute permissions for the Users, Groups, and Roles secured feature, and traverse permissions for the Administration secured function (p. 853).

Steps

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.


3. Click the Cognos namespace.

   Tip: If you want to delete a Cognos group or role, select the check box next to it and click the delete button.

4. On the toolbar, click the new group or new role button.

5. In the Specify a name and description page, type a name and, if you want, a description for the new group or role, and then select a destination folder and click Next.

6. If you want to create a group without members, click Finish.

7. If you want to add members to the new group or role, click Add and choose how to select the users, groups, or roles:

   • To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, or roles.

   • To search for entries, click Search and in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.
To type the name of entries you want to add, click **Type** and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:

namespace/group_name;namespace/role_name;namespace/user_name;

Here is an example:

Cognos/Authors;LDAP/scarter;

8. Click the right-arrow button and when the entries you want appear in the **Selected entries** box, click **OK**.

**Tip:** To remove entries from the **Selected entries** list, select them and click **Remove**. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click **Show users in the list**.

9. Click **Finish**.

**Add or Remove Members of a Cognos Group or Role**

You can modify the membership of a Cognos® group or role by adding or removing members.

When you remove users, groups, or roles from a Cognos group or role, you do not delete them from the authentication provider or from IBM® Cognos software.

If you plan to modify groups or roles that reference entries from multiple namespaces, you must log on to each of those namespaces before you start your task. Otherwise, you will not have full administrative rights for the entries you want to modify.

To administer users, groups, and roles, you must have execute permissions for the **Users, Groups, and Roles** secured feature, and traverse permissions for the **Administration** secured function (p. 853).

**Steps**

1. In IBM Cognos Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.

2. On the **Security** tab, click **Users, Groups, and Roles**.

3. Click the **Cognos** namespace.

4. In the **Actions** column, click the properties button for the group or role whose membership you want to modify.

5. Click the **Members** tab.

6. If you want to add members, click **Add** and choose how to select members:

   - To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, or roles.

   - To search for entries, click **Search** and in the **Search string** box, type the phrase you want to search for. For search options, click **Edit**. Find and click the entry you want.

   - To type the name of entries you want to add, click **Type** and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:
7. Click the right-arrow button and when the entries you want appear in the Selected entries box, click OK.

Tip: To remove entries from the Selected entries list, select them and click Remove. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click Show users in the list.

8. To remove members from a Cognos group or role, in the Set Properties page, specify which users, groups, or roles to remove, and click Remove.

9. Click OK.
Chapter 14: Access Permissions and Credentials

You use access permissions and credentials to ensure your organization’s data. You can perform the following tasks:

- set access permissions for your organization’s data, which specify the users who can have access to entries such as reports Access Permissions and Credentials
- create trusted credentials to authorize other users to use your credentials when those users do not have sufficient access permissions to perform specific tasks trusted credentials
- manage your own data source credentials (p. 281)

Set Access Permission for Entries

You can secure your organization’s data by setting access permissions for the entries. You specify which users and groups have access to a specific report or other content in IBM® Cognos® software. You also specify the actions they can perform on the content.

When you set access permissions, you can reference both authentication provider users, groups, and roles and Cognos groups and roles. However, if you plan to deploy your application in the future, we recommend that you use only the Cognos groups and roles to set up access to entries in IBM Cognos software to simplify the process (p. 278).

Permissions and Permitted Actions

You can grant or deny the following access permissions.

<table>
<thead>
<tr>
<th>Permissions</th>
<th>Icons</th>
<th>Permitted Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read</td>
<td><img src="image1.png" alt="icon" /></td>
<td>View all the properties of an entry, including the report specification, report output, and so on, which are properties of a report. Create a shortcut to an entry.</td>
</tr>
<tr>
<td>Write</td>
<td><img src="image2.png" alt="icon" /></td>
<td>Modify properties of an entry. Delete an entry. Create entries in a container, such as a package or a folder. Modify the report specification for reports created in Report Studio and Query Studio. Create new outputs for a report.</td>
</tr>
</tbody>
</table>
Permitted Actions

<table>
<thead>
<tr>
<th>Permissions</th>
<th>Icons</th>
<th>Permitted Actions</th>
</tr>
</thead>
</table>
| Execute     | ![Execute Icon] | Process an entry.  
For entries such as reports, agents, and metrics, the user can run the entry.  
For data sources, connections, and signons, the entries can be used to retrieve data from a data provider. The user cannot read the database information directly. The report server can access the database information on behalf of the user to process a request. IBM Cognos software verifies whether users have execute permissions for an entry before they can use the entry.  
For credentials, users can permit someone else to use their credentials.  
**Note:** Users must have execute permissions for the account they use with the run as the owner report option.  
| Set policy  | ![Set Policy Icon] | Read and modify the security settings for an entry.  
| Traverse    | ![Traverse Icon] | View the contents of a container entry, such as a package or a folder, and view general properties of the container itself without full access to the content.  
**Note:** Users can view the general properties of the entries for which they have any type of access. The general properties include name, description, creation date, and so on, which are common to all entries. |

**Access Permissions for Users**

Users must have at least traverse permissions for the parent entries of the entries they want to access. The parent entries include container objects such as folders, packages, groups, roles, and namespaces.

Permissions for users are based on permissions set for individual user accounts and for the namespaces, groups, and roles to which the users belong. Permissions are also affected by the membership and ownership properties of the entry.

IBM Cognos software supports combined access permissions. When users who belong to more than one group log on, they have the combined permissions of all the groups to which they belong. This is important to remember, especially when you are denying access.

**Tip:** To ensure that a user or group can run reports from a package, but not open the package in an IBM Cognos studio, grant the user or group execute and traverse permissions on the package. Users also require read permissions on the package to launch studios.
**Access Permissions Required for Actions**

To perform specific actions, each user, group, or role needs the right combination of access permissions granted for the entry, its parent entry, and its source and target entry. The following table lists permissions required for specific actions.

<table>
<thead>
<tr>
<th>Action</th>
<th>Permissions required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add an entry</td>
<td>Write permissions for a parent entry</td>
</tr>
<tr>
<td>Query the entry properties</td>
<td>Read permissions for an entry</td>
</tr>
<tr>
<td>View the children of the entry</td>
<td>Traverse permissions for an entry</td>
</tr>
<tr>
<td>Update an entry</td>
<td>Write permissions for an entry</td>
</tr>
<tr>
<td>Delete an entry</td>
<td>Write permissions for an entry, and write permissions for a parent entry</td>
</tr>
<tr>
<td>Copy an entry</td>
<td>Read permissions for an entry and any child entries, traverse permissions for all of the children, and write and traverse permissions for the target parent entry</td>
</tr>
<tr>
<td>Move an entry</td>
<td>Read and write permissions for an entry, write permissions for both the source parent entry and the target parent entry, and traverse permissions for the target parent entry</td>
</tr>
</tbody>
</table>

**Ownership of Entries**

If the user is an owner of an entry, the user has full access rights for the entry. This ensures that users can always access and modify the entries they own. By default, the owner of the entry is the user who creates the entry. However, any other user who has set policy permissions for the entry can take ownership of the entry.

**Granted and Denied Access**

You can grant access or deny access to entries. An icon that represents the type of access appears next to the entry name on the Permissions tab. For example, when a group has execute permissions for a report, this icon appears next to the group name on the Permissions tab for the report.

When a group has execute permissions denied for a report, this icon appears next to the group name.

Denied access has precedence over granted access. When you deny specific users or groups access to an entry, you replace other security policies that grant access to the entry.

If the grant and deny permissions are in conflict, access to the entry is always denied. For example, a user belongs to two groups. One group has access granted to a report and the other group has access denied to the same report. Access to this report is denied for the user.
Deny access only when it is really required. Typically, it is a better administrative practice to grant permissions than to deny them.

**Parent/Child Permissions**
Access permissions are acquired from parent entries. If access permissions are not defined, the entry acquires permissions from its parent entry. You can replace parent permissions by defining permissions for the child entry.

Objects that exist only as children of other objects always acquire permissions from their parents. Examples of such objects are report specifications and report outputs. They are visible through the Software Development Kit. You cannot set permissions specifically for those objects.

**Permissions and Deployment**
If you are an administrator who is deploying to a target environment, see "Deployment" (p. 375).

**Capabilities Permissions**
If you are an administrator, you set access to the secured functions and features by granting execute permissions for specified namespaces, users, groups, or roles. For more information, see "Secured Functions and Features" (p. 283).

**Deleting Cognos Groups and Roles**
When you delete a Cognos group or role, access permissions based on it are also deleted. You cannot restore them by creating a new group or role with the same name because this entry has a different internal ID.

If your groups or roles are created by authentication providers, check how your authentication provider deals with such situations. Typically, you cannot recreate access permissions if they are based on IDs but you can if they are based on names.

**Accessing Entries Associated with Data Sources Secured Against Multiple Namespaces**
Data sources in IBM Cognos software can be secured against multiple namespaces. In some environments, the namespace used to secure the data source is not the primary namespace used for access to IBM Cognos Connection. When you try to access an entry, such as a report, a query, or an analysis, that is associated with a data source secured against multiple namespaces, and you are not logged on to all of the required namespaces, a prompt for authentication appears. You must log on to the namespace before you can access the entry.

When single signon (SSO) is enabled, the prompt for authentication does not appear. You are automatically logged on to the namespace.

This functionality applies to IBM Cognos Viewer only. If a similar situation occurs in an IBM Cognos studio, you must quit your task and log on to all the namespaces that you want to use in the current session.

**Set Access Permissions for an Entry**
Setting access permissions for an entry includes creating new permissions or updating existing permissions. You can specify access permissions for all entries in IBM® Cognos® software. Some
examples of such entries are reports, queries, analyses, packages, agents, metrics, namespaces, groups, users, or dispatchers. You can reference users, group and roles from different namespaces in a security policy for an entry.

If you plan to reference entries from multiple namespaces, log on to each namespace before you start setting access permissions. Otherwise, entries in namespaces to which you are not logged on are shown as **Unavailable**.

Entries referenced by a security policy may also be shown as **Unavailable** when

- the entries were recently deleted from an external namespace.
- the entries are associated with an external namespace that was recently deleted.

To avoid this issue, run the consistency check type of content maintenance task selecting the option **References to external namespaces**. Content Manager deletes entries associated with the deleted namespaces from security policies. For more information, see "Maintain the Content Store" (p. 157).

To administer security, you must have set policy permissions (p. 275).

**Steps**

1. In IBM Cognos software, locate the entry for which you want to set access permissions.

2. In the **Actions** column, click the set properties button for the entry.

3. In the **Set properties** page, click the **Permissions** tab.

4. Choose whether to use the permissions of the parent entry or specify permissions specifically for the entry:

   - To use the permissions of the parent entry, clear the **Override the access permissions acquired from the parent entry** check box, then click OK if you are prompted to use the parent permissions. Click OK.

   - To set access permissions for the entry, select the **Override the access permissions acquired from the parent entry** check box, then proceed to step 5.

5. If you want to remove an entry from the list, select its check box and click **Remove**.

   **Tip**: If you want to select all entries, select the check box at the top of the list in the upper-left corner. Clear the check box to deselect all entries.

6. To specify the entries for which you want to grant or deny access, click **Add**, then choose how to select entries:

   - To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, or roles.

   - To search for entries, click **Search** and in the **Search string** box, type the phrase you want to search for. For search options, click **Edit**. Find and click the entry you want.
To type the name of entries you want to add, click **Type** and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:

namespace/group_name;namespace/role_name;namespace/user_name;

Here is an example:

Cognos/Authors;LDAP/scarter;

7. Click the right-arrow button and when the entries you want appear in the **Selected entries** box, click **OK**.

   **Tip:** To remove entries from the **Selected entries** list, select them and click **Remove**. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click **Show users in the list**.

8. For each entry in the list, in the box next to the list, select or clear check boxes to specify what type of access you want to grant or deny.

9. Click **Apply**.

   In the **Permissions** column, an icon appears next to the user, group, or role. This icon represents the type of access granted or denied to the entry.

10. If you want to remove access permissions that were previously set for the child entries so that the child entries can acquire permissions set for this entry, in the **Option** section, select the **Delete the access permissions of all child entries** check box.

    This option appears only with entries that are containers. You can use it to restrict access to a hierarchy of entries.

    **Warning:** Select this option only when you are certain that changing access permissions of the child entries is safe.

11. Click **OK**.

### Trusted Credentials

Trusted credentials are used for users who must perform a task or process, but do not have sufficient access permissions for entries that contain sensitive data, such as database signons and group memberships. Users with more extensive access permissions, who own the entries, can authorize a trusted user to use their credentials to access the entries.

Trusted credentials are also used to run scheduled requests when users are not logged on to IBM Cognos software, for example, overnight. When the request runs, a user session is created. The trusted credential is used to log on to IBM® Cognos® software as the user the trusted credential represents and the user’s access permissions are used to run the report or the job.

The credentials are stored as part of the account object in the namespace.

### Create Trusted Credentials

You can create trusted credentials (p. 280) when you want to authorize other users to use your credentials when those users do not have sufficient access permissions to perform specific tasks.
For users to use trusted credentials, traverse permissions must be granted for the namespace.

**Steps**

1. In IBM® Cognos® Connection, in the upper-right corner, click the my area options button, My Preferences.

2. On the Personal tab, under Credentials, if you have not created credentials before, click Create the Credentials.

3. Select the users, groups, or roles you want to authorize to use your credentials.
   If you are prompted for your credentials, provide your user ID and password.

4. If you want to add entries, click Add then choose how to select entries:
   - To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, or roles.
   - To search for entries, click Search and in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.
   - To type the name of entries you want to add, click Type and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry: namespace/group_name;namespace/role_name;namespace/user_name;
     Here is an example:
     Cognos/Authors;LDAP/scarter;

5. Click the right-arrow button and when the entries you want appear in the Selected entries box, click OK.

   **Tip:** To remove entries from the Selected entries list, select them and click Remove. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click Show users in the list.

6. If you want to remove an entry from the list, select the check box next to it and click Remove.

7. Ensure that the list contains only the users, groups, or roles that you want, and click OK.

**Manage Your Own Data Source Credentials**

You may be prompted for your data source credentials when you perform the following actions:

- view, run, or open an entry (see "Reports and Cubes" (p. 419))
- use a schedule or a job (see "Schedule Management" (p. 365))
- select the data sources that can be used to create a package (p. 408)

You may also be prompted for data source credentials when you use Framework Manager (see the Framework Manager User Guide).
You can save your data source credentials so that you are not prompted for them every time. You can also view and delete your data source credentials.

If you are an administrator, you can also create or modify data source signons (p. 234), but if you have a lot of users, it can be unwieldy for data source configurations that require each user to have their own signon since the credentials for each user must be done individually. You can also view the data source credentials for other users.

Note that credentials are checked in the following order:

- first, the signons that you create as an administrator are checked
- if no credentials are found for the user, the user’s profile is checked to see if they have stored their own credentials
- if no credentials for the user are found in either place, the user is prompted for credentials

This is important because if you create credentials after a user has saved their own credentials, they get data associated with the credentials that you created for them, which might not be what they are expecting.

If you are a user, your administrator must give you execute permissions for the Manage own data source signons capability and traverse permissions for its ancestors. You must also have read and traverse permissions on your account. You can then save credentials to your personal profile, as long as you do not have access to any predefined signons for the data source. You are not prompted for your credentials if you have permission to access an existing data source credential and you have saved the personal credential in your profile. You can view and delete your data source credentials from the My Preferences page.

To view another user’s credentials, you must have read and traverse permissions on the user’s account. To remove data source credentials, you must have read, write, and transverse permissions on the user’s account.

**Save Your Data Source Credentials**

1. When you are prompted to enter your data source credentials, enter your user ID and password.
2. Select the Remember my user ID and password when connecting to this data source check box.
3. Click OK.

The next time you perform an action that requires those data source credentials, you are not prompted for them unless they have been removed or deleted, or have expired.

**View and Remove Your Data Source Credentials**

1. In IBM® Cognos® Connection, in the upper-right corner, click My Area Options, My Preferences.
2. Click the Personal tab.

Your data source credentials are listed under Data source credentials. You can sort the list by Data Source Name or Data Source Connection Name.
3. To remove a data source credential, select the check box for it, then click Remove.
Chapter 15: Secured Functions and Features

The secured functions and secured features within the functions, which are also referred to as capabilities, control access to different administration tasks and different functional areas of the user interface in IBM® Cognos® software (p. 283). Examples of the secured functions are Administration and Report Studio. Examples of the secured features are User Defined SQL and Bursting (p. 283).

Content Manager reads the users’ permissions at logon time. Depending on the permissions for the secured functions and features, users can access specific components and perform specific tasks in IBM Cognos software.

When a content store is initialized, the initial permissions for the secured functions and features are created (p. 853). The permissions define which of the predefined and built-in Cognos groups and roles have access to which secured functions and features, and the type of access. The initial permissions grant unrestricted access to IBM Cognos software because the built-in role System Administrators includes the group Everyone in its membership. You must remove the group Everyone from the membership of System Administrators before you start setting access to capabilities. For more information, see "Initial Security" (p. 297).

When running a report using the Run as the owner option, the capabilities of the owner are used for bursting and report layout properties in the HTML format. All other capabilities are based on the user who runs the report.

Administrators can set up access to the secured functions and features using the Capabilities page on the Security tab in IBM Cognos Administration (p. 289). Users can see a list of the secured functions and features available to them in My Area Options of the portal, in My Preferences, Personal, the Capabilities section.

The secured functions and features include the following.

**Adaptive Analytics**
This secured function controls access to the reports packaged using Adaptive Analytics.

**Administration**
This secured function contains the secured features that control access to the administration pages that you use to administer IBM Cognos software. System administrators can use this capability to delegate administration tasks to different administrators.

The secured features associated with this function are

- **Adaptive Analytics Administration**
  Users can access Adaptive Analytics to perform administrative tasks.

- **Administration tasks**
Chapter 15: Secured Functions and Features

Users can access **Content Administration** on the **Configuration** tab in **IBM Cognos Administration** to administer exports, imports, index updates, consistency checks, and report updates.

- **Configure and manage the system**
  Users can access **System** on the **Status** tab and **Dispatchers and Services** on the **Configuration** tab in **IBM Cognos Administration** to configure dispatchers and services, and to manage the system.

- **Controller Administration**
  Users can use the administrative functions of IBM Cognos Controller.

- **Data Source Connections**
  Users can access **Data Source Connections** on the **Configuration** tab in **IBM Cognos Administration** to define data sources, connections, and signons.

- **Distribution Lists and Contacts**
  Users can access **Distribution Lists and Contacts** on the **Configuration** tab in **IBM Cognos Administration** to manage distribution lists and contacts.

- **Metric Studio Administration**
  Users can create new metric packages using the new metric package wizard in IBM Cognos Connection, and access the **Tools** menu in Metric Studio.

- **Planning Administration**
  Users can access IBM Cognos Planning Contributor Administration Console and IBM Cognos Planning Analyst to perform administration tasks.

- **PowerPlay Servers**
  User is given limited access to the IBM Cognos Administration pages. This includes access to the PowerPlay® page and the ability to set PowerPlay properties.

- **Printers**
  Users can access **Printers** on the **Configuration** tab in **IBM Cognos Administration** to manage printers.

- **Run activities and schedules**
  Users can access **Current Activities, Past Activities, Upcoming Activities and Schedules** on the **Status** tab in **IBM Cognos Administration** to monitor the server activities and manage schedules. To grant access to the scheduling functionality independently from the monitoring functionality, use the **Scheduling** capability.

- **Set capabilities and manage UI profiles**
  Users can access **Capabilities** and **User Interface Profiles** on the **Security** tab in **IBM Cognos Administration** to manage the secured functions and features and the Report Studio user interface profiles.

- **Styles and portlets**
Users can access Styles and Portlets on the Configuration tab in IBM Cognos Administration to manage styles and portlets.

- **Users, Groups and Roles**
  Users can access Users, Groups and Roles on the Security tab in IBM Cognos Administration to manage namespaces, users, groups, and roles.

**Analysis Studio**
This secured function controls access to Analysis Studio.
The secured feature associated with this function is

- **Open PowerPlay Reports with Analysis Studio**
  From PowerPlay Studio, users can open PowerPlay Studio reports in Analysis Studio.

**IBM Cognos Viewer**
This secured function controls access to IBM Cognos Viewer, which you use to view reports.
The secured features associated with this function are

- **Context Menu**
  Users can use the context menu in IBM Cognos Viewer.
  Note: To see the context menu, users must have access to both the Selection and Context Menu secured features.

- **Run With Options**
  Users can change the default run options.

- **Selection**
  Users can select text in lists and crosstabs.

- **Toolbar**
  Users can see the IBM Cognos Viewer toolbar.

**Collaborate**
This secured function controls access to IBM Lotus Connections from within IBM Cognos.
The secured features associated with this function are:

- **Launch Collaboration Tools**
  The secured feature allows users to launch IBM Lotus® Connections from any Launch menu within the IBM Cognos Business Intelligence environment, including the Business Insight Getting Started Page, and the Actions Menu. The links will go to the user’s Lotus Connections home page, if it is configured, or to Activities.

- **Allow Collaboration Features**
This secured feature controls access to the Collaborate icon and to IBM Lotus Connections Search Results within Business Insight. Users must have access to create or view activities from within Business Insight.

**Controller Studio**
This secured function controls access to IBM Cognos Controller.

**Data Manager**
This secured function controls access to IBM Cognos Data Manager.

**Detailed Errors**
This secured function controls access to viewing detailed error messages in the Web browser.

**Drill Through Assistant**
This secured function controls access to the drill-through debugging functionality in the drill-through Go To page and the drill-through definitions. Users who have this capability see additional information in the Go To page for each drill-through target. This information can help to debug a drill-through definition, or can be forwarded to the Cognos Software Services representative.

**Event Studio**
This secured function controls access to Event Studio.

**Execute Indexed Search**
This secured function controls access to the search of indexed content. This secured function does not appear until until the Index Update Service has been started.

**Executive Dashboard**
This secured function controls access to IBM Cognos Business Insight.
The secured feature associated with this function are
- Publish Dashboards to Collaboration Spaces

**Glossary**
This secured function controls access to the IBM InfoSphere™ Business Glossary.

**Hide Entries**
This secured function specifies that a user can hide entries and view hidden entries in IBM Cognos software.
The Hide this entry check box appears on the General tab of the entries’ properties pages. The Show hidden entries check box appears on the Preferences tab in user profiles, and on the General tab in My Area Options My Preferences.

**Import Relational Metadata**
Reserved for future use.
**Lineage**
This secured function controls access to the Lineage action. Use this to view information about data or metadata items from IBM Cognos Viewer, or from the source tree in Report Studio, Query Studio, and Analysis Studio.

**Manage Own Data Source Signons**
This secured function controls the ability to manage data source credentials on the Personal tab in My Preferences.

**Metric Studio**
This secured function controls access to Metric Studio.
The secured feature associated with this function is
- Edit View
  Use the edit features of Metric Studio to edit metric content.

**Planning Contributor**
This secured function controls access to IBM Cognos Planning Contributor and IBM Cognos Planning Analyst.

**PowerPlay Studio**
This secured function controls access to PowerPlay Studio.

**Query Studio**
This secured function controls access to the Query Studio, which you use to create simple, ad hoc reports.
The secured features associated with this function are
- Create
  Create new reports and use the Save as option for new reports and custom views.
- Advanced
  Use advanced authoring features, such as creating complex filters, formatting style, and multilingual support.

**Report Studio**
This secured function controls access to Report Studio, which you use to author professional reports.
The secured features associated with this function are
- Allow External Data
  Users can use external data in reports.
- Bursting
  Users can author and run burst reports.
Create/Delete
Users can create new reports, use the Save as option for new reports and report views, and change models.

HTML Items in Report
Users can use the button, HTMLItem, and hyperlink elements of the report specification when authoring reports.

Open PowerPlay Reports with Report Studio
From PowerPlay Studio, users can open PowerPlay Studio reports in Report Studio.

User Defined SQL
Users can edit the SQL statements directly in the query specification and run the query specifications that contain the edited SQL statements.

Note: Restrictions on who can use this feature are not enforced in Framework Manager. For example, a Framework Manager user who does not have User Defined SQL rights in IBM Cognos Administration can still create a query subject and use manually created SQL queries to search a database.

Scheduling
This secured function controls access to the scheduling functionality for items that can be run, such as reports.

The secured features associated with this function are

- Schedule by day
  Users can schedule entries daily.

- Schedule by hour
  Users can schedule entries by the hour.

- Schedule by minute
  Users can schedule entries by the minute.

  If a user is denied access to the Schedule by minute capability, 'by minute' scheduling is also denied for other capabilities that allow 'by minute' scheduling, for example, the Schedule by month capability.

- Schedule by month
  Users can schedule entries monthly.

- Schedule by trigger
  Users can schedule entries based on a trigger.

- Schedule by week
  Users can schedule entries weekly.

- Schedule by year
Users can schedule entries yearly.

- **Scheduling Priority**
  Users can set up and change the processing priority of scheduled entries.

**Self Service Package Wizard**
This secured function controls the ability to select which data sources can be used to create a package (p. 408).

**Set Entry-Specific Capabilities**
This secured function specifies that a user can set up capabilities at an entry level.

The **Capabilities** tab appears in the **Set properties** pages for packages and folders for users who have this capability and who have set policy permissions for the entry or who own the entry.

**Specification Execution**
This secured function specifies that a user or Software Development Kit application can use an inline specification.

IBM Cognos BI studios and some services use inline specifications internally to perform tasks. The service running the specification tests a number of capabilities to ensure that the user is entitled to use the inline specification. For more information, see the runSpecification method in the **Developer Guide**.

This capability is required to author Data Manager tasks.

**Statistics**
This secured function controls the ability to author statistical objects and statistical charts in IBM Cognos reports.

**Watch Rules**
This secured function controls access to the **Rules** tab in **My Watch Items** in IBM Cognos Connection. Use this secured function to create and run watch rules.

**Set Access to a Secured Function or Feature**
You set access to the secured functions and features by granting execute permissions for them to specified namespaces, users, groups, or roles. If you set permissions for a secured feature, you must grant execute permissions for the feature and traverse permissions for its parent secured function. For example, to grant access to Report Studio and all its functionality, you grant execute permissions for the **Report Studio** secured function. If you want to grant access only to the **Create/Delete** secured feature within Report Studio, grant traverse permissions for the **Report Studio** secured function and execute permissions for the **Create/Delete** secured feature.

You must have set policy permissions to administer secured functions and features. Typically, this is done by directory administrators.
Before you start setting permissions on capabilities, ensure that the initial security settings are already changed.

**Steps**

1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Security tab, click Capabilities.
   A list of available secured functions appears.

3. Choose whether to set access for a function or for a feature:
   - To set access for a function, click the actions button next to the function name, and click Set properties.
   - To set access for a feature, click the actions button next to the feature name, and click Set properties.
   
   **Tip:** Functions that have secured features have links.

4. Click the Permissions tab.

5. Choose whether to use the permissions of the parent entry or specify different permissions:
   - To use the permissions of the parent entry, clear the Override the access permissions acquired from the parent entry check box, and click OK.
   - To set access permissions explicitly for the entry, select the Override the access permissions acquired from the parent entry check box, and then perform the remaining steps.

6. If you want to remove an entry from the list, select its check box and click Remove.
   
   **Tip:** To select or deselect all entries in a page, click Select all or Deselect all at the bottom of the list.

7. If you want to add new entries to the list, click Add and choose how to select entries:
   - To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, or roles.
   - To search for entries, click Search and in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.
   - To type the name of entries you want to add, click Type and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:
     
     \textit{namespace/group\_name;namespace/role\_name;namespace/user\_name;}
     
     Here is an example:
     
     Cognos/Authors;LDAP/scarter;

8. Click the right-arrow button and when the entries you want appear in the Selected entries box, click OK.
Tip: To remove entries from the Selected entries list, select them and click Remove. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click Show users in the list.

9. Select the check box next to the entry for which you want to set access to the function or feature.

10. In the box next to the list, select the proper check boxes to grant execute permissions for the entry.

11. Click Apply.

In the Permissions column, an icon that denotes the execute permissions granted appears next to the namespace, user, group, or role.

12. Repeat steps 8 to 10 for each entry.

13. Click OK.

**Set Access to User Interface Profiles for Report Authors**

To meet the needs of both professional report authors and business users, IBM® Cognos® software provides distinct custom user interfaces that contain reporting features relevant to these roles.

Users must have the Report Studio capability to use the custom interfaces for report authoring.

The following user interfaces are supported:

- **Professional Authoring Mode**
  
  Professional authoring mode is available in Report Studio.

  The Professional authoring mode gives users access to a full range of functionality. In this mode, you can create any report type, including charts, maps, lists, and repeaters, using any data source (relational or multi-dimensional). Professional authoring mode supports the use of external data.

- **Express® Authoring Mode**

  Express authoring mode is available in Business Insight Advanced.

  The Express authoring mode provides an interface that is designed for the business user. Users can create list, crosstab, and chart reports to explore and analyze data according to specific information needs. Express authoring mode supports the use of external data, and both dimensional and relational data sources.

To support the different authoring modes, IBM Cognos Administration provides two User Interface Profiles named Professional and Express. Use the Professional profile to set access to the Professional mode, and the Express profile to set access to the Express mode.

Users can have access to both the Professional and Express authoring modes, however, they must use Report Studio for Professional authoring mode and Business Insight Advanced for Express authoring mode. To switch from Professional authoring mode to Express authoring mode, the user must exit Report Studio and launch Business Insight Advanced. Similarly, if a user wants to switch from Express authoring to Professional authoring, they must exit Business Insight Advanced and...

Steps

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.


3. Specify access permissions for the user interface profile you want

   - To grant access to the Professional authoring mode, click the actions button next to Professional, and click Set properties.
   - To grant access to the Express authoring mode, click the actions button next to Express, and click Set properties.

   The Permissions page appears.

4. Select the Override the access permissions acquired from the parent entry check box.

5. In the box on the left, select the check box next to the user, group, or role for which you want to grant access to this user interface profile.

6. In the box on the right, grant execute and traverse permissions for the selected users, groups, or roles.

   No other permissions are required.

7. Click OK.

For more detailed information about setting access permissions, see "Set Access Permissions for an Entry" (p. 278).
Chapter 16: Object Capabilities

Object capabilities specify the secured functions and features (p. 283) that users, groups, or roles can use with different packages. For example, the capabilities define the studio to open a package and the studio features available while working with this package.

The secured functions and their features, also referred to as global capabilities, control access to the different components and functionality in IBM® Cognos® software. For object capabilities to work, you must combine them with applicable global capabilities. For example, when setting up object capabilities for a package that contains Report Studio and Query Studio reports, ensure that the user also has access to the Report Studio and Query Studio secured functions and their applicable secured features.

Republishing an existing package from a client tool, such as Framework Manager, does not overwrite or modify object capabilities previously specified in IBM Cognos Connection.

Control object capabilities with the Set Entry-Specific Capabilities secured function (p. 289).

You can set up the following object capabilities for individual packages (p. 295).

**Adaptive Analytics**
This secured function controls access to the reports packaged using Adaptive Analytics.

**Analysis Studio**
This secured function controls access to Analysis Studio.

The secured feature associated with this function is

- **Open PowerPlay Reports with Analysis Studio**
  From PowerPlay Studio, users can open PowerPlay Studio reports in Analysis Studio.

**Administration**
This secured function controls access to the administrative pages in IBM Cognos software. You can specify object capabilities for the following secured features within Administration.

- **Adaptive Analytics Administration**
  Users can access Adaptive Analytics to perform administrative tasks.

- **Planning Administration**
  Users can access IBM Cognos Planning Contributor Administration Console and IBM Cognos Planning Analyst to perform administration tasks.

- **Metric Studio Administration**
  Users can create new metric packages using the new metric package wizard in IBM Cognos Connection, and access the Tools menu in Metric Studio.
**Event Studio**

This secured function controls access to Event Studio.

**Glossary**

This secured function controls access to the IBM InfoSphere™ Business Glossary.

**Metric Studio**

This secured function controls access to Metric Studio.

The secured feature associated with this function is

- **Edit View**
  
  Use the edit features of Metric Studio to edit metric content.

**Planning Contributor**

This secured function controls access to IBM Cognos Planning Contributor and IBM Cognos Planning Analyst.

**Query Studio**

This secured function controls access to the Query Studio, which you use to create simple, ad hoc reports.

The secured features associated with this function are

- **Create**
  
  Create new reports and use the Save as option for new reports and custom views.

- **Advanced**
  
  Use advanced authoring features, such as creating complex filters, formatting style, and multilingual support.

**Report Studio**

This secured function controls access to Report Studio, which you use to author professional reports.

The secured features associated with this function are

- **Allow External Data**
  
  Users can use external data in reports.

- **Bursting**
  
  Users can author and run burst reports.

- **Create/Delete**
  
  Users can create new reports, use the Save as option for new reports and report views, and change models.

- **HTML Items in Report**
Users can use the button, HTMLItem, and hyperlink elements of the report specification when authoring reports.

- **Open PowerPlay Reports with Report Studio**
  From PowerPlay Studio, users can open PowerPlay Studio reports in Report Studio.

- **User Defined SQL**
  Users can edit the SQL statements directly in the query specification and run the query specifications that contain the edited SQL statements.

  **Note:** Restrictions on who can use this feature are not enforced in Framework Manager. For example, a Framework Manager user who does not have User Defined SQL rights in IBM Cognos Administration can still create a query subject and use manually created SQL queries to search a database.

**Lineage**
This secured function controls access to the Lineage action. Use this to view information about data or metadata items from IBM Cognos Viewer, or from the source tree in Report Studio, Query Studio, and Analysis Studio.

**Specification Execution**
This secured function specifies that a user or Software Development Kit application can use an inline specification.

IBM Cognos BI studios and some services use inline specifications internally to perform tasks. The service running the specification tests a number of capabilities to ensure that the user is entitled to use the inline specification. For more information, see the runSpecification method in the Developer Guide.

This capability is required to author Data Manager tasks.

**Watch Rules**
This secured function controls access to the Rules tab in My Watch Items in IBM Cognos Connection. Use this secured function to create and run watch rules.

## Set Up Object Capabilities for a Package

Use this functionality to specify the secured functions and features (p. 293) that users, groups, or roles can use with specific packages.

You can specify object capabilities at the package level or, if the package is stored in a folder, at the folder level. Capabilities specified at the folder level apply only to packages in that folder and in its subfolders, and not to any other entries, including reports. For example, if a folder contains packages, reports and a subfolder that contains other packages and reports, only the packages in the folder and in the subfolder are affected by the capabilities settings.

To use object capabilities, the users must

- have access to the secured functions and features associated with the package (p. 283)
have access to the Object Capabilities secured function (p. 289)

have set policy permissions for the package (p. 275) or own the package

When setting up object capabilities for the first time after installing IBM Cognos software, we recommend that you start with Public Folders, and that the capabilities for Public Folders mirror the global capabilities. This provides an accurate baseline on which object capabilities can be further refined.

Steps

1. In IBM® Cognos® Connection, click the properties button [ ] for the package that you want, or the folder that contains the package.

   Tip: When setting up object capabilities for Public Folders, click the properties button [ ] in the product toolbar.

2. Click the Capabilities tab.

3. Select the Override the capabilities acquired from the parent entry check box.

4. In the box on the left, select the check box next to the user, group, or role for which you want to specify object capabilities.

   If the user, group, or role is not in the list, click Add. If you want to remove the user, group, or role from the list, select its check box, and click Remove.

   For more information about adding or removing entries from this list, see the steps in "Set Access Permissions for an Entry" (p. 278).

5. In the box on the right, select or clear the applicable check boxes to grant or deny the required object capabilities for users, groups, or roles.

   An icon that represents a granted or denied capability appears next to the name of the user, group, or role. When you deny access to a secured function, you automatically deny access to all its secured features.

6. If applicable, select the Delete the capabilities of all child entries check box.

   Use this option to specify object capabilities for a hierarchy of entries, for example, for all packages in a folder.

7. Click OK.
Chapter 17: Initial Security

When a content store is initialized, a set of security objects is created and stored in the Cognos® namespace. They are designed to simplify the IBM® Cognos administration. The initial security policies grant unrestricted access to all objects in the content store to all users.

The security administrator must modify the initial security settings to secure the content store (p. 300).

To see a summary of the initial access permissions for the Content Manager objects, see "Initial Access Permissions " (p. 851).

Built-in Entries

The built-in entries include the Anonymous user account, the groups All Authenticated Users and Everyone, and the role System Administrators. You cannot delete the built-in entries. They appear in both secured and non-secured environments.

Anonymous
This entry represents a user account shared by members of the general public who can access IBM Cognos software without being prompted for authentication. For example, this type of access is useful when distributing an online catalog.

Anonymous users can see only those entries for which access permissions are not set, or are set specifically for this account or for the Everyone group.

You can disable the Anonymous user account by changing the configuration parameters in the configuration tool.

All Authenticated Users
This group represents users who are authenticated by authentication providers. The membership of this group is maintained by the product and cannot be viewed or altered.

You cannot deploy this group (p. 382).

Everyone
This group represents all authenticated users and the Anonymous user account. The membership of this group is maintained by the product and cannot be viewed or altered.

You can use the Everyone group to set default security quickly. For example, to secure a report, you grant read, write, or execute permissions to the report for the Everyone group. After this security is in place, you can grant access to the report to other users, groups, or roles, and remove the group Everyone from the security policy for this report. Then, only users, groups, and roles that you specified have access granted to the report.

You can use the Everyone group to apply security during deployment (p. 376), but you cannot deploy the group itself (p. 382).
System Administrators

This is a special role in IBM Cognos software. Members of this role are considered root users or super users. They may access and modify any object in the content store, regardless of any security policies set for the object. Only members of the System Administrators role can modify the membership of this role.

The System Administrators role cannot be empty. If you do not want to use System Administrators, you can create an empty group in the Cognos namespace or in your authentication provider, and add this group to the membership of the System Administrators role.

When this role is created during the content store initialization, the group Everyone is included in its membership. This means that all users have unrestricted access to the content store. Immediately after installing and configuring IBM Cognos software, you must modify the initial security settings for this role and remove the group Everyone from its membership (p. 300).

You can deploy this role (p. 382).

Predefined Entries

The predefined entries include several Cognos® roles (p. 270). Each of the roles has a specific set of access permissions, and can be used to secure different components and functions in IBM® Cognos software. You can use the predefined roles, or delete them.

When the predefined roles are created during the content store initialization, the group Everyone is a member of some of them. Some of such roles are Consumers, Query Users, Analysis Users, and Authors. If you want to use the predefined roles, we recommend that you modify their initial membership immediately after installing and configuring IBM Cognos software (p. 300).

The predefined roles include the following.

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive Analytics Administrators</td>
<td>Members can administer reports packaged using Adaptive Analytics.</td>
</tr>
<tr>
<td>Adaptive Analytics Users</td>
<td>Members can use reports packaged using Adaptive Analytics.</td>
</tr>
<tr>
<td>Analysis Users</td>
<td>Members have the same access permissions as Consumers. They can also use the IBM Cognos Analysis Studio.</td>
</tr>
<tr>
<td>Authors</td>
<td>Members have the same access permissions as Query Users and Analysis Users. They can use Report Studio, IBM Cognos Business Insight Advanced, Query Studio, and Analysis Studio, and save public content, such as reports and report outputs.</td>
</tr>
<tr>
<td>Role</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Consumers</td>
<td>Members can read and execute public content, such as reports.</td>
</tr>
<tr>
<td>Controller Administrators</td>
<td>Members have full access to IBM Cognos Controller menus and can create individual IBM Cognos Controller users and define their limitations.</td>
</tr>
<tr>
<td>Controller Users</td>
<td>Members have general access to IBM Cognos Controller menus.</td>
</tr>
<tr>
<td>Data Manager Authors</td>
<td>Members can use Data Manager to create data warehouses and data repositories for reporting, analysis, and performance management.</td>
</tr>
<tr>
<td>Directory Administrators</td>
<td>Members can administer the contents of namespaces. In the Cognos namespace, they administer groups, accounts, contacts, distribution lists, data sources, and printers.</td>
</tr>
<tr>
<td>Metrics Administrators</td>
<td>Members can administer metric packages and tasks in IBM Cognos Connection.</td>
</tr>
<tr>
<td>Metrics Authors</td>
<td>Members can create and edit scorecard applications in Metric Studio.</td>
</tr>
<tr>
<td>Metrics Users</td>
<td>Members can monitor performance in Metric Studio.</td>
</tr>
<tr>
<td>Portal Administrators</td>
<td>Members can administer the Cognos portlets and other portlets in IBM Cognos Connection. This includes customizing portlets, defining portlet styles, and setting access permissions for portlets.</td>
</tr>
<tr>
<td>Planning Contributor Users</td>
<td>Members can access the Contributor Web client, Contributor Add-in for Microsoft® Excel, or Analyst.</td>
</tr>
<tr>
<td>Planning Rights Administrators</td>
<td>Members can access Contributor Administration Console, Analyst, and all associated objects in the application.</td>
</tr>
<tr>
<td>Query Users</td>
<td>Members have the same access permissions as Consumers. They can also use the IBM Cognos Query Studio.</td>
</tr>
</tbody>
</table>
### Specify Security Settings After Installation

When the predefined roles are created during the content store initialization, the group **Everyone** is a member of the **System Administrators** role. This means that all users have full access to the content store. To limit that access, you must add trusted users as members of this role, and then remove the group Everyone from its membership.

You must also modify the membership for the predefined roles that include the group Everyone such as Consumers, Query Users, and Authors. Make similar modifications for them as you do for the System Administrators role. These modifications should also take the license terms into consideration.

If you do not want to use the predefined roles, you can delete them.

To secure the Cognos® namespace, modify its initial access permissions by granting access for the users you want.

When you set access permissions, you should not explicitly deny access to entries for the group Everyone. Denying access overrides any other security policies for the entry. If you denied access to the entry for Everyone, the entry would become unusable.

To maintain a secure installation, users should be granted only the permissions and capabilities required to allow them to complete their assigned tasks. For example, readers would normally be restricted to read and traverse permissions for Public Folders, and this role would not be allowed to create reports using any studio. Consumers would normally be restricted to read, traverse and execute.

Certain capabilities such as HTML Item In Report and User Defined SQL should be tightly managed. These capabilities are checked during the authoring process as well as when running reports. If a consumer needs to run a report that requires these capabilities, you may be able to use the Run as Owner feature to limit the number of system users that require these capabilities. The Run as Owner feature uses the report owner’s credentials to perform some capability checks and to access data.

For information on granting capabilities, see **Object Capabilities**

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readers</td>
<td>Members have read-only access to IBM Cognos software. They can navigate some portions of the content store, view saved report outputs in the portal, select cells in saved report outputs in IBM Cognos Viewer, and use the IBM Cognos Viewer context menu to perform actions, such as drill-through.</td>
</tr>
<tr>
<td>Report Administrators</td>
<td>Members can administer the public content, for which they have full access. They can also use IBM Cognos Report Studio and IBM Cognos Query Studio.</td>
</tr>
<tr>
<td>Server Administrators</td>
<td>Members can administer servers, dispatchers, and jobs.</td>
</tr>
</tbody>
</table>
Your IBM® Cognos software installation must already be configured to use an authentication provider, which is documented in the *Installation and Configuration Guide*.

**Steps for System Administrators and Predefined Roles**

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.


3. Click the Cognos namespace.

4. For the role you want, in the Actions column, click the set properties button.

5. On the Members tab, modify the membership list:
   - Ensure that one or more users defined in your authentication provider are members.
   - Remove the group Everyone.

6. Click OK.

7. On the Permissions tab, set access permissions for this role to prevent unauthorized users from creating, updating, or deleting the content, and then click OK.

   For each role, repeat steps 3 to 6.

**Steps for the Cognos Namespace**

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.


3. In the Actions column next to the Cognos namespace, click the set properties button.

4. On the Permissions tab, set access permissions for the Cognos namespace to prevent unauthorized users from creating, updating, or deleting the content.

   We recommend that you remove the group Everyone. However, you may leave it, depending on your requirements.

5. If you want, select the Delete the access permissions of all child entries check box.

6. Click OK.

**Securing the Content Store**

To ensure its security and integrity, the content store is accessed by the Content Manager service using single database signon specified in IBM® Cognos® Configuration. The database signon is encrypted according to your encryption standards. However, the content store security relies not only on the IBM Cognos BI security but also on the native database security, operating system security, and network security.

For securing your database, follow these guidelines:
Secure the database and the database API using the mechanisms provided by the database, the network, and the operating system.

Assign a limited number of users to maintain the database.

Use your database native security to grant only minimum permissions to the user accounts that access the database, as follows:

- **MS SQL Server**
  Users must have create and drop table permissions for the database. Ensure that the user account is a member of the db_ddladmin, db_datareader, and db_datawriter roles, and the owner of their default schema.

- **ORACLE**
  Users must have permissions to connect to the database. Also, they must be able to create, alter, and drop tables, triggers, views, procedures, and sequences, as well as insert, update, and delete data in the database tables. The permissions must be granted to the user account directly, and not through a group or role membership.

- **DB2**
  Users must have the create, drop table, CREATETAB, CONNECT and IMPLICITSCHEMA permissions for the database. Also, they must have USE permissions for the USER TEMPORARY tablespace and other appropriate tablespaces associated with the database.

- **Sybase Adaptive Server Enterprise**
  Users must have create, drop table, create default, create procedure, create rule, create table, and create view permissions for the database.

Limit the number of users who have read or write access for the Content Manager tables.

Follow other recommendations on securing the database. For information, see the database documentation.
Chapter 18: IBM Cognos Connection

IBM® Cognos® Connection is the portal to IBM Cognos software. IBM Cognos Connection provides a single access point to all corporate data available in IBM Cognos software.

You can use IBM Cognos Connection to work with entries such as reports, analyses, queries, agents, metrics, and packages. You can use IBM Cognos Connection to create shortcuts, URLs, and pages, and to organize entries. You can personalize IBM Cognos Connection for your own use.

You can use IBM Cognos Connection to create and run reports and cubes (p. 419) and distribute reports (p. 449). You can also use it to create and run agents (p. 461) and schedule entries (p. 365). As an administrator, you can use IBM Cognos Connection to administer servers, optimize performance, and set access permissions (p. 275). You can also use it for entry administration, including such things as scheduling and distributing reports, agents, and metrics.

If you use a customized user interface, you may not have access to all the features documented.

Log On

IBM® Cognos® software supports authenticated and anonymous user access. To use IBM Cognos software as an authenticated user, you must successfully log on. During the logon process, you must provide your credentials, such as user ID and password, as required by your organization. Anonymous users do not log on.

Tip: If you want to see a summary of your logon information for the current session, in the portal, click My Area Options, My Preferences and then click the Personal tab. This is not available to anonymous users.

Steps

1. In the portal, click Log On.
2. If the namespace Logon page appears, in the Namespace box, click the namespace you want to use.
3. Click OK and type your user ID and password.
4. Click OK.
   Your session starts.

Log Off

You log off to end your session. Even if you used multiple namespaces in the session, you log off only once.
If you close your Web browser without logging off, your session ends.

**Steps**

1. In the portal, click **Log Off**.
   
   You are now logged out of all the namespaces you were using.

2. Choose whether to log on again:
   
   - If you do not want to log on again, close your Web browser.
   - If you want to log on as an authenticated user, click **Log on again**.
   - If you want to log on as an anonymous user, click **Open a session as an anonymous user**. This is available only if your administrator set it up.

---

**Create a Shortcut**

A shortcut is a pointer to another entry such as a report, report view, folder, job, agent, page, or URL.

You can use shortcuts to organize information that you use regularly. For example, if you frequently use a report in Public Folders, you can create a shortcut in My Folders.

If you want to make a new entry, it might be easier to make a copy of an existing entry (p. 315) and modify it. If you want to run an existing agent or report with some minor changes, create an agent view (p. 463) or a report view (p. 428). For example, to change the format, language, or delivery method of a report, create a report view.

You cannot update the source entry by clicking the shortcut. Updating the source automatically updates all shortcuts to the entry.

**Tip:** If the source entry was deleted or moved to another location, the shortcut icon changes to indicate a broken link.

You can change access permissions for a shortcut entry, but it does not change the access permissions for the source entry.

**Steps**

1. In IBM® Cognos® Connection, locate the entry you want to create a shortcut to.

2. Under **Actions**, click **More** and then click **Create a shortcut to this entry**.

3. In the **Name** box, type the name of the shortcut.

4. If you want, in the **Description** and in the **Screen tip** box, you can type a description of the entry.
   
   The description appears in the portal when you set your preferences to use the details view (p. 325). The screen tip, which is limited to 100 characters, appears when you pause your pointer over the icon for the entry in the portal.
5. If you do not want to use the target folder shown under Location, choose another location:
   - Click Select another folder, select the target folder, and click OK. If the folder box is empty, go back one folder level using the path at the top of the dialog box.
   - Click Select My Folders as the location.

6. Click Finish.

In the portal, shortcut entries are identified by the shortcut icon 🔄.

### Create a URL

A URL is a standard way of identifying the location for any external file or Web site. Create URLs to keep the files and Web sites you use most frequently at your fingertips. Clicking a URL opens the file or Web site in the browser. After opening a URL, click the back button in your browser to return to the portal.

The URL must contain a valid server name that is included in the valid domains list, as specified by your administrator. Otherwise, you cannot create the URL.

Administrators maintain the list of valid domains in IBM® Cognos® Configuration, in the IBM Cognos Application Firewall category, the Valid domains or host property. For more information, see the Installation and Configuration Guide.

### Steps

1. In IBM® Cognos® Connection, go to the folder where you want to create the new URL.

2. Click the new URL button 🖥️ on the toolbar.

3. In the Name box, type the name of the new URL.

4. If you want, in the Description and in the Screen tip box, you can type a description of the entry.
   
   The description appears in the portal when you set your preferences to use the details view (p. 325). The screen tip, which is limited to 100 characters, appears when you pause your pointer over the icon for the entry in the portal.

5. In the URL box, type the URL location.
   
   If the URL points to a Web site address, the protocol must be included. For example, to create a URL for the IBM Cognos Web site, type http://www.cognos.com.
   
   The URL must use a valid domain, as specified by your administrator. To view a list of acceptable domains, click View acceptable domains.

6. If you do not want to use the target folder shown under Location, choose another location:
   
   - Click Select another folder, select the target folder, and click OK. If the folder box is empty, go back one folder level using the path at the top of the dialog box.
   
   - Click Select My Folders as the location.
7. Click **Finish**.

In the portal, URL entries are identified by the URL icon 🌐.

**Bookmark an Entry**

You can bookmark an IBM® Cognos® entry in your Web browser so that later you can quickly perform the default action associated with the entry. For example, using a report bookmark, you can view the most recent report output, run the report, or open it in an authoring tool. For more information, see "Set Default Report Options" (p. 421).

The bookmark saves the URL of the entry and its default action at the time when the bookmark was created.

Some default actions are available only to users who

- have the required access permissions for the entries.
- have the required product components installed.
- have access to specific, secured functions and features.
  
  For example, the capabilities to use a specific IBM Cognos Business Intelligence studio.
- use specific Web browsers.

For example, to open an agent, users must have read and traverse permissions for the agent, have Event Studio installed and the permissions to use it, and use Microsoft® Internet Explorer as their Web browser.

**Steps for Internet Explorer**

1. In IBM Cognos Connection, locate the entry for which you want to create a bookmark.

2. In the **Actions** column, click **More**.

3. In the list of actions available for this entry, click **Add to bookmarks** 🌐.

   The Internet Explorer box for adding favorites appears.

4. Create the bookmark as you normally do in Internet Explorer.

**Steps for All Web Browsers**

1. In IBM Cognos Connection, locate the entry for which you want to create a bookmark.

2. In the **Actions** column, click the set properties button 🌐 for the entry.

3. On the **General** tab, click **View the search path, ID and URL**.

4. Right-click the link that appears under **Default action URL**.

   The link shows the entry name and the action that will be performed. If the entry has no default actions, the link is replaced by **None**. The text below the link shows the URL used by the link.
5. From the menu, click the option for creating bookmarks.

   For example, if you are using Internet Explorer, click Add to Favorites. If you are using Firefox, click Bookmark This Link.

6. Create the bookmark as you normally do in your Web browser.

**Entry Properties**

You can control the way an entry appears and behaves by modifying its properties. The properties for entries vary depending upon the type of entry selected and your privileges. For example, reports have properties to control run options while folders do not. If a property is not applicable to the type of entry you are customizing, it will not appear in the Set properties page.

**General Properties**

General properties appear on the General tab of the Set properties page.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>The type of entry.</td>
</tr>
<tr>
<td>Owner</td>
<td>The owner of the entry. By default, the owner is the person who created the entry. When the owner no longer exists in the namespace, or is from a different namespace than the current user, the owner shows as Unknown. &lt;br&gt; If you have Set policy permissions, click Make me the owner to become the owner of the entry.</td>
</tr>
<tr>
<td>Contact</td>
<td>The person responsible for the entry. Click Set the contact and then click Select the contact to set the contact for the entry or click Enter an email address to enter the contact’s email address.</td>
</tr>
<tr>
<td>Location</td>
<td>The location of the entry in the portal and its ID. Click View the search path, ID and URL to view the fully qualified location and the ID of the entry in the content store. &lt;br&gt; Entries are assigned a unique identification (ID) number. For more information, see &quot;Organizing Entries&quot; (p. 315).</td>
</tr>
<tr>
<td>Created</td>
<td>The date the entry was created.</td>
</tr>
<tr>
<td>Modified</td>
<td>The most recent date that the entry was modified.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Icon</td>
<td>The icon for the entry. Click <strong>Edit</strong> to specify an alternative icon. For more information, see &quot;Specify an Alternative Icon for an Entry&quot; (p. 322).</td>
</tr>
<tr>
<td>Indexed</td>
<td>The timestamp indicating when the entry was last indexed. The property does not appear if the entry has not been indexed.</td>
</tr>
<tr>
<td>Disable this entry</td>
<td>When selected, users that do not have write permissions for this entry cannot access it. The entry is no longer visible in the portal.</td>
</tr>
<tr>
<td>Hide this entry</td>
<td>Select this property to hide reports, packages, pages, folders, jobs, and other entries. Hide an entry to prevent it from unnecessary use, or to organize your view. The hidden entry is still accessible to other entries. For example, a hidden report is accessible as a drill-through target.</td>
</tr>
<tr>
<td>Hide Entries</td>
<td>A hidden entry remains visible, but its icon is faded. If you clear the <strong>Show hidden entries</strong> check box in my area options <strong>My Preferences</strong>, the entry disappears from your view.</td>
</tr>
<tr>
<td>Language</td>
<td>A list of languages that are available for the entry name, screen tip, and description according to the configuration set up by your administrator.</td>
</tr>
<tr>
<td>Name</td>
<td>The name of the entry for the selected language.</td>
</tr>
<tr>
<td>Screen tip</td>
<td>An optional description of the entry. The screen tip appears when you pause your pointer over the icon for the entry in the portal. Up to 100 characters can be used for a screen tip.</td>
</tr>
<tr>
<td>Description</td>
<td>An optional description of the entry. It appears in the portal when you set your preferences to use the details view.</td>
</tr>
<tr>
<td></td>
<td>Details view appears only in Public Folders and My Folders.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Run history</td>
<td>The number of occurrences or period of time to retain run histories for the entry.</td>
</tr>
<tr>
<td>Report output versions</td>
<td>The number of occurrences or period of time to keep report outputs. Setting this value to zero (0) saves an unlimited number of versions.</td>
</tr>
<tr>
<td>Package</td>
<td>The package that is associated with the entry. If the source package was moved or deleted, the text reads &quot;Unavailable.&quot; Click <strong>Link to a package</strong> to link the entry to a different package. For more information, see &quot;Select a Link for an Entry&quot; (p. 320).</td>
</tr>
<tr>
<td>URL</td>
<td>A URL to either a file or Web site address. For more information, see &quot;Create a URL&quot; (p. 305).</td>
</tr>
<tr>
<td>Source report</td>
<td>A path to the source entry for a report view. If the source entry was moved or deleted, the text reads &quot;Unavailable.&quot; Click <strong>Report Properties</strong> to view the properties of the source report. Click <strong>Link to a report</strong> to link the entry to a different package. For more information, see &quot;Select a Link for an Entry&quot; (p. 320).</td>
</tr>
<tr>
<td>Source agent</td>
<td>A path to the source entry for an agent view. If the source entry was moved or deleted, the text reads &quot;Unavailable.&quot; Click <strong>Agent Properties</strong> to view the properties of the source report. Click <strong>Link to an agent</strong> to link the entry to a different package. For more information, see &quot;Select a Link for an Entry&quot; (p. 320).</td>
</tr>
<tr>
<td>Shortcut to</td>
<td>A path to the entry that the shortcut points to. If the referred entry no longer exists, the text reads &quot;Source entry not found.&quot; Click <strong>Source Properties</strong> to view the properties of the source entry.</td>
</tr>
</tbody>
</table>
## Property | Description
--- | ---
Advanced routing | A list of keywords used to direct requests by package, user group, or user role to dispatchers in identified server groups. Click Set to add routing keywords for packages, user roles, or user groups. The rules used to direct the requests are part of IBM Cognos Administration.
Gateway | The location of the web server where the originating IBM Cognos product resides. Applies only to Series 7 PowerPlay reports.

### Permissions

Permissions appear on the Permissions tab of the Set properties page.

| Property | Description |
--- | ---
Override the access permissions | Whether to replace the permissions that are inherited from the parent entry.
Access permissions (Name, Type, Permissions) | The permissions that are set for the entry. You can grant or deny read, write, execute, set policy, and traverse permissions. For more information, see "Access Permissions and Credentials" (p. 275).
Click Add to add more names to the list. Click Delete to delete names from the list.
Delete the access permissions of all child entries | Whether to remove the existing access permissions for all child entries so that they will use the access permissions for this entry.

### Report, Query, Analysis, and PowerPlay Report Properties

Report properties appear on the following tabs of the Set properties page:

- the Report tab for Report Studio reports
- the Query tab for Query Studio reports
- the Analysis tab for Analysis Studio reports
- the PowerPlay Report tab for Series 7 PowerPlay reports

You can select the available paper sizes. In IBM Cognos Connection, click IBM Cognos Administration and then click Configuration. Click Dispatchers and Services and then click the define paper sizes button. To add new paper sizes, click New. To delete paper sizes, click Delete.
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default action</td>
<td>The default action when the report is run.</td>
</tr>
<tr>
<td>Report options: Override the default values</td>
<td>Whether to override default run options for the report. When selected, the values that you can override appear.</td>
</tr>
<tr>
<td>Format</td>
<td>The default format, orientation, and paper size to use when the report runs. Appears only if Override the default values is selected.</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Whether to create report output that supports accessibility. Enabling support creates report output that can be read by a screen reader.</td>
</tr>
<tr>
<td>Language</td>
<td>The default language to use for the report data when the report runs. Appears only if Override the default values is selected.</td>
</tr>
<tr>
<td>Prompt values</td>
<td>The values that are used to filter data when a report is run (p. 435).</td>
</tr>
<tr>
<td>Run as the owner</td>
<td>Whether to use the owner credentials (p. 280) when the report is run.</td>
</tr>
<tr>
<td>HTML options: Open in design mode</td>
<td>Whether to open an HTML-format Series 7 PowerPlay® report in design mode.</td>
</tr>
<tr>
<td>Number of rows per Web page in HTML reports</td>
<td>The number of rows you want to appear per Web page in HTML reports.</td>
</tr>
<tr>
<td>Enable selection-based interactivity in HTML reports</td>
<td>Whether to enable the following in HTML reports that are viewed in IBM® Cognos® Viewer: drill up and drill down, drill through, IBM Cognos Search, watch rules, and agent notification. For more information, see &quot;Disable Selection-based Interactivity&quot; (p. 447).</td>
</tr>
<tr>
<td></td>
<td>Note that to have watch rules evaluated in saved report output, you must select the Enable enhanced user features in saved output versions check box.</td>
</tr>
<tr>
<td>Enable alerts about new versions</td>
<td>Whether to allow report consumers to receive alerts about new versions of a saved report. If this check box is cleared, you are prompted whether to remove all users from the alert list.</td>
</tr>
</tbody>
</table>
### Property

**Enable enhanced user features in saved output versions**

Whether to create additional output formats so that watch rules can be evaluated and saved output versions can be imported into IBM Cognos for Microsoft® Office.

Note that to enable watch rules, you must select the **Enable selection-based interactivity in HTML reports** check box.

**Enable comments in saved output versions**

Whether to allow users to add comments to saved reports. For more information, see "Comments in Saved Reports" (p. 445).

**Refresh the report cache**

Create new cache data if none is available, when the report runs interactively.

**Cache duration**

The number of days or months before the report cache data expires. To enable the cache duration, select the **Refresh the report cache** check box.

### Job Properties

Job properties appear on the **Job** tab of the **Set properties** page.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steps</td>
<td>A list of steps in the job.</td>
</tr>
<tr>
<td>Submission of steps</td>
<td>Whether to run job tasks all at once or in sequence.</td>
</tr>
<tr>
<td>Defaults for all steps</td>
<td>Set default values at the job level. Click <strong>Set</strong>, then specify the defaults for all steps of the job. If no defaults are set, the defaults for the individual steps are used.</td>
</tr>
<tr>
<td>Run history details level</td>
<td>Click <strong>All</strong> to save the complete history details for the job steps when the run activity completes successfully. The complete history details for the job steps includes <strong>Name</strong>, <strong>Request time</strong>, <strong>Start time</strong>, <strong>Completion time</strong>, <strong>Status</strong>. Click <strong>Limited</strong> to save limited run history details for the job. The limited run history details include the job start time, completion time, status and messages. If the job run fails, the complete history details are saved. The default is <strong>All</strong>. The Run history details level setting for the job overrides the settings of the job steps.</td>
</tr>
</tbody>
</table>
## Agent Properties

Agent properties appear on the Agent tab of the Set properties page.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tasks</td>
<td>A list of tasks in the agent.</td>
</tr>
<tr>
<td>Default action</td>
<td>The default action when the agent is run.</td>
</tr>
<tr>
<td>Prompt values</td>
<td>The values that are used to filter data when an agent is run (p. 461).</td>
</tr>
<tr>
<td>Run as the owner</td>
<td>Whether to use the owner credentials (p. 280) when the agent is run.</td>
</tr>
<tr>
<td>Alert list</td>
<td>Whether to allow users to add themselves to the alert list for an agent.</td>
</tr>
</tbody>
</table>

## Page Properties

Page properties appear on the Layout and Content and Page Style tabs of the Set properties page.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of columns</td>
<td>The number of columns used to organize the content of a page. Up to three columns can be used.</td>
</tr>
<tr>
<td>Content</td>
<td>Type of content added to a page. Use to add and remove portlets, distribute the portlets between the columns, change the order of columns and specify their width.</td>
</tr>
<tr>
<td>Language</td>
<td>The language in which the page title and instructions can be typed. It should match the product language.</td>
</tr>
<tr>
<td>Title</td>
<td>The page title. You can format the title by changing the font and character style, and the text alignment. To return to the default browser settings, click Return to default. To modify the default settings, click Custom. You can hide the title.</td>
</tr>
</tbody>
</table>
**Rule Properties**

Use the rule properties to define or modify a watch rule. You can access the rule properties from the **My Watch Items, Rules** tab by clicking the set properties icon for a watch rule entry. The properties are located on the **Rule** tab of the **Set Properties** page.

The rule properties specify conditions in saved HTML report output so that when the report is saved and the conditions are satisfied, you are alerted.

For information about creating watch rules, see "Create a Watch Rule for a Specific Condition" (p. 443).

The following table describes the rule properties that are available.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disable the rule</td>
<td>Whether to disable the watch rule. When disabled, the watch rule is not applied when report output is generated.</td>
</tr>
<tr>
<td>Send an alert when the report reportname contains:</td>
<td>The name of the report and the rule defined for the watch rule. To edit the definition, click the existing filter condition, such as &gt; (greater than) and in the list that appears, click a different condition. Specify a different value in the box.</td>
</tr>
<tr>
<td>For the selected context</td>
<td>The objects in the report to which the rule applies.</td>
</tr>
<tr>
<td>Alert type</td>
<td>The type of alert you receive when the rule is satisfied. You can be alerted by email or news item.</td>
</tr>
</tbody>
</table>
Organizing Entries

Organize entries such as reports, analyses, agents, and packages in a meaningful way so that you can easily find them. It is important to plan how you can best organize entries in the portal. Review the entries and attempt to group them in a logical way. Consider grouping the entries by type or frequency of use.

You may decide to create a folder hierarchy by using nested folders. The folder structure should be logical and should support the chosen method of grouping.

Use meaningful names and detailed descriptions to identify entries in the portal.

You can copy, move, rename, or delete entries. You can create copies of entries and store them in multiple folders for easy access. You can disable entries and specify the order of entries. You can select a link for an entry. For example, if a report is deleted, you may want to link an associated report view to a different report. You can also hide an entry to prevent it from unnecessary use.

Remember that an entry often refers to other entries such as packages, reports, analyses, or queries. In addition, there may be references to entries in job steps, agents tasks, drill-through targets, or metrics. Reference IDs are hard-coded in the specification for each entry.

Note that references to deployment objects are based on search paths, not IDs. IDs are installation-specific while search paths are not.

Copy an Entry

When you create a copy of an entry, you create a replica of that entry in another location in the portal. For example, create a copy if you want to use a generic report as the underlying structure for additional reports. The copy of the entry has a new ID. If there is another entry of the same name in the target location, you are prompted to replace the existing entry with the copied entry. If you choose to replace the existing entry, the ID of the existing entry is used.

If you copy a folder, references for entries in the folder that reference each other are updated to reference entries in the copied folder.

If you want to run an existing agent or report with some minor changes, create an agent view (p. 463) or a report view (p. 428). For example, to change the format, language, or delivery method of a report, create a report view. You can copy multiple entries at the same time to the same location.

If you want a report to appear in more than one location, create a shortcut (p. 304).

You must have read permissions for an entry you are attempting to copy. You must also have traverse permissions for the current folder, and write and traverse permissions for the target folder (p. 275).

Steps

1. In IBM Cognos Connection, select the check boxes next to the entry or entries you want to copy.

2. Click the copy button on the toolbar.

3. Go to the desired location for the new entry or entries and click the paste button on the toolbar.
4. If an entry name is the same as an entry name in the destination folder, choose whether you want to replace the existing entry with the one that you are copying:
   - To replace the existing entry, click Yes.
   - To cancel the copy, click No.

Move an Entry

When you move an entry, you remove it from the current folder and place it in another folder. You may decide to move an entry if your folder becomes so full that it is difficult to locate particular entries. You can create a series of subfolders and move the entries to support your new folder hierarchy. For example, a folder containing weekly sales reports can be divided into sales reports by month or by author.

When you move an entry, the ID stays the same. References to the entry from other entries are not broken. However, shortcuts to the entry no longer work.

For example, a report has several report views associated with it. When you move the report to another location in IBM® Cognos® Connection, the references in the associated report views are not broken. However, shortcuts to the entry no longer work.

When you move an entry, if there is another entry of the same name in the target location, you are prompted to replace the existing entry with the moved entry. If you choose to replace the existing entry, the ID of the existing entry is kept. References to the moved entry are broken. Shortcuts to the entry no longer work.

If you want to use a generic entry as the underlying structure for additional entries, make a copy of the entry (p. 315). If you want an entry to appear in more than one location, create a shortcut (p. 304). If you want to run an existing agent or report with some minor changes, create an agent view (p. 463) or a report view (p. 428). For example, to change the format, language, or delivery method of a report, create a report view.

You must have read permissions for the entry you are attempting to move. You must also have write and traverse permissions for the current folder and for the target folder.

Steps
1. In IBM® Cognos® Connection, select the check boxes next to the entry or entries you want to move.

2. Click the cut button on the toolbar.

3. Go to the desired location for the entry or entries and click the paste button on the toolbar.

4. If an entry name is the same as an entry name in the destination folder, choose whether you want to replace the existing entry with the one that you are copying:
   - To replace the existing entry, click Yes.
   - To cancel the copy, click No.
Rename an Entry

You may decide to rename an entry. Perhaps the current name for an analysis is confusing or the purpose of a report changed.

When you rename an entry, the ID stays the same. However, the search path changes. References to the entry from other entries are not broken. Shortcuts to the entry no longer work.

For example, a package has reports, agents, and drill-through definitions associated with it. When you rename the package, the references in the associated reports, agents, and drill-through definitions are not broken.

You cannot rename an entry to the same name as another entry that already exists in the same location.

You must have read permissions for the entry you are attempting to rename. You must also have write and traverse permissions for the current folder and for the target folder.

Steps
1. In IBM® Cognos® Connection, locate the entry you want to rename, and in the Actions column, click the set properties button.
2. Click the Properties tab.
3. In the Name box, type a new name for the entry.
4. Click OK.

Disable an Entry

You can disable entries to prevent users from accessing them.

Disabling entries is useful when you want to perform maintenance operations. For example, you may want to disable a folder while you reorganize its content. When you disable a folder, the folder content is also disabled.

If an entry is disabled, the disabled icon appears beside the entry to indicate that it is disabled.

If the source entry is disabled, all shortcuts to the entry appear with the source disabled icon, indicating that it no longer works.

You must have read and write permissions for an entry (p. 275) to enable or disable it. You must also have traverse permissions on the folder that contains the entry.

Steps
1. In IBM® Cognos® Connection, locate the entry you want to disable and, in the Actions column, click the set properties button.
2. Click the General tab.
3. Select the Disable this entry check box.
Tip: To enable a disabled entry, clear the Disable this entry check box.

4. Click OK.

If you have only read, execute, or traverse permissions for a disabled entry, you cannot see the entry in the portal. If you have write or set policy permissions for a disabled entry, it appears in the portal with the disabled icon.

Hide an Entry

You can hide entries in IBM® Cognos® Connection and IBM Cognos Administration such as reports, packages, pages, folders, jobs, data sources, portlets, and so on, to ensure that the entries are not accessed or run unnecessarily. This specifically applies to drill-through reports that, when they run, could have negative impact on system performance. For example, running drill-through reports that have optional prompts, or no prompts, could result in database queries that use considerable resources. When these reports are hidden in the portal, users cannot run them and the system is not overloaded with unnecessary requests.

Hiding an entry does not affect its properties, including security permissions. You can access hidden entries using different methods, such as using a URL.

Depending on the user preferences specified in my area options, a hidden entry either entirely disappears from the user interface or remains visible, but its icon fades. For more information, see "View a Hidden Entry" (p. 318).

You cannot hide users, groups, or roles in external namespaces.

An administrator controls which users, groups, or roles can hide entries by granting the users access to the Hide Entries capability in IBM Cognos Administration. Only users who have access to this capability can perform the following steps.

Steps

1. In IBM Cognos software, locate the entry that you want to hide, and click its set properties button.

2. On the General tab, select the Hide this entry check box.

3. Click OK.

The entry is now hidden; however, it may still appear in the user interface with a faded icon. To remove the entry from your view, see "Steps to Change the Preference for Viewing Hidden Entries" (p. 319).

View a Hidden Entry

Users can change their preferences to either show or remove hidden entries from the user interface. Icons that represent hidden entries are faded.

Depending on the preferences, a hidden entry may or may not appear in search pages, wizards, save as boxes, and so on. For example, when the user interface does not show hidden entries, hidden
packages do not appear in the list of available packages when users try to open the applicable studio, and the search results do not include the packages.

The following are the rules that apply to viewing hidden entries:

- A hidden report is accessible as a drill-through target.
  Drill-through targets include parameter values to avoid resource-intensive query operations. However, the user still requires read and execute permissions to use this target report in a drill-through activity.

- A hidden drill-through definition is not displayed in the Go To page if the user interface does not show hidden entries.

- A visible shortcut can point to a hidden entry. If the shortcut points to a hidden folder, any hidden entries in the folder are not visible.

- Search pages do not return hidden entries if the user interface does not display the entries.

The following, are examples of situations when hidden entries are always visible, regardless of the user preferences for viewing hidden entries.

- Hidden entries on the Permissions and Personal tabs
  The entries icons are faded.

- Portal tabs associated with hidden pages

- Portlets in a page

- Job steps that refer to hidden entries already in a job
  The entries icons are faded.

- Agent tasks that refer to hidden entries already in an agent
  The entries icons are faded.

- Details in a report run history
  The icons that represent hidden entries do not change.

Setting the default option for viewing hidden entries in IBM® Cognos® software is part of managing user profiles.

Only users who have access to the Hide Entries capability in IBM Cognos Administration can perform the following steps.

**Steps to Change the Preference for Viewing Hidden Entries**

1. Go to my area options [3] and click My Preferences.

2. On the General tab, select or clear the Show hidden entries check box.
   If you select this check box, the hidden entries appear in the user interface with faded icons. If you clear this check box, the hidden entries disappear from the user interface.

3. Click OK.
Select a Link for an Entry

Some entries are linked to other entries when they are created. For example, a report view is linked to a report and a report or agent is linked to a package. Metrics are linked to a metrics package.

You can change the link for an entry. For example, if a report is deleted, you may want to link an associated report view to a different report. After you change the link, the report view reflects the content of the new report.

Select a link that is appropriate for the entry. For example, the package that a report is linked to must contain a valid model for the report to run correctly.

If the link associated with the entry is not available, Unavailable appears. For example, Unavailable appears if the package that a report is linked to is deleted.

You must have write permissions for the entry you are attempting to select a link for. You must also have write and traverse permissions for the current folder.

Steps
1. In IBM® Cognos® Connection, locate the entry you want and click the set properties button.
2. Click the General tab and find the current link for the entry.
   For example, for a report, look in Package. For a report view, look in Source report.
3. Click the link.
   For example, for a report, click Link to a package. For a report view, click Link to report.
4. Select the new entry that you want to link the entry to and click OK.

Delete an Entry

When you delete an entry, you permanently remove it from the portal and its ID is deleted. You may decide to delete an entry because it is outdated or may no longer satisfy your requirements.

Deleting the source entry for a shortcut removes only the source entry. The shortcut entries remain but have an invalid reference icon and are not accessible.

Deleting a shortcut or a report or agent view removes only the selected entry and not the source entry. References from other entries no longer work.

You must have write permissions or set policy permissions for the entry you are attempting to delete. You must also have write and traverse permissions for the current folder.

Steps
1. In IBM® Cognos® Connection, select the check boxes next to the entries you want to delete.
2. Click the delete button on the toolbar.
   A confirmation box appears.
3. Click OK.
Specify the Order of Entries

You can specify the order of folders and entries in the portal. You may decide to organize entries by level of usage and place entries that you use daily at the top of the list.

By default, existing entries are sorted alphabetically. Entries added after the order is specified are shown at the end of the list.

To specify the order of entries, you must have read and write permissions for all entries in the folder and read and traverse permissions for the folder containing the entries.

Steps

1. In IBM® Cognos® Connection, click the tab you want.

2. Click the order button on the toolbar.

3. Select the entries in the Shown in default order list box and click the right-arrow button to move them to the Shown first list box.

   Note: You specify the order of folders and entries independently.

4. Click the Up, Down, To top, and To bottom links to move the folders and entries within the list.

5. Click OK.

Create a Folder

You can organize entries into folders. Having folders that are logically labeled and organized helps you easily locate reports. For example, you might want to create folders in My Folders or Public Folders to help you organize your entries.

You can create folders in the following locations:

- Public Folders
  Entries that are placed in Public Folders are of interest to and can be viewed by many users. When the focus is on the Public Folder tab, the content is grouped by packages or folders. Each package contains a single model and all related entries, such as folders, reports, jobs, report views, agents, metrics, URLs, and shortcuts.

- My Folders
  You create personal folders and use them to organize entries according to your preferences. My Folders are accessible by you only when you are logged on.

You must have write access to a folder to create entries in it.

Tips

- Click More to view a full list of actions that can be performed on an entry.
- Click Set Properties to change the general properties, defaults, permissions, and job properties for an entry. Not all properties are available for each type of entry.

Steps

1. In IBM® Cognos® Connection, go to the location for the new folder.

2. Click the new folder button on the portal toolbar.

3. In the Name box, type the name of the new folder.

4. If you want, in the Description and in the Screen tip box, you can type a description of the entry.

   The description appears in the portal when you set your preferences to use the details view (p. 325). The screen tip, which is limited to 100 characters, appears when you pause your pointer over the icon for the entry in the portal.

5. If you do not want to use the target folder shown under Location, choose another location:
   - Click Select another folder, select the target folder, and click OK. If the folder box is empty, go back one folder level using the path at the top of the dialog box.
   - Click Select My Folders as the location.

6. Click Finish.

The new folder has the same permissions as the parent folder. For information about changing access permissions, see "Access Permissions and Credentials" (p. 275).

Specify an Alternative Icon for an Entry

In the portal, the standard icons that appear next to entries help identify the class to which the entry belongs. To better identify an entry among several similar entries, you can replace the standard icon with an alternative icon.

When you specify an alternative icon, use a screen resolution of 16 x 16 pixels to ensure that the icon is properly aligned and spaced in the portal.

Customizations, such as alternative icons, are not maintained automatically. As a result, alternative icons must be ported manually upon upgrade.

Steps

1. In IBM® Cognos® Connection, locate the entry you want and click the set properties button.

2. Click the General tab and next to Icon, click Edit.

3. Click Specify an icon, and in the edit box, specify a name for the image, for example, myicon.gif.

   The image must exist in the folder c10_location/webcontent/ps/portal/images.

4. Click OK.
Wherever the entry appears in the portal, the alternative icon appears instead of the standard icon.

## Search for an Entry

You can search for entries whose name, description, or both match the string entered in the search criteria. The search ignores capitalization.

The following table shows examples of search criteria and results.

<table>
<thead>
<tr>
<th>Method</th>
<th>Search criteria</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contains the exact string</td>
<td>Report 1</td>
<td>&quot;Report 1&quot;, &quot;Report 100&quot;, &quot;Copy of Report 1&quot;</td>
</tr>
<tr>
<td>Starts with the exact string</td>
<td>report</td>
<td>&quot;report 1&quot;, &quot;Report 100&quot;</td>
</tr>
<tr>
<td>Matches the exact string</td>
<td>Report</td>
<td>&quot;Report&quot;, &quot;report&quot;</td>
</tr>
</tbody>
</table>

Entries for which you have access permissions are included in the search results.

For information about multilingual searches, see "Search for an Entry in Multiple Languages" (p. 324).

### Steps

1. **Go to the highest level folder you want to include in your search.**  
   
   **Tip:** You can increase or limit the folders to include in your search by changing the **Scope** when you enter the search criteria.

2. **From the Search Options,** specify the search option to use. The following options are available:
   - **Full text and all fields**
   - **Name field**
   - **Description field**
   - **Name or description field**

3. **Click the search button** on the toolbar.

4. **In the search box,** type the phrase you want to search for.

5. **Click Advanced.**

6. **Choose the type of match between the search string and the results:**
   - **To return entries that include the search string somewhere in the name or description,** click **Contains the exact string.**
   - **To return entries whose name or description begins with the search string,** click **Starts with the exact string.**
• To return entries whose name or description matches the search string word for word, click
  **Matches the exact string.**

  **Note:** These options are only available for search options: **Name field**, **Name or description field** or **Description field**.

7. In the **Type** box, click the type of entry to search for.
   
   **Tip:** To search for all shortcuts in the selected location, click **Shortcuts**.

8. In the **Modified** box, click the date that the entry was last modified.
   
   For example, if you want the search to return entries that were updated in the last week, click **In last week**.
   
   **Note:** This option is only available in the Cognos® namespace.

9. In the **Scope** box, click the folders you want to include in the search.

10. Click the **Search** button.
    
    The entries matching the search criteria and for which you have permissions to view appear at the bottom of the screen under **Results**.
    
    **Tip:** To open an entry, click its link.

### Search for an Entry in Multiple Languages

The user’s locale sets the default language for a search. You can customize this setting by changing the Content language option in the Set Preferences page, in My Preferences. If the Content language is English, then the search results are delivered in English. For information about searching for an entry, see "Search for an Entry" (p. 323).

When you perform a search, you can use a search term that is in a different language from the language specified by the Content language setting. To search in multiple languages, use the following syntax:

<search_term> +language: <locale>

**Example:** ventes +language: fr

Although you can search in different languages, you only receive search results if the search index supports that language. Your administrator specifies the languages that are supported.

For information about specifying the locales available for searches, see "Limit Index by Language" (p. 498).

**Steps**

1. Click the search button on the toolbar.

2. In the search box, type the phrase you want to search for. Use the following syntax:
   
   <search_term> +language: <locale>

   The search returns a list of entries.
Personalize the Portal

You can personalize the way data appears in IBM® Cognos® Connection by changing your preferences. For example, you can set the product language and the preferred output format of reports. Changes take effect immediately in the current session. The preferences are stored and used for future sessions unless you change them.

You can change the following settings:

<table>
<thead>
<tr>
<th>General</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of entries in list view</td>
<td>The maximum number of rows that appear in a list before scrollbars are required. This applies to rows where scrolling is allowed.</td>
</tr>
<tr>
<td>Separators in list view</td>
<td>The method of separating entries in lists in Public Folders and My Folders. Select from no separator, grid lines, or alternating backgrounds. The setting applies to all lists with the exception of the output versions list. This setting is available only if you use Microsoft® Internet Explorer Web browser or Firefox.</td>
</tr>
<tr>
<td>Style</td>
<td>The uniform look and feel applied to all components of IBM Cognos software. You can choose from the styles available to you.</td>
</tr>
<tr>
<td>Show hidden entries</td>
<td>Use this setting to show or remove hidden entries from your view in IBM Cognos Connection.</td>
</tr>
<tr>
<td></td>
<td>When you select this check box, the hidden entries remain visible, but their icons are faded.</td>
</tr>
<tr>
<td></td>
<td>When you clear this check box, the hidden entries disappear from your view. For example, hidden packages are not visible in IBM Cognos Connection and in the associated studios. You must have access to the Hide Entries capability granted by your administrator to see this setting.</td>
</tr>
<tr>
<td>Default view</td>
<td>The decision to use list view or details view by default. List view shows the name, modified date, and actions. Details view shows the name, description, modified date, and possible actions. Details view works only in Public Folders and My Folders in IBM Cognos Connection. In other components, list view is used.</td>
</tr>
</tbody>
</table>
### General

<table>
<thead>
<tr>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of columns in details view</td>
<td>The maximum number of columns per row for the details view.</td>
</tr>
<tr>
<td>Report format</td>
<td>The preferred format to view the report. Choose between HTML, PDF, Delimited Text (CSV), Microsoft Excel spreadsheet software, and XML.</td>
</tr>
<tr>
<td>Show a summary of the run options</td>
<td>The option to show a summary of the run options when a report is not run interactively.</td>
</tr>
<tr>
<td>Show the Welcome page at startup</td>
<td>The option to show or hide the Welcome page at the beginning of a session.</td>
</tr>
<tr>
<td>Enable accessibility support for reports I run or schedule</td>
<td>The option to create accessible report output whenever I run or schedule a report.</td>
</tr>
<tr>
<td>Product language</td>
<td>The language used by the IBM Cognos user interface. It applies to all IBM Cognos components, such as IBM Cognos Connection, IBM Cognos Viewer, and Report Studio.</td>
</tr>
<tr>
<td>Content language</td>
<td>The language used to view and produce content in IBM Cognos software, such as names and descriptions of entries, or data in reports.</td>
</tr>
<tr>
<td>Time zone</td>
<td>The time zone used. Select the default server time zone set by your administrator. For more information, see the <em>Installation and Configuration Guide</em>. Or you can select another time zone.</td>
</tr>
</tbody>
</table>

Personal settings appear if you have read permissions for your account.

### Personal

<table>
<thead>
<tr>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary logon</td>
<td>The namespace and credentials that you used to log on to IBM Cognos software. Also shows the given name, surname, and email address if they have been defined.</td>
</tr>
<tr>
<td>Secondary logon</td>
<td>A list of secondary logons.</td>
</tr>
<tr>
<td></td>
<td>The secondary logons exists if you logged on to multiple namespaces.</td>
</tr>
</tbody>
</table>
### Personal

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alerts</strong></td>
</tr>
<tr>
<td><strong>Credentials</strong></td>
</tr>
<tr>
<td><strong>Groups and roles</strong></td>
</tr>
<tr>
<td><strong>Capabilities</strong></td>
</tr>
</tbody>
</table>

### Description

Portal tabs settings appear if you have read permissions for your account.

<table>
<thead>
<tr>
<th>Portal Tabs</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>List of entries</strong></td>
<td>Represents the tabs, including Public Folders and My Folders, in your IBM Cognos Connection environment.</td>
</tr>
<tr>
<td><strong>Add</strong></td>
<td>Use to add a tab for a specified page in IBM Cognos Connection. Each tab represents Public Folders, My Folders, or a page.</td>
</tr>
<tr>
<td><strong>Remove</strong></td>
<td>Use to remove a tab from IBM Cognos Connection.</td>
</tr>
<tr>
<td><strong>Modify the sequence</strong></td>
<td>Use to change the order of tabs in IBM Cognos Connection.</td>
</tr>
</tbody>
</table>

### Steps

1. In IBM Cognos Connection, click **My Area Options, My Preferences**, and click the required tab.
2. Choose the appropriate settings.
3. Click **OK**.
My Watch Items

Use the My Watch Items area of the portal to view (p. 328) and manage watch items from a single location. Watch items include alert lists and watch rules that help you monitor business events that are important to you.

The Alerts tab shows the alert lists to which you belong. Use this tab to remove yourself from the alert list for a report or agent.

The Rules tab shows the watch rules you created in saved HTML report output. Use this tab to

- edit a watch rule (p. 329)
- enable or disable a watch rule. For information, see "Disable an Entry" (p. 317).
- organize watch rules in folders. For information, see "Create a Folder" (p. 321).
- delete a watch rule. For information, see "Delete an Entry" (p. 320).
- edit the My Watch Items page properties. For information, see "Edit a Page" (p. 334).

You can also add yourself to the alert list for a report (p. 440), add yourself to the alert list for an agent (p. 464), and create a watch rule for a report (p. 443).

The report owner must allow report users to receive alerts and create watch rules for the report.

View Watch Items

To view the alerts lists to which you belong and the watch rules you created, use the My Watch Items area of the portal.

You can also remove yourself from an alert list (p. 328), and edit a watch rule (p. 329).

Steps

1. In IBM Cognos® Connection, in the upper-right corner, click My Area Options, My Watch Items.
2. To view your alerts lists, click Alerts.
3. To view your watch rules, click Rules.

Remove Yourself from an Alert List

To remove yourself from an alert list for a report or agent, use the My Watch Items area of the portal.

When you are added to an alert list, you receive an email notification when the report, or report associated with the agent task, is saved. After removing yourself from an alert list, you are no longer alerted.
Tip: You can also add or remove yourself from an alert list for a report using the Report tab of the Set Properties page (p. 440). For an agent, you can use the Agents tab of the Set Properties page (p. 464).

**Steps**

1. In IBM® Cognos® Connection, in the upper-right corner, click My Area Options My Watch Items.

2. Click the Alerts tab, and in the Source column, click the alert list to remove.
   
   You can select multiple alert lists.

3. Click the remove me from the alert list button.

4. Click the refresh button.

   Note that the alert list is removed from the Source column.

**Edit a Watch Rule**

After creating watch rules in saved HTML report output, you can edit them from the My Watch Items area of the portal. For example, you can change the general properties, such as name, language, and description. You can also change the properties, such as the conditional expression for the rule, the items to which the rule applies, and the alert type.

For information about creating a watch rule, see "Watch Rules in Saved Reports" (p. 442).

To edit a watch rule in IBM® Cognos® Connection, you must have read and write permission to the My Watch Items page.

**Steps**

1. In IBM Cognos Connection, in the upper-right corner, click the my area options button and click My Watch Items.

2. Click the Rules tab, and in the Actions column, click the set properties button for the watch rule you want to edit.

3. Use the Set properties page, General tab, to change the properties, such as name, language, or description for the watch rule.

4. Click the Rules tab to edit the rules properties, such as the conditional expression for the rule, the items to which the rule applies, and the alert type.

   For more information on the rule properties, see "Watch Rules in Saved Reports" (p. 442).
Chapter 19: Pages and Dashboards

You can create dashboards in IBM® Cognos® Connection using pages and portlets. You can also create dashboards in IBM Cognos Business Insight which you can access in IBM Cognos Connection. Information about dashboards that use pages and portlets can be found in this section. For information about IBM Cognos Business Insight, see "IBM Cognos Business Insight" (p. 348).

IBM Cognos Connection pages and dashboards provide quick access to IBM Cognos business intelligence and performance management information, such as reports, metrics, or news items. The information is relevant to specific users or business objectives, and can be monitored at a glance.

Dashboards are pages with enhanced functionality. The information is displayed on multiple tabs that are easy to navigate. Each tab can include different segment of information. A dashboard can be accessed as a standalone application through a URL. Users can print selected dashboard pages.

The content for pages and dashboards is provided by Cognos portlets, or other supported portlets. Each portlet is an independent application that adds to the page different content and functionality, such as the ability to browse folders and entries, view reports and metrics, and include custom text and images or links to other Web pages.

You can add different types of information to your pages and organize them in a way that is meaningful to you. For example, you may want to see specific IBM Cognos reports and metrics, or have links to your favorite Web sites.

The following table shows the types of content you can add to an IBM Cognos Connection page, and the portlets that provide this content.

<table>
<thead>
<tr>
<th>Page Content</th>
<th>Portlet</th>
<th>Portlet Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browse IBM Cognos folders, reports, and other entries</td>
<td>IBM Cognos Navigator</td>
<td>IBM Cognos Content</td>
</tr>
<tr>
<td>Search for IBM Cognos reports and other entries</td>
<td>IBM Cognos Search</td>
<td></td>
</tr>
<tr>
<td>View and interact with IBM Cognos reports and other entries</td>
<td>IBM Cognos Viewer</td>
<td></td>
</tr>
<tr>
<td>View and interact with different types of performance metrics, such as the metrics you want to monitor closely, or the metrics for which you are directly responsible.</td>
<td>IBM Cognos Metric List</td>
<td>IBM Cognos Metric Studio</td>
</tr>
<tr>
<td>Add a metric history chart that illustrates the historical performance of the metric</td>
<td>IBM Cognos History Chart</td>
<td></td>
</tr>
<tr>
<td>Page Content</td>
<td>Portlet</td>
<td>Portlet Group</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>Display an impact diagram associated with a metric</td>
<td>IBM Cognos Impact Diagram</td>
<td></td>
</tr>
<tr>
<td>Display a custom diagram associated with a scorecard.</td>
<td>IBM Cognos Custom Diagram</td>
<td></td>
</tr>
<tr>
<td>View and interact with custom applications created using IBM Cognos Software Development Kit</td>
<td>IBM Cognos Extended Applications</td>
<td>IBM Cognos Extended Applications Portlet</td>
</tr>
<tr>
<td>Register and show active links to other Web pages</td>
<td>Bookmarks Viewer</td>
<td>IBM Cognos Utility</td>
</tr>
<tr>
<td>Add and view custom images, such as logos</td>
<td>Image Viewer</td>
<td></td>
</tr>
<tr>
<td>Insert any other Web page</td>
<td>HTML Viewer</td>
<td></td>
</tr>
<tr>
<td>Add and show the content of a Real Simple Syndication (RSS) news feed specified by a URL address</td>
<td>RSS Viewer</td>
<td></td>
</tr>
<tr>
<td>Add and view custom text and images</td>
<td>HTML Source</td>
<td></td>
</tr>
<tr>
<td>Create and view a dashboard with multiple tabs</td>
<td>Multi-page</td>
<td>Dashboard</td>
</tr>
<tr>
<td>Add non-Cognos items to a page</td>
<td>Supported other portlets</td>
<td>Content associated with other portlets</td>
</tr>
</tbody>
</table>

**Note:** The portlets can also be referred to as HTML fragments.

The list of pages is cached in an IBM Cognos Connection session. When the state of a page changes during the current session, users who have access to the page are affected. For example, when a page is disabled or deleted, it can no longer be used and its tabs are deleted or not functional. To update the portal with the most current settings, use the IBM Cognos Connection refresh button.

When you log on to IBM Cognos Connection for the first time, you access the pages an administrator made available to you. Later, you can create your own pages.

You can perform the following page-related tasks in IBM Cognos Connection:

- create pages (p. 333) and dashboards (p. 339)
- edit pages (p. 334)
- share pages with other users (p. 335)
- modify portlets (p. 335)
Create a Page

You can create your own pages in IBM® Cognos® Connection to group different types of information into a single view.

The pages are saved in Public Folders or My Folders. If you plan to share a page with other users, save it in Public Folders.

After you create the page, you can edit it to modify its contents, layout and style, and to set access permissions (p. 335).

You can delete pages in IBM Cognos Connection (p. 320) if you have the required access permissions for the pages. Deleting a page may affect your portal tabs (p. 337).

Steps

1. In IBM Cognos Connection, click the new page button.
2. Specify a name and location for the page, and, if you want, a description and a screen tip.
3. Click Next.
   The Set columns and layout page appears.
4. Define the layout for your page by setting the number and width of columns.
   Tip: If you are using multiple columns and one of the columns includes a report that is shown in IBM Cognos Viewer, set the width to at least 50% to minimize scrolling.
5. In the column to which you want to add portlets, click Add.
6. Click the portlet group that contains the portlets you want to add.
7. Select the portlets, and click the add button to move them to the Selected entries box. If you want to remove a portlet from the Selected entries box, click Remove.
   Tip: You can preview the content of the portlets by clicking the view this portlet button.
8. Click OK.
9. Repeat steps 5 to 8 for each portlet group you want.
10. Click OK, and then click Next.
   The Set page style page appears.
11. Customize the appearance of your page.

- If you want, add a title and instructions for the page in the language of the product.
  
  For more information, see "Edit a Page" (p. 334).

  To hide the title or instructions, select the associated check box.

  **Tip:** To change the formatting of the text, click Custom. To go back to the default formatting, click Return to default.

- If you want, hide the portlet borders, title bars, or the edit button in the title bar. This helps to avoid clutter and gives the page a uniform look and feel.

12. Click Next.

13. If you want to add the page to the portal tab bar, select the Add this page to the portal tabs check box. To view the page, select the View the page check box.

14. Click Finish.

**Edit a Page**

You can change the page content, layout and style, and access permissions. For example, you may want to see a different report, or change the list of users who can access the page.

**Page Titles and Instructions**

When you create a page, you can specify a title and instructions for the page only in the product language you currently use. For example, if you use the French version of IBM Cognos software, you can type the title and instructions in French only. After the page is created, you can add the title and instructions for other language versions by editing the page properties on the Page Style tab.

**Steps**

1. Go to the page you want to edit.

2. Click the edit page button.

   **Tip:** Alternatively, locate the page in IBM Cognos Connection, and click its set properties button.

3. Change the page properties as required.

   For more information about changing the page content, layout, and style, see "Create a Page" (p. 333).

   For more information about setting the page access permissions, see "Share a Page" (p. 335).
Share a Page

You can share your page with other users by giving them access permissions for the page. You can set up the permissions so that other users can only view the page or also modify it.

To view a page, traverse and execute permissions for the page, and execute permissions for its portlets are required. To modify the page, write permissions are also required.

Steps
1. If you did not create the page in Public Folders, copy it there from your personal folders (p. 315).
2. Specify which users, groups, or roles can have read, traverse, execute, or write permissions for the page.
   For more information, see "Access Permissions and Credentials" (p. 275)

Modify a Portlet

Portlets provide different types of information for pages. You can modify the content of an instance of a portlet in a page if you have the required permissions for the page (p. 335). You will retain the custom settings even if the administrator resets the portlet. Other users who also have access to the page that contains this portlet instance will also see the changes. However, if the administrator locks the portlet, you cannot configure it.

The configurable properties for the Cognos® portlets vary. For more information, click the help button in the portlet title bar.

Steps
1. Go to the page that contains the portlet.
2. In the portlet title bar, click the edit button ⌁.
3. Edit the properties as required.
   Tip: If you want to go back to the default settings, click the reset button.
4. Click OK.

Enable Communication Between Cognos Portlets

You can enable portlet-to-portlet communication so that the portlets can interact. For example, you can use this functionality when you want to navigate published IBM® Cognos® reports and view the selected reports on the same page.

This functionality applies only to Cognos portlets and works between portlets of different groups. For example, the IBM Cognos Metric List portlet can communicate with the IBM Cognos Viewer portlet. One portlet is a target portlet, and the remaining portlets are source portlets. The results of actions in the source portlets are shown in the associated target portlets.

Portlets in different pages can communicate between themselves.
You can enable portlet-to-portlet communication between the following source and target portlets.

<table>
<thead>
<tr>
<th>Source portlet</th>
<th>Target portlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Cognos Navigator</td>
<td>IBM Cognos Viewer</td>
</tr>
<tr>
<td>IBM Cognos Search</td>
<td>IBM Cognos Viewer</td>
</tr>
<tr>
<td>IBM Cognos Viewer</td>
<td>IBM Cognos Viewer</td>
</tr>
<tr>
<td>IBM Cognos Metric List</td>
<td>IBM Cognos Viewer</td>
</tr>
<tr>
<td></td>
<td>IBM Cognos History Chart</td>
</tr>
<tr>
<td></td>
<td>IBM Cognos Impact Diagram</td>
</tr>
<tr>
<td>IBM Cognos Impact Diagram</td>
<td>IBM Cognos Viewer</td>
</tr>
<tr>
<td></td>
<td>IBM Cognos History Chart</td>
</tr>
<tr>
<td>IBM Cognos Custom Diagram</td>
<td>IBM Cognos Viewer</td>
</tr>
<tr>
<td></td>
<td>IBM Cognos Metric List</td>
</tr>
<tr>
<td></td>
<td>IBM Cognos History Chart</td>
</tr>
<tr>
<td>Bookmarks Viewer</td>
<td>HTML Viewer</td>
</tr>
<tr>
<td>Image Viewer</td>
<td>HTML Viewer</td>
</tr>
<tr>
<td>RSS Viewer</td>
<td>HTML Viewer</td>
</tr>
</tbody>
</table>

To enable this functionality, you specify a channel name in the target portlet and refer to this name in the associated source portlets.

For more information about Cognos portlets, see "Deploying Cognos Portlets to Other Portals" (p. 555).

**Steps**

1. Go to the page or the dashboard that contains the portlets for which you want to enable portlet-to-portlet communication.

2. Click the edit button in the portlet title bar.

3. For the channel property, type the name you want.

   The name can contain letters, numbers, and underscore (_) characters, but must not contain any spaces. For example, Cognos, Cognos_Portlets, CognosPortlets are valid names.

   **Note:** The boxes where you type the channel name have different labels in different portlets. For example, Channel, Portlets using channel, or In a destination portlet.
4. Click OK.

5. Repeat the steps for each portlet that you want to broadcast on the same channel.
   Ensure that you type the same channel name.

**Portal Tabs**

The tabs in IBM® Cognos® Connection are used to quickly access the pages that are important to you.

The tabs represent:
- Public Folders
- My Folders
- Pages or dashboards

An administrator specifies the default tab setup for users. To personalize IBM Cognos Connection, you can add (p. 337) and remove (p. 338) tabs, or reorder them (p. 339). Other users are not affected by your changes.

When you delete a page, the tab associated with this page is automatically removed. Your tabs may also be affected by changes to the associated pages made by other users who have access to the pages. For example, when a page is deleted during the current session, its tab is no longer functional, and an error message may appear when you click the tab. To see the most current tab settings, click the IBM Cognos Connection refresh button.

**Note:** If many tabs exist, scrolling is added automatically.

**Add a Tab**

You can add a tab in IBM® Cognos® Connection for a new page or for an existing page so that you can access the page quickly.

If the Public Folders or My Folders tabs are not available in your tab bar, you can add them, too. Only one tab can exist for each folder or page.

There are various methods to add a tab. Choose the method that is applicable to your current view.

**Steps Using My Preferences**

1. Click the may area button **My Preferences**, and then click the Portal Tabs tab.
   A list of your current tabs appears.

2. Click Add.

3. In the list of available pages, select the page you want.
   You can select multiple pages.

4. Click the right arrow button to move the page to the Selected entries box.
5. Click OK.
   The tab for the page appears in the portal.

6. Click OK to close My Preferences.

**Steps Using the Tab Menu**

1. From the tab menu on the left side of the tab bar, click Add tabs.

2. In the list of available pages, select the page you want.
   You can select multiple pages.

3. Click the right arrow button to move the page to the Selected entries box.

4. Click OK.
   The tab for the page appears in the portal.

**Steps Using the Add Button**

1. In the list of available pages, locate the page you want.

2. In the Actions column, click its associated add button.
   The tab appears in the portal.

**Delete a Tab**

You can delete a tab when it is not needed.

When you delete a page that has a tab, the tab is automatically removed. When you remove a tab for a page, the page is not deleted.

You can delete the Public Folders and My Folders tabs, and add them back later, if needed (p. 337). Deleting the tabs does not delete Public Folders and My Folders from Content Manager.

**Steps Using My Preferences**

1. Click the may area button, My Preferences, and then click the Portal Tabs tab.
   A list of your current tabs appears.

2. Select the check box next to the tab you want to remove, and click Remove this tab.
   You can select multiple tabs.

3. Click OK.
   The tab is deleted from the tab bar.

**Steps Using the Tab Menu**

1. On the tab bar, click the tab you want to remove.

2. From the tab menu on the left side of the tab bar, click Remove this portal tab.
3. In the message box, ensure you are deleting the proper tab, and click OK. The tab is deleted from the tab bar.

**Reorder the Tabs**

You can change the order of tabs so that they are organized in a way that is meaningful to you.

**Steps Using My Preferences**

1. Click the may area button My Preferences, and then click the Portal Tabs tab. A list of your current tabs appears.
2. Click Modify the sequence.
3. In the Tabs box, move the tabs up or down as required.
4. Click OK. The tabs appear in the new order.
5. Click OK to close My Preferences.

**Steps Using the Tab Menu**

1. From the tab menu on the left side of the tab bar, click Modify the sequence of tabs. A list of your current tabs appears.
2. Move the tabs up or down using the appropriate buttons.
3. Click OK. The tabs appear in the new order.

**Change Your Home Page**

You can choose any page in IBM® Cognos® Business Intelligence as your home page.

**Steps**

1. Go to the page you want to set up as your new home page.
2. Next to the home icon, click the arrow, and click Set as Home Page.

**Create a Dashboard with Multiple Tabs**

A dashboard is a visual display of the most important information that a user needs. The information is consolidated and arranged on a single screen so that it can be monitored at a glance.

Different segments of information are displayed on different tabs. To create a dashboard, you assemble the different segments of information into a single view by using the Multi-page portlet (p. 331). This portlet is linked to a source folder that contains entries that appear as tabs in the
dashboard. You can make changes to the tabs in the dashboard by adding or deleting the associated entries from the source folder.

The following entries can be used as tabs in a dashboard:

- folders and shortcuts to folders
  Use folders to include a second level of tabs.

- packages and shortcuts to packages
  Use packages to include a second level of tabs.

- reports and shortcuts to reports
  Use to view or run a Report Studio report.

- report views and shortcuts to report views
  Use to view or run a Report Studio report.

- queries and shortcuts to queries
  Use to view or run a Query Studio report.

- analysis and shortcuts to analysis
  Use to view or run an Analysis Studio report.

- pages and shortcuts to pages
  Use to add a page or another dashboard

- URLs and shortcuts to URLs
  Use to embed a different Web page.

- PowerPlay reports
  Use to view or run a PowerPlay® report

- Microsoft® Documents
  Use to include a link to a Microsoft document, such as an Excel, PowerPoint, or Word document.

The general dashboard properties are the same as page properties. You can edit the dashboard layout and style (p. 334), modify the properties of the Multi-page portlet (p. 335), set up access permissions for the dashboard (p. 335), and add it to the portal tabs (p. 337).

**Setting up the Dashboard Folder Structure**

Before you start creating your dashboards, we recommend setting up a folder hierarchy in Public Folders to keep your dashboard resources organized. For example, create a folder for all the dashboards you plan to create. Next, create a subfolder for each dashboard to use as source folder for the entries that you want to include in the dashboard, such as reports, folders, pages, or shortcuts. The folder structure may look like this:
1. The Sales and Marketing pages are the multi-tabbed dashboards. These are the dashboard master pages that are built using the Multi-page portlet.

2. The Sales Resources folder is the source folder for the Sales dashboard, and the Marketing Resources folder is the source folder for the Marketing dashboard.

3. The source folders can contain entries such as reports, pages, folders, shortcuts, and so on. These entries appear as tabs in the dashboard.

**Steps**

1. In IBM® Cognos® Connection, click the new page button

2. Type the name, and select a location for your page.

3. Click Next.

4. In the Set columns and layout page, set the number of columns to 1, and the column width to 100%.

5. Click Add.

   A list of portlet groups appears.

6. In the Available Entries box, click Dashboard.

7. Select the Multi-page portlet, and click the right arrow button to move the portlet to the Selected Entries box.

8. Click OK, and then Next.

9. In the Set page style page, specify a meaningful title for the page, select any of the remaining properties, and click Next.

10. In the Select an action page, you can select Add this page to the portal tabs.

11. Click Finish.

   The page that you created is the dashboard master page.

12. Open the page you created.
Chapter 19: Pages and Dashboards

An empty frame of the Multi-page portlet appears.

13. In the portlet toolbar, click the edit button "修改 ".

The portlet properties page appears.

14. In the Folder section, click Select an entry.

15. Browse to the folder or package that contains the resources for the dashboard, such as shortcuts, pages, or bookmarks. Select an entry, and click OK.

   Tip: To add My Folders as a tab in the dashboard, create a shortcut to My Folders.

16. Specify other portlet properties as required. For example, in the Display Style section, specify how to display the dashboard tabs, horizontally at the top of the page, or vertically on the left side of the page.

   For more information about the portlet properties, see "Multi-page" (p. 908).

17. Click OK.

You can now open and view the dashboard page.

   Tip: Other users can access the dashboard through its URL. To see the URL, go to IBM Cognos Connection, locate the dashboard master page, and open its properties page. On the General tab, click View the search path, ID and URL.

Adding Interactivity to Pages and Dashboards

Pages and dashboards become much more effective for data reporting and analysis when you add interactivity to them. A single action in one report can cause other reports to refresh simultaneously and show the data associated with the action.

You can enhance the page interactivity by

- defining global filters (p. 342)
- enabling the sharing of drill-up and drill-down actions (p. 346)
- enabling the sharing of drill-through actions (p. 347)

Defining Global Filters

Global filters are used to control the display of one or more reports in a single portal page or in a dashboard. For example, a global filter can be on a report that contains only a prompt or prompt controls. This allows for a single selection to drive a number of reports at once. When a prompt answer is changed, all related reports refresh dynamically to show the data that answers the prompt. For example, if you answer a prompt for a country with Brazil, all related reports on the page are filtered to show the data for Brazil. When this is used in a dashboard, the context is passed to all corresponding tabs.

Perform the following tasks to set up a page or a dashboard with global filters:

- Prepare the Reports (p. 343)
Preparing the Reports

Before you start creating a page or a dashboard with global filters, you must know which reports you can use, and have the reports ready. The reports can be authored in Report Studio, Query Studio, or Analysis Studio.

For reports in a package, the global filters share parameters using the model item.

Create the Global Filters

A global filter is a value that is shared across different reports. At least one of the reports that you are using for the dashboard needs to contain a prompt or prompt control. The prompted report is embedded into a page or a dashboard using the IBM® Cognos® Viewer portlet and linked with other reports in the page using the global filter portlet properties. The prompts that are used as global filters control the display of your chosen linked reports. If this functionality is implemented in a single page, the prompts control linked reports in different sections of the page.

If the page is a dashboard with multiple tabs, the prompts can control the report filtering across tabs. Note that there is a limitation with filtering across tabs for IBM Cognos Viewer portlets. For prompts to control report filtering, the IBM Cognos Viewer portlet must exist as a sibling on the same page as the Multi-page portlet.

We recommend creating prompt reports in Report Studio. The rich editing environment of this studio gives the author access to a variety of prompt controls, such as the Next, Reprompt, or Finish buttons. These controls add more interactivity to portal pages.

For more information about building prompts and prompt pages, see the IBM Cognos Report Studio User Guide.

Using Metrics as Global Filters

You can use metrics and strategy elements in IBM Cognos Metric Studio portlets as global filters. In a page, or in a dashboard with multiple tabs, the IBM Cognos Metric List, IBM Cognos Impact Diagram, and IBM Cognos Custom Diagram portlets can filter prompted parameters for the IBM Cognos Viewer portlet. You must configure IBM Cognos Viewer to show a report associated with a metric or a strategy element, and set up communication between the portlets using the same channel name (p. 335).

When a user clicks a metric name in IBM Cognos Metric List, IBM Cognos Impact Diagram, or IBM Cognos Custom Diagram, IBM Cognos Viewer dynamically updates the report if the report prompt parameters are based on metric values. When a user clicks a strategy element in IBM Cognos Custom Diagram, IBM Cognos Viewer dynamically updates the report if the report prompt parameters are based on strategy element values.

For this functionality to work, the following parameters that are broadcast on a channel after a click action in an IBM Cognos Metric Studio portlet must match the names of the report prompt parameters:

- scorecard_extid
Chapter 19: Pages and Dashboards

- scorecard_sid
- strategy_sid
- metric_sid
- metric_extid
- time_period_sid

**Steps to Create a Prompted Report**

1. In Report Studio, create a prompt on a report page, not on a prompt page, of the report.
   
   Set the **Auto-Submit** property for the prompt to **yes**.
   
   If you want to use cascading prompts, only the last prompt in the sequence needs to be on the report page.
   
   For some prompts, such as the value prompts, you may need to add a **Finish** button to signal that the prompt selection is complete. For cascading prompts, the **Reprompt** button is also required to restart the prompting sequence.
   
2. Add other details, such as background images, instructions, or a title.
   
   The prompt can now be added to a portal page or a dashboard (p. 344).

**Assemble the Reports on a Page**

The prompts and the target reports in a page or a dashboard create an interactive and easy way to access IBM® Cognos® Business Intelligence environment.

Each report is displayed using the IBM Cognos Viewer portlet. The reports communicate with each other using the properties of this portlet.

You can use different design strategies to implement global filters in a page. Here is an example of a basic layout:

![Diagram of a basic layout with a prompt report and two target reports.](image-url)
Use the following steps when defining global filters in a single page. If you want to implement this functionality in a dashboard, you must complete additional steps. For more information, see "Create a Dashboard with Multiple Tabs" (p. 339).

**Steps**

1. In IBM Cognos Connection, click the new page button.
2. Type the name, and select a location for your page.
3. Click Next.
4. In the Set columns and layout page, set the number and width of columns.
   For example, the reports that display the prompts and prompt controls can be placed in one column, and the target reports in a separate column to the right.
5. Click Add at the bottom of the first column.
6. In the Available Entries box, click IBM Cognos Content.
7. Select the IBM Cognos Viewer portlet, click the right arrow button to move the portlet to the Selected Entries box, and click OK.
8. Repeat steps 5 to 7 for each column.
   You must add the IBM Cognos Viewer portlet for each report that you want to include in the column. For example, if the column on the left will contain a prompt and prompt controls, add two IBM Cognos Viewer portlets.
9. Click Next.
10. Complete the remaining steps in the wizard, if needed, and click Finish.
    For more information, see the steps in the section "Create a Page" (p. 333).
11. Go to the folder where you saved the new page, and open it.
    In the page columns, you can see the empty frames of the IBM Cognos Viewer portlets.
12. For any portlet in the page, click the edit button in the portlet toolbar.
13. In the portlet properties page, click Select an entry to select the report you want to display in the portlet.
    The Set the properties page appears.
15. For the Fragment Action property, specify the default portlet action when the portlet is invoked in a page.
    You can choose to show the run icon, run the report, or view the most recent saved output.
    **Tip:** For more information about the portlet properties, click the Help button in the portlet.
16. For the Prompt the user property, specify how to execute the prompts.
- When you select **Every time**, if the report contains optional or required prompts, the user is prompted to enter the prompt values before the report is run.

- When you select **Only when required parameter values are missing**, the user is prompted if the report contains required prompts and the values are missing. Otherwise the report runs successfully.

- When you select **Never and show the report only when required values are provided**, IBM Cognos Viewer attempts to run the report, but the page remains hidden until the required prompt values are provided.

- When you select **Based on the prompt settings of the report**, IBM Cognos Viewer uses the prompts specified in the report.

17. For the **Prompt values** property, select the **Communicate with other portlets** check box.

   This property enables communication between this portlet and other portlets in the page that have this property set up.

18. If you want to set up communication between only specific portlets in the page, type the channel name in the box provided.

   Only the portlets that share the same channel name can interact. By specifying the channel name, you have more control over the page. For example, you can link only the reports that have matching parameters.

   For more information about this property, click the **Help** button in the portlet.

19. If you selected the **Communicate with other portlets** check box, you can specify how global prompts are matched. Select either **Parameter name or data item** or **Parameter name only**.

   Typically, prompt values are matched using the parameter name only. However, for date and time prompts, such as From and To, using the parameter name may not work because the parameter names are using the same data item, for example, Order date. In these situations, use the **Parameter name or data item** option to get the correct results in your reports.

20. If you want to see the portlet toolbar in the page, for the **Show Toolbar** property, select the **Normal mode** and **Maximize mode** check boxes.

21. Click **OK** to close the **Set the properties** page, and click **OK** again to close the general properties page.

22. Repeat steps 12 to 20 for each portlet in the page.

**Enable Sharing of Drill-up and Drill-down Actions**

In pages, you can enable sharing of drill-up and drill-down actions, between reports that are based on a dimensionally modelled data source. A drill action on an item in one report causes the same action in an associated report if the report is on the same page and contains the same item. For example, when you drill down on the item 2005 in one report, all reports in the page drill down on the same item and the data for the year 2005 appears in all reports.
This functionality is enabled using the properties of the IBM® Cognos® Viewer portlet. By default, drill actions are disabled in a page.

This functionality is not supported for dashboards with multiple tabs. However, a single page with drill-up and drill-down actions enabled can be embedded into a dashboard as one of the tabs.

**Steps**
1. In IBM Cognos Connection, create a page that contains the IBM Cognos Viewer portlet for each report that you want to add to the page.
   
   For more detailed information, see the steps in "Create a Page" (p. 333).
2. Configure the IBM Cognos Viewer portlets to display the reports that you want to add to the page.
   
   In the portlet properties page, click **Select an entry** to select the report you want to display in the portlet.
3. In the **Set the properties** page of the IBM Cognos Viewer portlets, for the **Drill down and drill up** property, select the **Communicate with other portlets on the page** check box.
   
   This property enables communication between all portlets in the page using the default channel.
   
   For more information, click the **Help** button in the portlet.
4. If you want to set up communication between only specific portlets in the page, type the channel name in the box provided.
   
   Only the portlets that share the same channel name can interact. By specifying the channel name, you have more control over the page.

### Enable Sharing of Drill-through Actions

You can enable sharing of drill-through actions in a page. When a user drills from a source report to a target report, the target report appears in the specified area of the page.

For this feature to work, a page must have a report that contains an authored drill-through path. The page must also contain a placeholder IBM® Cognos® Viewer portlet that is set up to receive the drill-through requests.

Report-based drill-through works with both interactive reports and saved report outputs. However, it only works for a single drill-through request. If the drill-through contains multiple targets, it must be invoked from the context menu.

This functionality is enabled using the **Channel** property of the IBM Cognos Viewer portlet. You must specify the same channel name for the portlet that contains the source report and the portlet that receives the target report. By default, drill-through actions are disabled in a page.

This functionality is not supported for dashboards with multiple tabs. However, a single page with drill-through actions enabled can be embedded into a dashboard as one of the tabs.

**Steps**
1. In IBM Cognos Connection, create a page that contains the IBM Cognos Viewer portlets for the drill-through source report, and the target report.
For more detailed information, see the steps in the section “Create a Page” (p. 333).

2. Configure one of the IBM Cognos Viewer portlets to display the Report Studio source report that contains the drill-through path.

   In the portlet properties page, click **Select an entry** to select the report you want to display in the portlet.

3. Configure the other IBM Cognos Viewer portlet to display the drill-through target report.

   As the target report, we recommend using a report that contains prompts.

   In the portlet properties page, click **Select an entry** to select the report you want to display in the portlet.

4. For both portlets configured in step 2 and 3, in the **Set the properties** page, for the **Report-based drill-through** property, select the **Communicate with other portlets on the page** check box, and type the channel name in the box provided.

   The channel name is mandatory.

   For more information about this property, click the **Help** button in the portlet.

**IBM Cognos Business Insight**

IBM® Cognos® Business Insight is a new report consumption environment that provides an integrated Business Intelligence experience for business users. This Web-based tool allows you to use IBM Cognos content and external data sources to build sophisticated, interactive dashboards. For more information about IBM Cognos Business Insight, see the IBM Cognos Business Insight User Guide. Alternatively, you can create dashboards using pages and portlets in IBM Cognos Connection. For more information, see “Pages and Dashboards” (p. 331).

**Launching IBM Cognos Business Insight**

You can launch IBM® Cognos® Business Insight:

- From the IBM Cognos Business Intelligence Welcome page
- From IBM Cognos Connection by clicking the new dashboard button in the toolbar
- In a Web browser by entering the URL for IBM Cognos Business Insight using the following format: http://machine_name/ibmcognos/cgi-bin/cognos.cgi?b_action=icd or the URL that your administrator provides
- By clicking the hyperlinked name of an existing dashboard object from IBM Cognos Connection
- From the **Launch** menu in IBM Cognos Connection and IBM Cognos Administration
- From a dashboard listed in the search results in IBM Cognos Connection
Browser chrome

The browser chrome includes toolbars and menus on a Web browser. Whether the browser chrome is displayed depends on how you launch Business Insight. Business Insight opens in a chromeless browser if you launch from the IBM® Cognos® Business Intelligence Welcome page. If you launch directly in a browser by entering a URL, then your browser displays the chrome.
Chapter 20: Activities Management

You can manage IBM® Cognos® activities from My Activities and Schedules in IBM Cognos Connection.

You can view a list of your activities that are current, past, upcoming on a specific day, or scheduled. You can filter the list so that only the entries that you want appear. A bar chart shows you an overview of daily activities, by hour. You can use the chart to help choose the optimum date for rescheduling activities.

You can set run priority for entries (p. 358). You can also view the run history for entries (p. 359), specify how long to keep run histories (p. 361), and rerun failed entries (p. 362).

As an administrator, you can use IBM Cognos Administration to manage activities for all entries, not just your own. You can see who ran each entry and perform actions on entries as required. For example, you may want to cancel or suspend a user’s large job if it is holding up important entries in the queue. You can also override the priority of an entry instance or you can change it permanently for an entry itself (p. 358).

If you switch views, you must refresh to see current data. For example, if you switch from Past Activities to Upcoming Activities, you must refresh to see current data in the panes.

To access My Activities and Schedules in IBM Cognos Connection, you must have the required permissions for the Run activities and schedules capability.

Manage Current Activities

Current activities are entries that are currently being processed in IBM® Cognos® software. Each entry is listed by name and shows the request time, the status, and the priority for background activities. The bar chart shows the total number of entries, broken down by the number of pending, executing, waiting, and suspended entries. When the activity is processing, the process number is displayed.

You can sort the Request time, Status, and Priority columns. You can choose to view a list of background activities or interactive activities.

For entries that are being processed in the background, you can click Show Details to see more information. For each entry, this displays Last Execution Response Time and Path, for example, Public Folders > Samples > Cubes > Great Outdoor Sales (cube).

In IBM Cognos Administration, the user who ran the entry is also listed. You can sort by user.

You can suspend background entries and release them later when you want them to run. You can permanently cancel runs for entries that have one of the following statuses:

- pending in the queue
- executing
- suspended
• waiting for a process external to IBM Cognos software to complete

You can filter the entries to display only those you want. You can choose to display only those entries with a specific status or priority, or entries of a specific type or scope.

In IBM Cognos Administration, for interactive current entries, you can filter by status and the dispatcher where the activity is running. For background current entries, you can filter by status, priority, type, scope, user who ran the entry, user who owns the entry, and dispatcher.

When an entry is currently running, the dispatcher, process ID, and start time is displayed. Note that process ID and dispatcher of current background entries might be unavailable when the activity first appears. Refresh the page to see the updated process ID and dispatcher.

If you cancel an entry that contains other entries, such as a job or an agent, steps or tasks that have not yet been completed are canceled. However, steps or tasks that have already completed remain completed.

You can change the priority of entries (p. 358) and view the run history (p. 359).

Steps
1. If you are an administrator, from the Launch menu, click IBM Cognos Administration. On the Status tab, click Current Activities. In the Filter section, click Background activities or Interactive activities.

   If you are a user, in IBM® Cognos® Connection, in the upper-right corner, click the my area options button, click My Activities and Schedules, and in the left pane, click Current Activities.

2. In the Filter section, click the filtering items that you want to use.

   Tip: If you want to use advanced filtering options, click Advanced options. To reset all selections to the default settings, click Reset to default.

3. Click Apply.

   The list shows the entries that you selected.

4. To perform an action on an individual entry, click the arrow to the right of the entry and select the action. To perform an action on several entries, select the check box for the entries you want and then click one of the following buttons on the toolbar.

   Tip: To select all entries, click the check box in the upper left-hand corner, next to Name.

<table>
<thead>
<tr>
<th>Goal</th>
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<tbody>
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<tr>
<td>Cancel the run (Actions menu beside entry)</td>
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</table>
Manage Past Activities

Past activities are entries that have finished processing in IBM® Cognos® software.

Each entry is listed by name and shows the request time and the status. You can sort the Request time and Status columns. The bar chart shows the total number of entries, broken down by status. If an entry has failed, a button appears showing the severity of the error.

In IBM Cognos Administration, the user who ran the entry is also listed.

You can filter the entries to display only those you want. You can choose to view a list of activities that occurred over a specified length of time, such as the last four hours or the last day, or you can specify a date or time range. You can filter by status, type, and scope.

In IBM Cognos Administration, you can also filter by the user who ran the entry, the user who owns the entry, and the dispatcher where the activity ran.

You can view the run history (p. 359).

Steps

1. If you are an administrator, from the Launch menu, click IBM Cognos Administration. On the Status tab, click Past Activities.

   If you are a user, in IBM Cognos Connection, in the upper-right corner, click the my area options button, click My Activities and Schedules, and in the left pane, click Past Activities.

2. In the Filter section, click the filtering items that you want to use.

   Tip: If you want to use advanced filtering options, click Advanced options. To reset all selections to the default settings, click Reset to default.

3. If an error occurred when the entry ran, pause over the error button next to the status to see the severity of the error.

4. Click Apply.

   The list shows the entries that you selected.

5. To perform an action on an individual entry, click the arrow to the right of the entry and select the action. To perform an action on several entries, click one of the following buttons on the toolbar.

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<td>Run suspended entries (Actions menu beside entry)</td>
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<td>Set Priority (Actions menu beside entry)</td>
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Manage Upcoming Activities for a Specific Day

You can choose to view a list of all upcoming activities that are scheduled for a specific day. Each entry is listed by name and shows the request time and the priority. A bar chart shows the total number of scheduled and canceled entries for each hour of the day. The chart legend shows the total number of scheduled and canceled entries for the day.

You can sort the Request time, Status, and Priority columns. You can choose to view a list of background activities or interactive activities.

In IBM Cognos Administration, each entry also indicates the user who scheduled it. You can sort by user.

In IBM Cognos Administration, you can cancel scheduled runs of entries, reschedule entry runs that have been canceled, and set priorities. You can suspend entries indefinitely or suspend them until a specific date. (p. 355)

You can click Show Details to see more information. For each entry, this displays Last Execution Response Time and Path, for example, Public Folders > Samples > Cubes > Great Outdoor Sales (cube).

You can filter the entries to display only those you want. You can choose the date and time for which you want to view upcoming activities. You can filter by status, priority, type, and scope.

In IBM Cognos Administration, you can also filter by the user that scheduled the entry and the entry owner.

In IBM Cognos Administration, you can also filter to determine how many scheduled entries are currently suspended. For more information, see "Manage Suspended Activities" (p. 355)

You can also change the priority of an entry in the queue (p. 358).

Steps
1. If you are an administrator, from the Launch menu, click IBM Cognos Administration. On the Status tab, click Upcoming Activities.

   If you are a user, in IBM® Cognos® Connection, in the upper-right corner, click the my area options button, click My Activities and Schedules, and in the left pane, click Upcoming Activities.

2. In the Filter section, click the filtering items that you want to use.
Tip: If you want to use advanced filtering options, click Advanced options. To reset all selections to the default settings, click Reset to default.

3. Click Apply.

   After applying the filter,
   - The list shows the entries that you selected.
   - The filter status line shows the criteria used to generate the list.
   - The bar chart shows the scheduled and canceled entries by hour for the specified day.

   The list of entries, filter status line, and chart are updated whenever you redefine the filter and click Apply. The list of entries and filter status line do not change when you browse the chart to a different date.

4. To perform an action on an individual entry, click the arrow to the right of the entry and select the action. To perform an action on several entries, select the check box for the entries you want and then click one of the following buttons on the toolbar.

   Tip: To select all entries, click the check box in the upper left-hand corner, next to Name.

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**Manage Suspended Activities**

Suspending entries allows you to respond to system requirements. For example, if your system tends to be overloaded at certain times, you can reduce the workload and avoid bottlenecks during these peak times by suspending entries indefinitely or rescheduling them for a later time.
You can resume suspended entries even after the original execution time has lapsed. For example, if you schedule a report for 9:00 am, then suspend it, you can restart the report at 9:30 am.

The upcoming activities bar chart helps you determine when to reschedule entries. By browsing the upcoming dates in the chart, you can see the number of entries for a specific day. When you pause the pointer over a specific hour in the day, you can find the number of entries for that hour. Use this to find a date when demand is low and reschedule the entry to that date. The chart columns show the total number of scheduled and canceled entries for each hour of the day. The chart legend shows the total number of scheduled, canceled, and suspended entries for the day.

After suspending entries, you can view a list of entries that are suspended indefinitely.

### Steps to suspend entries

1. If you are an administrator, from the **Launch** menu, click **IBM Cognos Administration**. On the **Status** tab, click **Upcoming Activities**.

   If you are a user, in IBM® Cognos® Connection, in the upper-right corner, click the my area options button, click **My Activities and Schedules**, and in the left pane, click **Upcoming Activities**.

2. In the **Filter** section, for **Day** select a date, and for **Status** click **Scheduled**.

3. Click **Apply**.

   The list shows the scheduled entries for the selected date. Because entries are backlogged on that date, you want to suspend certain entries indefinitely and reschedule others. You want to browse the upcoming dates in the chart and choose another date for the suspended entries.

4. In the chart, click the next and previous icons to browse the upcoming dates. The chart shows both scheduled and canceled entries for each day by hour.

   **Important:** The list of entries that appear below the chart does not change to match the date you select in the chart. The list of entries matches your specified filter criteria and does not change until you specify and apply a new filter.

5. In the list of scheduled entries, select the check box next to the entries that you want to suspend and click the suspend button on the toolbar. In the **Suspend Activity** dialog box,
   - to suspend entries indefinitely, click **Indefinitely**.
   - to reschedule entries to another date, click **Until**, and select a date and time.

   Note that both the chart and the list of entries refresh, and the suspended entries no longer appear in the list of entries.

   **Tip:** To suspend an individual entry, click the arrow to the right of the entry and click **Suspend**.

### Steps to view a list of suspended entries for a specific day

1. In the **Filter** section for upcoming activities, under **Day** select a date, and under **Status** click **Suspended**.

2. Click **Apply**.
The list shows the suspended entries for that day.

You can run, cancel, or reschedule suspended entries. To perform an action on an individual entry, click the arrow to the right of the entry and select the action that you want. To perform an action on several entries, select the check box for the entries you want, and then click the appropriate button on the toolbar.

**Tip:** To select all entries, click the check box in the upper left-hand corner, next to **Name**.

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**Manage Scheduled Activities**

You can choose to view a list of scheduled entries. Each entry is listed by name, status, and priority. A bar chart shows you an overview of activities broken down by enabled and disabled schedules.

In **IBM Cognos Administration**, the date and time the schedule was modified and the user who scheduled it are also listed.

You can filter the entries to display only those you want. You can choose to display only the entries with a specific status or priority, or entries of a specific type or scope.

In **IBM Cognos Administration**, you can also filter by the user that scheduled the entry and by the entry owner.

You can set properties, run the schedule once, disable and enable scheduled entries, modify the schedule, remove the schedule, set the priority (p. 358), and view the run history (p. 359). Depending on the entry, you may also be able to perform other functions, such as view outputs or event lists.
For more information on schedules, see "Schedule Management" (p. 365).

**Steps**

1. **If you are an administrator**, from the **Launch menu**, click **IBM Cognos Administration**. On the **Status tab**, click **Schedules**.

   If you are a user, in IBM® Cognos® Connection, in the upper-right corner, click the my area options button, click **My Activities and Schedules**, and in the left pane, click **Schedules**.

2. **In the Filter section**, click the filtering items that you want to use.

   **Tip:** If you want to use advanced filtering options, click **Advanced options**. To reset all selections to the default settings, click **Reset to default**.

3. Click **Apply**.

   The list shows the entries that you selected.

4. To perform an action on an individual entry, click the arrow to the right of the entry and select the action. To perform an action on several entries, select the check box for the entries you want and then click one of the following buttons on the toolbar.

   **Tip:** To select all entries, click the check box in the upper left-hand corner, next to **Name**.

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<td>Disable the schedule (Actions menu beside entry)</td>
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<tr>
<td>Set Priority (Actions menu beside entry)</td>
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**Manage Entry Run Priority**

Scheduled entries can be assigned a priority from 1 to 5. For example, an entry with priority 1 runs before an entry with priority 5. If there is more than one entry with the same priority, the one that arrived in the queue first runs first. The default priority is 3.

Interactive entries always run immediately and priority cannot be changed once they are running.

You set the priority for an entry when you schedule it (p. 366). When an entry is in the current, upcoming, or scheduled queue, you can change the priority.
You may want to set a low priority for entries that take a long time to run so that other entries in
the queue are not delayed.

When you schedule a job (p. 368), you set the priority for the whole job, not for individual entries
within the job. You may want to set a low priority for a job with many entries so that other entries
in the queue are not delayed.

You schedule priority for the parent job. When the job runs, all the child entries inherit the priority
of the parent. When the job is in the queue and is not yet running, you can update the priority. You
cannot do this for the individual entries in the job. Changing the priority of the job changes
the priority of all its child entries. You can view the run history of a job (p. 359) while it is executing
and see which of its entries have completed, are executing, or are pending.

The priority of entries in the queue does not affect an entry that is already running. That entry
completes and then the queue priority is checked for the next entry to run.

Tip: In IBM Cognos Administration, you can change priority of entries based on filtered options.
For example, to change the priority of all entries run by Joan Jackson, select her from Run by under
Filter. Then you can select all of the displayed entries and change the priority for all of them at the
same time.

You must have the Run activities and schedules capability to manage entry run priority.

**Steps**

1. If you are an administrator, from the Launch menu, click IBM Cognos Administration. On the
   Status tab, click Current Activities, Upcoming Activities, or Schedules.
   If you are a user, in IBM® Cognos® Connection, in the upper-right corner, click the my area
   options button, click My Activities and Schedules, and in the left pane, click Current
   Activities, Upcoming Activities, or Schedules.

2. To change the priority for one entry, click the arrow to the right of the entry and select Set
   Priority. To change the priority of more than one entry, select the check box for the entries you
   want and then click the set priority button on the toolbar.
   Tip: To select all entries, click the check box in the upper left-hand corner, next to Name.

3. From the menu, click the priority that you want, and then click OK. If you selected one entry,
   the current priority of the entry appears in the Set the priority box. If you selected multiple
   entries, the Set the priority box contains (Multiple).

   The new priority appears in the Priority column next to the entries that you selected.

**View the Run History for Entries**

Sometimes entries are scheduled to run in the background, without anyone waiting to view them.
This includes scheduled entries, entries that are run once and saved, and interactive entries that are
saved or mailed. Interactive entries do not have run histories.
IBM® Cognos® software keeps history information each time an entry runs in the background. The run history for an entry includes information such as the request time, start time, completion time, and whether the report ran successfully.

You can look at a more detailed run history for the entry, which includes general, error, and warning messages related to the entry and any actions you can take. If there is any email associated with the entry, the status of the email delivery is included.

Some types of entries display additional information in the detailed run history page:

- For reports, a report output version (p. 438) is kept each time a report is run according to a schedule. You can view the report output version from the detailed run history.

- For jobs and agents, you can view a list of steps and see a detailed run history for each one. You can also see the parts of the job or agent that have not yet completed. If the entry is part of a parent entry, you can view the parent entry that initiated the run.

- For human tasks contained within an agent, you can view a list of steps and see a detailed run history for each one.

- For deployment export and import entries, you can view the public folders content in IBM Cognos Administration.

You may see the following message: *Only progress information is currently available. The information will be updated following the completion of the parent activity.*

This means that the deployment has completed, but the parent activity is still running. Once the final completion information is obtained from Content Manager, the message no longer appears.

- For data movement, you can view nodes that were executed as part of a data movement entry in IBM Cognos Administration. For more information about nodes, see the Data Manager User Guide.

- For index update tasks, you can view the IBM Cognos Connection folder or package that is indexed. You can view the scope of the index, either all entries or only entries that have changed. You can also view the type of data collected for indexed entries.

You can rerun failed entries (p. 362) from the detailed run history page. You can view a list of related runs that are part of the rerun series and see a detailed run history for each one. You can specify how many run history occurrences to keep or for how long to keep them (p. 361).

**Steps**

1. If you are an administrator, from the Launch menu, click IBM Cognos Administration. On the Status tab, click Schedules or Past Activities.

   If you are a user, in IBM Cognos Connection, in the upper-right corner, click the my area options button, click My Activities and Schedules, and in the left pane, click Schedules or Past Activities.

2. Next to the entry, click the arrow and then click View run history.
3. If you want, select the **Status** of entries that you want to view. A list of selected entries appears.

4. If you want to view the run history details, in the **Actions** column, click the view run history details button next to the entry you want. Then, if you want, from the **Severity** list, select the severity of the entries.

   Under job steps, the complete run history details is shown. If the job run history details level was set to **Limited**, no history details for the jobs steps are recorded.

5. If there is a report output version, in the **Actions** column, click the view outputs button for the entry you want. Then, from the **Versions** list, click the version you want. To delete a version, click **Manage versions** click the check box for the version, and then click **Delete**.

   **Note:** For data movement tasks, a log file may be associated with the entry. To view a log file associated with an entry, click the view the log file button.

6. If you want to view messages, click an item with a link in the **Messages** column.

   **Tip:** Messages are nested. There may be child messages within child messages. If a message is displayed as a link, you can continue to drill down through the child messages.

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**Specify How Long to Keep Run Histories**

You can keep run histories for a specific number of runs or for a specific number of days or months. For example, you can keep the run histories for the ten latest runs (occurrences) or for the past two days or six months. You can also choose to keep all run histories.

You must have read and write permissions for the entry and read or traverse permissions for the folder that contains the entry.

**Steps**

1. If you are an administrator, from the **Launch** menu, click **IBM Cognos Administration**. On the **Status** tab, click **Current Activities**, **Upcoming Activities**, or **Schedules**.

   If you are a user, in IBM® Cognos® Connection, in the upper-right corner, click the my area options button, click **My Activities and Schedules**, and in the left pane, click **Current Activities**, **Upcoming Activities**, or **Schedules**.

2. Click the set properties button next to the entry you want.

   The entry properties page appears.

   If you are an administrator, you can access additional actions. From the **Launch** menu, click **IBM Cognos Administration**. On the **Status** tab, click the type of entry you want. Next to the entry, click the arrow, and then click **Set properties**.

3. On the **General** tab, under **Run history** on the bottom-left side of your screen, choose the retention method and type the value:
To keep run histories for a specific number of occurrences, click **Number of occurrences** and type the number. To save an unlimited number of run histories, set this value to 0.

To keep run histories for a specific length of time, click **Duration** and click either **Days** or **Months**. Type the appropriate value in the box.

4. Click **OK**.

**Rerun a Failed Entry Task**

When an entry, such as a report, agent task, or job, runs according to a schedule or runs in the background and the entry fails, you can resubmit the failed entry with the same options that were specified in the original run.

For a job that contains steps that ran successfully and steps that did not run successfully, you are not required to rerun the entire job but only the individual job steps. If the job steps are run sequentially, you can rerun the job starting with the failed job step. If you wish, you can select which steps to rerun and skip the failed steps. However, the selected job steps run sequentially and if a step fails, then the steps that occur after the failed step are not run.

When you rerun a job step individually, a new run history that includes only the single job step is created for the parent job. For more information about run histories, see "View the Run History for Entries" (p. 359).

When rerunning an agent entry, associated tasks, such as an email that sends report output to a list of email recipients, are also rerun if they failed initially. If there are two associated tasks running in parallel and one task fails and one succeeds, rerunning the agent only reruns the failed task. However, if tasks are selected to run on failure, they are run again when the rerun fails.

Although the run history shows entries that ran successfully, you cannot rerun an entry that succeeded. The run options are not stored for these entries.

A rerun can fail when a task associated with a failed entry is deleted or updated.

You must have execute permissions to rerun a failed task.

**Steps**

1. If you are an administrator, from the **Launch** menu, click **IBM Cognos Administration**. On the **Status** tab, and click **Past Activities**.
   
   If you are a user, in IBM Cognos® Connection, in the upper-right corner, click the my area options button ❪, click **My Activities and Schedules**, and in the left pane, click **Past Activities**.

2. Next to the entry, click the arrow and then click **View run history details** ❪.

   The **View run history details** page shows run details, such as start time and completion time, run status, and error messages for a failed run. Other information that appears in the page depends on whether the entry is for a single task, a job with multiple steps, or an agent with tasks. For example, if it is a single task, the report options and the report outputs appear. If it is a job with multiple steps, a **Job** section appears with the run details of the job steps.
3. Under **Status**, next to **Failed**, click **Rerun**.

- If the rerun task is a single task, you receive a message asking you to confirm the rerun.

- If the rerun task is a job with multiple job steps or an agent with tasks, the **Rerun** page appears. Select the check box next to the entries you want to rerun.

**Tip:** You can also rerun failed entries by clicking **Rerun** in the **Outstanding to complete** section. To rerun a single job step, in the **Job** section, in the **Actions** column, click the view run history details button for the failed step.
Chapter 21: Schedule Management

You can schedule IBM® Cognos® entries to run at a time that is convenient for you. For example, you may want to run reports or agents during off hours when demands on the system are low. Or you may want to run them at a regular weekly or monthly interval.

To use this functionality, you must have the required permissions for the Scheduling secured function in IBM Cognos Administration.

In IBM Cognos Administration, you can control access to scheduling by day, week, month, year, and trigger using the appropriate scheduling capability. You can also restrict intraday scheduling using the Schedule by minute and Schedule by hour capabilities (p. 283).

If you have administrator privileges, you can also schedule tasks that:

- maintain your content store (p. 157)
- schedule query service caching tasks (p. 254)
- import or export entries from a deployment archive (p. 375)
- run jobs (p. 368)
- run metrics maintenance (p. 117)

You can schedule entries to run at specified intervals. You can schedule entries individually (p. 366) or use jobs to schedule multiple entries at once (p. 368). Jobs have their own schedules independent from report schedules.

You can schedule entries to run on the last day of each month (p. 368). You can also schedule entries to be triggered by occurrences, such as database refreshes or emails (p. 371).

You can run reports to produce outputs based on the options that you define, such as format, language, and accessibility.

Only one schedule can be associated with each entry. If you require multiple schedules for a report or agent entry, you can create report views (p. 428) or agent views (p. 463) and then create a schedule for each view.

After you create a schedule, the entry or job runs at the time and date specified. You can then view the scheduled entries and manage them. For more information, see "Activities Management" (p. 351).

Credentials for Scheduled Entries

When you open a scheduled entry, the credentials show the current schedule owner. If you are not already the schedule owner, you can name yourself the owner (p. 368).

Credentials for a schedule do not change automatically when you modify a schedule. You must explicitly change the credentials.

For information on data source credentials, see "Trusted Credentials" (p. 280).
Prompts in Scheduled Entries

If an entry that contains prompts is scheduled, you must save the prompt values or specify default values (p. 435) to ensure that values exist when the report runs according to the schedule.

In a job, you can specify prompt values for job steps. When an entry runs as part of a job, the prompt values saved in the job definition are used instead of the values saved with the entry. If no values are specified in the job definition, IBM Cognos software uses the values saved in the entry.

Priority for Scheduled Entries

When you schedule an entry, you may be able to select a run priority from 1 to 5. For example, an entry with priority 1 runs before an entry with priority 5. If there is more than one entry with a specific priority, the one that arrived in the queue first runs first. The default is 3. If you do not have permissions for entry priorities, the priority appears but you cannot change it.

When you schedule a job, you can set priority for the whole job only, not for individual entries within a job. However, you can change the priority of individual entries when they are pending in the queue.

The priority of entries in the queue does not affect an entry that is already running. The running entry completes and then the queue priority is checked for the next entry to run.

For more information, see "Manage Entry Run Priority" (p. 358).

Run Histories for Scheduled Entries

IBM Cognos software keeps history information each time a scheduled entry runs. You can use the run history for an entry to see the times at which it ran and whether it ran successfully. For more information, see "View the Run History for Entries" (p. 359).

Schedule an Entry

You schedule an entry to run it at a later time or at a recurring date and time. For example, you can schedule a report or an agent.

If you no longer need a schedule, you can delete it. You can also disable it without losing any of the scheduling details. You can then enable the schedule at a later time. For more information, see "Activities Management" (p. 351).

You can schedule an entry to run on the last day of each month (p. 368) or as part of a job (p. 368). You can schedule reports based on trigger occurrences (p. 371).

To use this functionality, you must have the required permissions for the Scheduling secured function in IBM Cognos Administration.

To schedule an entry, you need the permissions that are required to run the entry. For example, to schedule a report or report view, you must have read, write, execute, and traverse permissions for it. To schedule a child report view, you must have execute permissions on the parent report. You also require the following access permissions for any data sources used by the report:

- dataSource - Execute and Traverse
- dataSourceConnection - Execute and Traverse
With only Execute access, you are prompted to log on to the database.

- dataSourceSignon - Execute

To set priority for an entry, you must have the required permissions for the Scheduling priority secured feature. See "Secured Functions and Features" (p. 283).

If you want, you can change the current schedule owner by changing the credentials for a scheduled entry. For more information, see "Example - Change the Credentials for a Schedule" (p. 368).

Steps
1. In IBM® Cognos® Connection, click the schedule button for the entry you want to schedule.
2. Set the priority for the scheduled entry.
   Select a lower number for higher priority. The default is 3.
3. Under Frequency, select how often you want the schedule to run.
   The Frequency section is dynamic and changes with your selection. Wait until the page is updated before selecting the frequency.
   If you specify intraday scheduling in the Frequency section, you can also select a daily frequency for your scheduled entries. Proceed to step 4.
   If you did not specify intraday scheduling, proceed to step 5.
4. Under Daily frequency, select how often you want the schedule to run each day. You can choose to schedule an entry either by the minute or by the hour.
   When you specify a daily frequency, you also have the option to select a time period when you want the entry to run during the day, for example, between 9:00 am and 5:00 pm. This way, you can restrict the running of entries to periods during the day when updates are required.
5. Under Start, select the date when you want the schedule to start.
6. Under End, select when you want the schedule to end.
   Tip: If you want to create the schedule but not apply it right away, select the Disable the schedule check box. To later enable the schedule, clear the check box.
7. If additional options are available on the Schedule page, specify what you want.
   For example, for reports, you can select formats, languages, delivery method (including how to save report output files), and prompt values.
8. Click OK.

A schedule is created and the report runs at the next scheduled time.
Example - Schedule an Entry on the Last Day of the Month

You want to schedule a financial report to run automatically on the last day of each month for the next year.

Steps
1. In IBM® Cognos® Connection, click the schedule button for the entry you want to schedule.
2. Under Frequency, select By Month, and then select Day.
3. Enter Day 31 of every 1 month(s).
   Entering 31 as the day ensures that the entry runs on the last day of the month, regardless of how many days are in the month.
4. Under Start, select the last day of the current month as the day you want the monthly schedule to start.
5. Under End, click End by and select the last day of the same month next year as the day you want the monthly schedule to end.
6. Click OK.

Example - Change the Credentials for a Schedule

You want to change the credentials for a schedule to identify you as the current schedule owner.

Steps
1. Log on to IBM® Cognos® Connection using your user ID and password.
2. In the Cognos Connection portal, click the schedule button for the entry for which you want to change the credentials.
   Under Credentials, the name of the current schedule owner appears.
3. Click the Use my credentials link to make you the schedule owner. Save your changes.
   The next time that you open the schedule, your credentials identify you as the schedule owner of the schedule, for example, Sam Carter (scarter).
   Note: If you are logged on as an anonymous user, information about the current schedule owner is not available.

Use Jobs to Schedule Multiple Entries

You can set the same schedule for multiple entries by creating a job. A job identifies a collection of reports, report views, and other jobs that are scheduled together and share the same schedule settings. When a scheduled job runs, all the entries in the job run.

Tip: If a job item is unavailable, you can select a different link by clicking Link to an entry.
Jobs contain steps, which are references to individual reports, jobs, and report views. You can specify whether to run the steps all at once or in sequence.

- When steps are run all at once, all the steps are submitted at the same time. The job is successful when all the steps run successfully. If a step fails, the other steps in the job are unaffected and still run, but the job has a **Failed** status.

- When the steps are run in sequence, you can specify the order in which the steps run. A step is submitted only after the preceding step runs successfully. You can choose to have the job stop or have the other steps continue if a step fails.

You can schedule a job to run at a specific time, on a recurring basis, or based on a trigger, such as a database refresh or an email (p. 371).

The individual reports, jobs, and report views in steps can also have individual schedules. Run options for individual step entries override run options set for the job. You can set run options for the job that serve as the default for step entries that do not have their own run options.

You can run reports to produce outputs based on the options that you define, such as format, language, and accessibility.

You can also include content store maintenance and deployment imports and exports in a job. For more information, see "Maintain the Content Store" (p. 157) and "Deployment" (p. 375).

**Cached Prompt Data**

For reports that prompt for values each time that the report is run, you may want to use cached prompt data. Reports run faster because data is retrieved from the cache rather than from the database.

The cache is used only when a requested language is the same as one in the cache. For example, the cache contains data for English, English (United States), and German (Germany). When prompted, you request English (United States) for the report. There is an exact match and the cached data is used. The cached data is also used when there is a partial match. If you request English (Canada), the cached data for English is used. If you request German (Austria), there is no match and the cached data is not used.

You can use caches for reports or report views. For report views, the report view cache is used first. If no report view cache is found, the cache for the associated report is used.

You must use a job to create or refresh a cache. You can refresh the cache automatically by scheduling the job to run periodically. If you want to use live data the next time that you run the report, you can clear the cache.

**Permissions**

Permissions required to include an entry as part of a job vary depending on the type of entry. The permissions are the same as for scheduling an entry (p. 366).

**Steps**

1. In IBM® Cognos® Connection, click the new job button 📝.
2. Type a name and, if you want, a description and screen tip for the job, select the location in which to save the job, and then click Next.

The Select the steps page appears.

3. Click Add.

4. Select the check boxes for the entries you want to add and click the right arrow button \( \rightarrow \). When the entries you want appear in the Selected entries box, click OK.

You can also click Search, and in the Search string box, type the phrase you want to search for. For search options, click Edit. When you find the entry you want, click the right arrow button to list the entry in the Selected entries box and click OK.

To remove entries from the Selected entries list, select them and click Remove. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click Show users in the list.

5. If you want to change run options for an individual entry when it runs as part of the job, click the set icon \( \bigtriangledown \), click Produce report outputs, select the Override the default values box, make the changes, and click OK.

To send the report to mobile recipients, select Send the report to mobile recipients and click Select the recipients.

Tip: To return to defaults for individual entries, click the delete button.

6. If you want to refresh the cache for a report when the job runs, click the edit icon next to the report, and then from the Run the report to menu, click Refresh the report cache. Click Override the default values. To accept the displayed language, click OK. To change the language, click Select the languages, select the languages you want, and then click OK. Click OK to accept the displayed languages.

Tip: To clear the cache, click the delete button.

7. If you want to create or refresh the cache, click the set icon, click Refresh the report cache, select the Override the default values box, add languages, if you want, and click OK.

Tip: To clear the cache, click More next to the report whose cache you want to clear, click Clear the cache, and click OK twice.

8. Under Submission of steps, select whether to submit the steps All at once or In sequence.

If you select In sequence, the steps are executed in the order they appear in the Steps list. If you want the job to continue to run even if one of the steps fails, select the Continue on error check box.

Tip: To change the order, click Modify the sequence, make the changes, and click OK.

9. If you want to specify default run options at the job level, under Defaults for all steps, click Set.

Note that the run options that are available for a job with multiple entries may not apply to every entry. If the option does not apply to an entry, it is ignored.
10. If you want to override defaults, select the category and select the Override the default values check box and select the default options you want for the job and click OK.

11. To save the complete history details for the job steps when the run activity completes successfully, click All from the Run history details level list. Click Limited to save limited run history details for the job. If the job run fails, the complete history details are saved.

   The default is All.

12. Select the action you want:

   - To run now or later, click Run now or at a later time and click Finish. Specify the time and date for the run. Click Find only or Find and fix, then click Run. Review the run time and click OK.

   - To schedule at a recurring time, click Schedule to run at a recurring time and click Finish. Then, select frequency and start and end dates. Click Find only or Find and fix, then click OK.

     Tip: To temporarily disable the schedule, select the Disable the schedule check box. To view the schedule status, see "Activities Management" (p. 351).

   - To save without scheduling or running, click Save only and click Finish.

A job is created and will run at the next scheduled time.

**Trigger-based Entry Scheduling**

You can schedule entries based on an occurrence, such as a database refresh or an email. The occurrence acts as a trigger, causing the entry to run. For example, you may want to run a report every time a database is refreshed.

Trigger-based scheduling may be used to run entries automatically based on an occurrence. It may also be used to limit when users can run entries. For example, in a warehouse environment where the database is refreshed only once a week, there is no need to run reports more frequently.

You can choose to schedule the report based on the database refresh so that the report runs only once a week.

Trigger-based scheduling applies only to the entry, not to any entry view associated with it. For example, if trigger-based scheduling applies to a report, it does not apply to report views associated with the report. However, you can schedule a report view using a trigger.

In IBM Cognos Administration, you can control access to scheduling by trigger using the Schedule by trigger capability. (p. 283)

**Setting Up Trigger-based Scheduling**

To schedule an entry based on an occurrence and confirm trigger-based scheduling, you must have read, write, execute, and traverse permissions. You also require the following access permissions for all data sources used by the entry.
### Schedule an Entry Based on an Occurrence

As part of setting up trigger-based scheduling, you must schedule an entry based on an occurrence. Trigger-based schedule is activated if the user firing the trigger has:

- read and traverse permissions for the schedule entry
- traverse permissions for all ancestors of the schedule entry
- access to IBM® Cognos® Administration

#### Steps

1. In IBM Cognos Connection, click the schedule button next to the entry you want to schedule.

2. Under Frequency, click the By Trigger tab.

3. In Trigger name, type the name of the trigger occurrence.

    **Note:** The trigger name that you enter may be provided to you by your administrator or developer. If not, you must inform your administrator or developer of the trigger name that you use.
4. The default start date is "now", and the default end date is "forever", which means the trigger schedule runs when the trigger is fired (either from trigger.bat or from an Software Development Kit application). If you enter a valid start and end date, the trigger schedule can only be fired between those dates.

5. Click **OK**.
Chapter 22: Deployment

Deployment involves moving applications from one installation to another. In IBM® Cognos® software, you deploy packages, top-level folders, or the entire content store from a source environment to a target environment.

Typically, deployment transfers entries, such as packages, folders, reports, and report views, from a development environment to a test environment and then to a production environment. You can also deploy between operating systems.

It is important to plan your deployment to ensure that you deploy the correct information and that you do not disturb the target environment. It is also important to consider security in the source and target environments.

You can upgrade entries from previous releases, by running the deployment import wizard. For more information, "Import to a Target Environment" (p. 393).

You can use an operating system or scripting mechanism to perform deployment from a command line. You can use the IBM Cognos software development kit to automate the deployment process to

- create, update, and delete a deployment specification
- load a deployment specification from a deployment archive
- submit deployment export and import requests
- access deployment history

Deployment of human task service is a separate task. For more information, see "Deploy Human Task and Annotation Services" (p. 397).

For more information, see the IBM Cognos Software Development Kit Developer Guide.

Deployment Specifications

A deployment specification is an entry in the content store that defines the

- entries to be deployed
- deployment preferences
- name of the deployment archive

There are two types of deployment specifications. Export specifications are created in the source environment and control the creation of deployment archives. Import specifications are created in the target environment and control the import of entries from the deployment archive.

You can view the deployment history for each deployment specification to see the date, time, and details of the import or export.
Deployment Archives

A deployment archive is a compressed file that contains the actual entries that are deployed. A deployment archive is created when you export from the source environment. If you export to an existing deployment archive, the contents of the archive are overwritten.

You move the deployment archive from the source environment to the target environment. Then you import from the deployment archive into the target environment.

To move a deployment archive, you need access to the installation directories on the computer where IBM Cognos software is installed. This location is set in the configuration tool. The default location is `c10_location/deployment`. For information about changing the location, see the IBM Cognos Installation and Configuration Guide.

Deployment Planning

When you deploy, you must consider how to handle security and which deployment method to select:

- the entire content store (p. 377)
- selected packages, folders, and directory contents (p. 379)

To avoid breaking references in the target environment, you must deploy all entries that refer to entries in another package or folder. Entries to consider include:

- jobs, shortcuts, and report views
- memberships and entry permissions

Security and Deployment

Before you deploy, you must consider access permissions (p. 376), security of deployment archives (p. 377), and references to namespaces other than Cognos (p. 377).

Access Permissions

The entries that you deploy may have security applied to them, such as access permissions (p. 275) that specify which users and groups can access them. If you deploy the entire content store (p. 377), all access permissions are deployed. If you deploy selected packages, public folders, and directory content, you can choose whether to deploy access permissions (p. 379).

Consider the following:

- Referenced users and groups
  
  If you deploy access permissions to a target environment, the referenced users and groups must exist in the target environment.

- Access permissions rules
  
  For access permissions to work after entries are deployed, the source environment and the target environment must use the same authentication provider with the same configuration. Otherwise, the permissions may not work after deployment.
Use the Cognos® namespace to ensure that the permissions from the source environment work in the target environment. For example, in the source environment, create Cognos groups with the group Everyone as a member, and then set access permissions for the groups. After deployment, in the target environment, map the Cognos groups to the appropriate users and groups from the authentication provider, and then remove Everyone from the membership of the group.

For information about deploying Cognos groups and roles, see "Including Cognos Groups and Roles" (p. 382).

**Securing Deployment Archives**

A deployment archive (p. 376) can contain sensitive information, such as signons and confidential account or credit card numbers in report outputs. When you export, you can encrypt the deployment archive by setting a password. Later, when you import, you must type the encryption password. The password must contain eight or more characters.

You must encrypt the deployment archive when it contains data source signons (p. 234) or when you deploy the entire content store (p. 377).

The encryption settings are configured in the configuration tool. For more information, see the IBM® Cognos Installation and Configuration Guide.

**Including References to Other Namespaces**

Some entries, such as groups, roles, distribution lists, contacts, data source signons, and some report properties, such as email recipients and report contacts, can refer to entities in namespaces other than the Cognos namespace. When you deploy public folders and directory content, you can deploy these entries with or without references to these namespaces.

Consider the following:

- **Included references**
  
  If you include the references to other namespaces, the system verifies that each of the referenced entities exists in the applicable namespaces. Therefore, you must ensure that you are logged on to each namespace, and that you have the necessary permissions to access the required entities in the namespaces. If you cannot access the namespaces, you will encounter errors during the deployment.

- **No included references**
  
  If you do not include the references to other namespaces, the referenced entities are removed from the membership list of groups, roles, distribution lists, and data source signons and other properties where they may exist.

When you deploy the entire content store (p. 377), the references to all namespaces are included.

**Deploying the Entire Content Store**

Deploying the entire content store ensures that all packages, folders, and directory content are copied to a new location. For example, if you are changing the computer where IBM® Cognos®
software is installed, you can move the entire content store from the old environment to the new environment and keep all the reports and other entries created by administrators and users.

Other reasons to deploy the entire content store include:

- moving a whole application into a new, empty environment, such as a new computer, from a development environment
- refreshing a whole application into an existing environment, such as an existing computer, from a development environment
- moving an application from an existing environment that uses a different underlying technology, such as a different database type for the content store, or a different operating system
- upgrading the contents of the content store

When you move a content store from one environment to another, you must use the same namespaces for policies, users, roles, and groups to work correctly.

When you deploy the entire content store, if there are no conflicts, the contents of the target content store are removed and replaced by the contents of the source content store, except for configuration data. The imported entries keep the owners from the source content store. For information about conflict resolution, see "Conflict Resolution Rules" (p. 385).

After the deployment is complete, some links for packages associated with reports may not work. You may need to relink packages to reports. For information about linking packages to reports, see the documentation for the studios.

**Tip:** Instead of deploying the entire content store, you can deploy only specific public folders and directory content (p. 379).

### Content Store

The content store includes all entries in the portal, such as:

- public folders
- packages
- reports
- data sources
- distribution lists and contacts
- printers
- the Cognos namespace
- deployment specifications

It does not include the deployment history (p. 379). Configuration objects (p. 379) such as dispatchers, are included in exports by default, but excluded in imports.

If you want to deploy users’ personal folders and personal pages, you must choose to include the user account information when you export and import.
Deployment History

When you export an entire content store, the export and import deployment specifications that exist in the source content store are exported. Their deployment histories are not exported.

Later, when you import the entire content store, you also import the export and import deployment specifications. You do not see entries in the View the deployment history page for the imported specifications.

If any of the imported deployment specifications are used for an encrypted deployment archive, you can delete them. To import an entire content store the first time, you must create a new import deployment specification.

By default, the information saved in deployment records includes the progress and summary reports only. If you want to include more detailed information, change the recording level using the advanced setting CM.DEPLOYMENTDETAILENTIRECONTENT. Use the steps in "Set Advanced Content Manager Parameters" (p. 154). More recording levels are available in partial deployment (p. 383).

Configuration Information

When you import an entire content store, configuration data is included in the export, but excluded from the import by default. We recommend that you do not change this setting. However, if you must import configuration settings, you can change the default in the Advanced Settings (p. 395).

If you import the configuration data, especially in a distributed environment with multiple content managers, the current information about the content manager status may be overwritten by the imported data.

Tip: If you import the configuration, restart the service in the target environment to update status information properly.

For information about including configuration data in the import, see "Include Configuration Objects in Import of Entire Content Store " (p. 395).

For information about how specific objects in the content store are imported, see "Conflict Resolution Rules For Deploying the Entire Content Store" (p. 386).

Deploying Selected Public Folders and Directory Content

You can choose to do a partial deployment, deploying only selected public folders and directory content, rather than the entire content store (p. 377).

You can deploy any packages and folders in Public Folders. Browse the Public Folders hierarchy and select a package or folder. This will deploy its entire contents. You cannot select specific entries in the packages or folders. During export, the parent packages and folders are not exported and Content Manager does not create placeholder locations for them in the target environment. During both export and import, you can specify a new target location in the Content Manager hierarchy for each deployed package and folder.

The directory content that you can deploy includes the Cognos® namespace, distribution lists and contacts, and data sources and their connections and signons.
When you deploy public folders and directory content, you cannot include objects from the configuration, capability, exportDeploymentFolder, and importDeploymentFolder areas of the content store (p. 381). For more information, see "Including References to Other Namespaces" (p. 377).

For information about how specific objects in the content store are imported, see "Deployment Conflict Resolution Rules When Importing and Exporting" (p. 385).

After the deployment is complete, some links for packages associated with reports may not work, even if you included packages and their reports in the deployment. You may need to relink packages to reports. For information about linking packages to reports, see the documentation for the studios.

Tip: If you want to deploy specific entries, you can create a folder at the root level of Public Folders, copy the specific entries to that folder, and select this folder when you deploy.

Deploying Packages
A package is an entry that contains published reports and metadata. Packages are created in Framework Manager, the modeling tool, and then published to IBM® Cognos Connection. Packages are stored in the content store and appear as entries in IBM Cognos Connection.

During a partial deployment (p. 379), you can deploy one or more packages at a time. A package can reference objects that are outside the package, such as security objects, data sources, and distribution lists. However, referenced objects are not deployed with the package.

While you are importing, you can deselect packages in the deployment archive that you do not want to import.

Renaming Packages and Folders
During a partial deployment (p. 379), you can rename packages and folders so that they have a new name in the target environment. This is useful if you do not want to overwrite a package or folder that has the same name in the target environment. The original package or folder remains intact, and the deployed one is renamed.

You might also want to add multilingual names for packages and folders so that users can see names suitable for their locale. A locale specifies linguistic information and cultural conventions for character type, collation, format of date and time, currency unit, and messages.

Before you rename packages, you consider the information about renaming entries and what happens to associated references to other entries in "Organizing Entries" (p. 315).

Disabling Packages and Folders
During a partial deployment (p. 379), you can disable the packages and folders in the target environment so that users cannot access them. Disabling packages and folders is useful if you want to test them in the target environment before you make them available to users.

You can disable packages and folders at the time of export or import.

When you disable a package or folder, the entries it contains are not accessible in the target environment after the import. Users cannot run, view, or edit entries. Only users who have write privileges to the disabled entries can access them. For more information, see "Disable an Entry" (p. 317).
Partial Deployment Options

During a partial deployment (p. 379), when you export and import, you can choose the following options. If you do not select an option when you export, it is not available during import.

Including Report Output Versions

You can choose to include the report output versions (p. 438) in your deployment. If you select this option, you can choose what to do if there is a conflict. You can replace the existing report output versions in the target environment with those from the deployment archive or keep target environment versions.

Including Run History

The run history of a report shows statistics about the status and times when the report ran (p. 359) in your deployment. You can choose whether to include the run history of reports.

If you select this option, you can choose what to do if there is a conflict. You can replace the existing report run histories in the target environment with those from the deployment archive or keep target environment histories.

Including Schedules

You can choose whether to include schedules (p. 365) in your deployment. If you do not deploy schedules, they are removed from the jobs and reports in the target environment.

If you select this option, you can choose what to do if there is a conflict. You can replace the existing schedules in the target environment with those from the deployment archive or keep target environment schedules.

When you choose to import schedules in the deployment, you can change the imported schedule credentials to your credentials. The credential of a schedule is the credential used to run the report in the schedule. This credential determines the permissions on the report as well as the capabilities that apply to the report execution. If the report does not have the Run as the owner property set to true, then the credential is also used to access the data source, data connection and signon objects. Changing the credential may affect the operation in the following ways:

- no impact
- report produces different data as a result of selecting a different connection or signon in the data source
- report fails to run because the user does not have the proper capabilities or permissions

To change the imported schedule credentials to the credentials of the person doing the import, do the following:

- Add the advanced setting CM.DeploymentUpdateScheduleCredential and set the value to True. See procedure, "Set Advanced Content Manager Parameters" (p. 154).
- When you import to the target environment using the New Import Wizard (p. 393), make sure to click Include schedules and select Replace Existing Entries under Conflict Resolution. Next, under Entry ownership, select The user performing the import.
Including Cognos Groups and Roles
You can choose whether to include Cognos groups and roles (p. 269) in your deployment.

When you deploy the Cognos groups and roles, you must deploy them all. However, the following built-in groups are not deployed:

- Anonymous
- All Authenticated Users
- Everyone

When you deploy groups, members of the System Administrators group are merged with the members of this group already in the target environment. This ensures that the target environment is accessible in case the deployed members are not valid. However, you may need to modify the membership list when the deployment is complete.

If you select this option, you can choose what to do if there is a conflict. You can replace groups and roles in the target environment with those from the deployment archive or to keep target environment groups and roles.

Including Distribution Lists and Contacts
You can choose whether to include distribution lists and contacts in your deployment. If you choose to deploy distribution lists and contacts, you must deploy them all.

If you select this option, you can choose what to do if there is a conflict. You can specify whether to replace the distribution lists and contacts in the target environment with those from the deployment archive or to keep the target distribution lists and contacts.

Including Data Sources
You can choose to include data sources and their associated connections (p. 197) in your deployment. If you choose to deploy data sources, you must deploy them all.

You can deploy the data sources with or without their signons. If you do not deploy the signons, you must configure the data sources accordingly in the target environment. If you deploy the signons, you must encrypt the deployment archive.

If you select this option, you can choose what to do if there is a conflict. You can specify whether to replace the data sources in the target environment with those from the deployment archive or to keep the target environment data sources.

If you replace the target data sources, and the data source connections in the source and target environments do not match, you can lose database connections. In this case, you must manually reconnect to the data sources in the target environment after the import, using the database client software.

Including Access Permissions
You can choose to include access permissions (p. 376) in your deployment.

If you select this option, you can choose what to do if there is a conflict. You can specify whether to replace the access permissions in the target environment with those from the deployment archive or to keep the target environment access permissions.
**Recording Deployment Details**

You can specify what type of information is saved in the deployment records by setting the **Recording Level** for the deployment. The amount of information kept in the records has an impact on performance.

You can set the following recording levels:

- **Basic**
  - Saves the deployment progress and summary information. This is the default option.

- **Minimal**
  - Saves only the deployment summary information. This option requires the least memory.

- **Trace**
  - Saves all deployment details. This option requires the most memory.

For information about recording deployment details when an entire content store is deployed, see "Deployment History" (p. 379).

**Ownership Considerations**

You can change the ownership of imported entries to the user performing the import. You can select this option at the time of export or import. If you use the owners from the source, the owners are imported along with the entries. You can apply the ownership options to new entries or to new and existing entries.

**Advanced Deployment Settings**

You can use the following advanced settings to specify how deployment works in your environment:

- specify if report output is part of deployment (p. 383)
- specify if configuration objects and children are part of deployment (p. 384)

**Specify if Report Output is Part of Deployment**

You can specify if report output is part of deployments. There are two advanced settings that you can use:

- **CM.DEPLOYMENTSKIPALLREPORTOUTPUT** to include or skip all report output from My Folders and Public Folders.
- **CM.DEPLOYMENTSKIPUSERREPORTOUTPUT** to include or skip user report output from My Folders only.

By default, these are set to True (include). To change the default to exclude, set them to False. You must have the required permissions to access **IBM Cognos Administration** (p. 283).

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.

3. On the **Status** tab, click **System**.

4. Click the arrow for the Actions menu next to **Systems** and click **Set properties**.

5. Click the **Settings** tab.

6. Click **Edit** next to **Advanced Settings**.

7. Select **Override the settings acquired from the parent entry**.

8. In the **Parameter** column, type CM.DEPLOYMENTSKIPALLREPORTOUTPUT or CM.DEPLOYMENTSKIPUSERREPORTOUTPUT.

9. In the **Value** column, type the setting that you want to use.

10. Click **OK**.

11. On the **Set properties** page, click **OK**.

**Specify if Configuration Objects and Children are Part of Deployment**

You can specify if configuration objects and their children are included as part of deployment. By default, they are not included.

You can change the default setting using the advanced setting CM.DEPLOYMENTINCLUDECONFIGURATION. By default, it is set to False (do not include configuration objects in deployments). To change the default to include configuration objects and their children, set it to True.

You must have the required permissions to access **IBM Cognos Administration** (p. 283).

**Steps**

1. Start IBM® Cognos® Connection.

2. In the upper-right corner, click **Launch, IBM Cognos Administration**.

3. On the **Status** tab, click **System**.

4. Click the arrow for the Actions menu next to **Systems** and click **Set properties**.

5. Click the **Settings** tab.

6. Click **Edit** next to **Advanced Settings**.

7. Select **Override the settings acquired from the parent entry**.

8. In the **Parameter** column, type CM.DEPLOYMENTINCLUDECONFIGURATION.

9. In the **Value** column, type the setting that you want to use.

10. Click **OK**.

11. On the **Set properties** page, click **OK**.
Deployment Conflict Resolution Rules When Importing and Exporting

This section explains conflict resolution rules that apply when you are importing or exporting into a target environment. The rules are different depending on whether you deploy the entire content store or selected public folders and directory content. The method you choose determines which objects are included in the import and how conflicts are resolved when an object already exists in the target environment.

Objects in the content store represent entries in the portal and the properties of those entries. For example, the object reportView represents a report view entry in the portal and the object runHistory represents the run history of an entry. For more information about objects, see the IBM Cognos Software Development Kit Developer Guide.

Objects in Public Folders inherit deployment rules by default, depending on whether you are deploying the entire content store (p. 377), or only selected Public Folders and directory content (p. 379).

Although conflicts can occur only during importing, not during exporting, the same rules are used to process objects in the archive during export. During an export operation, if the rule for an object is KEEP, it is not included in the archive. For any other setting, it is included in the archive.

Conflict Resolution Rules

A conflict can occur when the entry that you want to import from the deployment archive already exists in the target content store. When this happens, one of the following conflict resolution rules is used, depending on the entry and the advanced settings that you have used. See "Advanced Deployment Settings" (p. 383).

<table>
<thead>
<tr>
<th>Rule</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace</td>
<td>Replaces the entry and its children. The entry and all its children are removed from the source content store. The new entry and all its children are added to the source content store.</td>
</tr>
<tr>
<td>Keep</td>
<td>Keeps the entry. The properties of the entry and all its children are not updated. Existing children of the entry are kept. New children may be added.</td>
</tr>
<tr>
<td>Update</td>
<td>Updates the entry. The properties of the entry and its children are updated. Existing children of the entry are kept. New children may be added.</td>
</tr>
<tr>
<td>Merge</td>
<td>Merges the properties of the entries with existing entries.</td>
</tr>
</tbody>
</table>

If an entry has no children, replace and update have the same end result.
**Content**

All the objects in the content area of the content store are included and replaced when you import the entire content store.

**Directory**

If you include data sources, connections, and signons, and you keep existing entries, the associated objects from the archive are merged with the objects in the target environment. Even though the objects are merged, the retention rules still apply. A full merge may not occur because some objects may be discarded.

Note that when you want to include Cognos® groups and roles, and distribution lists and contacts, these items must be stored in a folder within the namespace in order to be deployed.

The members of distribution lists, groups, and roles in the archive are not merged with the contents in the target environment. Instead, the set of distribution lists, groups, and roles are merged with the set already existing in the target environment. However, the members of the System Administrators group are always merged when this group is imported. For more information, see "Including Cognos Groups and Roles" (p. 382).

**Conflict Resolution Rules For Deploying the Entire Content Store**

The default conflict resolution rule for deploying the entire content store is replace.

Exceptions to the default conflict resolution rule are listed in the following table:

<table>
<thead>
<tr>
<th>Object name</th>
<th>Conflict Resolution Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTPUT, GRAPHIC, PAGE</td>
<td>Keep if</td>
</tr>
<tr>
<td></td>
<td>the advanced setting CM.DEPLOYMENTSKIPALLREPORTOUTPUT is set to True</td>
</tr>
<tr>
<td></td>
<td>the object is under user accounts and the advanced setting CM.DEPLOYMENTSKIPUSERREPORTOUTPUT is set to True</td>
</tr>
<tr>
<td></td>
<td>For more information on the settings, see &quot;Specify if Report Output is Part of Deployment&quot; (p. 383).</td>
</tr>
<tr>
<td>ACCOUNT</td>
<td>Update if Include user account information is selected during deployment, keep if not.</td>
</tr>
<tr>
<td></td>
<td>For more information about including user account information, see &quot;Deploying the Entire Content Store&quot; (p. 377).</td>
</tr>
<tr>
<td>SESSION, CACHEOUTPUT, REPORTCACHE, REPORTMETADATA, DATACACHE, DEPLOYMENTDETAIL</td>
<td>Keep</td>
</tr>
</tbody>
</table>
### Object name | Conflict Resolution Rule
--- | ---
FOLDER, MRUFOLDER, SUBSCRIPTIONFOLDER | Replace if "directly" under Cognos namespace user account object ('My Folders' folder) or "directly" under 3rd party namespace user account object ('My Folders' folder).
CAPABILITY, SECUREDFUNCTION, CONFIGURATION, CONFIGURATIONFOLDER, DISPATCHER, DIRECTORY, NAMESPACE, NAMESPACEFOLDER, PORTAL, PORTALPACKAGE, PORTALSKINFOLDER, PORTLETFOLDER, PORTLETPRODUCER, PORTLET, PAGELETFOLDER, PAGELET, PAGELETINSTANCE, PORTLETINSTANCE | Update
ROLE, GROUP | Replace (but preserve object ID).
CONTENT, ADMINFOLDER, TRANSIENTSTATEFOLDER | Replace.
HISTORY, HISTORYDETAIL, HISTORYREQUEST ARGUMENTS | Keep if under ADMINFOLDER object.

## Conflict Resolution Rules For Partial Deployment

When you deploy public folders and directory content rather than the entire content store, you select the content that you want to deploy. Some conflict resolution rules depend on the choices you make.

When a parent object is updated, new children from the deployment archive are added and join the existing set of children in the target environment. If a conflict occurs, the conflict resolution rule is to replace the children.

Because all job steps are replaced, no conflict is possible when importing jobStepDefinition objects.

If you include report output versions and run histories and you keep existing entries, the associated objects from the archive are merged with the objects in the target environment. Even though the objects are merged, the retention rules still apply. A full merge may not occur because some objects may be discarded.

The default conflict resolution rule for partial deployments is replace.
Exceptions to the default conflict resolution rule are listed in the following table:

<table>
<thead>
<tr>
<th>Object name</th>
<th>Conflict Resolution Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPORTVERSIONSQL</td>
<td>Depends on whether Include report output versions is set to replace or keep (p. 381).</td>
</tr>
<tr>
<td>OUTPUT</td>
<td>Keep if advanced setting DEPLOYMENTSKIPREPORTOUTPUT is set to True (p. 383). Otherwise, depends on whether Include report output versions is set to replace or keep (p. 381).</td>
</tr>
<tr>
<td>GRAPHICPAGE</td>
<td>Keep if advanced setting DEPLOYMENTSKIPREPORTOUTPUT is set to True (p. 383). Otherwise, depends on whether Include report output versions is set to replace or keep (p. 381).</td>
</tr>
<tr>
<td>HISTORY</td>
<td>Depends on whether Include run history is set to replace or keep (p. 381).</td>
</tr>
<tr>
<td>SCHEDULE</td>
<td>Depends on whether Include schedules is set to replace or keep (p. 381).</td>
</tr>
<tr>
<td>JOBSTEPDEFINITION</td>
<td>Replace.</td>
</tr>
<tr>
<td>JOBDEFINITION</td>
<td>Update and remove any JOBSTEPDEFINITION children. If PackageHistories is specified and packageHistoriesConflictResolution is set to replace, remove HISTORY objects as well.</td>
</tr>
<tr>
<td>DATASOURCE, DATASOURCECONNECTION, DATASOURCENAME-BINDING</td>
<td>Depends on whether Include data sources and connections is set to keep or replace (p. 382).</td>
</tr>
<tr>
<td>DATASOURCESIGNON</td>
<td>Depends on whether Include data sources and connections and Include signons are set to keep or replace (p. 382).</td>
</tr>
<tr>
<td>DISTRIBUTIONLIST, CONTACT</td>
<td>Depends on whether Include distribution lists and contacts is set to keep or replace (p. 382).</td>
</tr>
<tr>
<td>ROLE, GROUP</td>
<td>Depends on whether Include Cognos groups and roles is set to keep or replace (p. 382). (If it is set to replace, object ID is preserved.)</td>
</tr>
</tbody>
</table>
Deploying IBM Cognos Entries

To deploy IBM® Cognos® software, you

- export into a deployment archive in the source environment
- move the deployment archive to the target environment
- include configuration objects if you are importing the entire content store
- import from the deployment archive into the target environment
- test the deployed entries

In IBM Cognos Connection, you can organize your deployment specification in folders in the same way that you organize all your entries. See "Organizing Entries" (p. 315).

Deployment and Agents

Deployment can be part of an agent. For more information, see "Agents" (p. 461).

Deployment Schedules and Run History

You can schedule deployment to run automatically at a specified time or as part of a job. IBM Cognos software saves the run history for each deployment specification. After you export or import, you can view the date and time and the status of the deployment. You can also view any error messages created by the deployment and the list of entries that were exported or imported. For more information, see "Activities Management" (p. 351).

Permissions

To deploy IBM Cognos entries, you must have execute permissions for the Administration tasks secured feature (p. 853) and traverse permissions for the Administration secured function. We also recommend that you belong to the System Administrators group and have read and write access to the Cognos namespace so that you can deploy the System Administrators group. For more information, see "Set Access Permissions for an Entry" (p. 278).

When you do a partial export of public folders and directory content (p. 379) rather than exporting the entire content store (p. 377), you must have read and traverse permissions for the entries that you export. You also need write permissions because you create a deployment specification and deployment history when you export. When you import, you must have write and set policy permissions for the entries that you import.

Prerequisites

IBM Cognos software and other products, must be installed and configured in the source and target environments. For more information, see the IBM Cognos Installation and Configuration Guide.
We recommend that you stop the Content Manager service before you export and import. This prevents users from receiving unpredictable results if they are performing operations during the deployment. For example, if users view reports in a package while the package is being imported, users may encounter errors when the report outputs are replaced. For more information, see “Stop and Start Dispatchers and Services” (p. 139).

Before you start, you must plan the deployment to determine what deployment options to use and what entries to deploy (p. 376). You may want to do a back up before deployment (p. 257).

Create an Export Deployment Specification

To export the IBM® Cognos® entries, you create an export deployment specification (p. 375). You can also use a previously saved deployment specification for export or for redeployment of your entries.

The entries are exported to an export deployment archive (p. 376) in the source environment. Later, you import the archive entries into the target environment. You can update the entries in the target environment using the entries from the deployment archive.

For information on conflict resolution during deployments, see "Deployment Conflict Resolution Rules When Importing and Exporting" (p. 385).

When you export, you select the entries to deploy, and you set the options that are used as defaults when importing.

Steps to Create a New Export Deployment Specification

1. In the source environment, open IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Content Administration.
4. On the toolbar, click the new export button . The New Export wizard appears.
5. Type a unique name and an optional description and screen tip for the deployment specification. Select the folder where you want to save it and click Next.
6. Choose whether to export the entire content store or to do a partial export of specific folders and directory content:
   - To export specific folders and directory content, click Select public folders and directory content, and then click Next. Proceed to step 7.
   - To export the entire content store, click Select the entire content store and select whether to include user account information. Click Next and proceed to step 18.
7. In the Select the Public folders content page, click Add.
8. In the Select entries page, in the Available Entries box, select the packages or folders that you want to export.
You can browse the Public Folders hierarchy and choose the packages and folders you want. Click the right arrow button \( \Rightarrow \) to move the selected items to the Selected entries box, and click OK.

9. For each package and folder that you export, do one of the following:
   • If you want the package or folder to have a different name in the target environment, or if you want to change the target location or add multilingual names, click the edit icon \( \text{edit} \) to make your changes, and click OK.
   • If you do not want users to access the package or folder and its entries, select the check box in the Disable after import column. This is useful when you want to test the reports before you make them available in the target environment.

10. Under Options, select whether you want to include the report output versions, run history, and schedules and what to do with entries in case of a conflict.

11. Click Next.

12. In the Select the directory content page, select whether you want to export Cognos groups and roles, distribution lists and contacts, and data sources and connections and what to do with the entries in case of a conflict.

13. Click Next.

14. In the Specify the general options page, select whether to include access permissions and references to namespaces other than IBM Cognos, and who should own the entries after they are imported in the target environment.

15. Specify the Recording Level for the deployment history (p. 383).

16. Click Next.

17. In the Specify a deployment archive page, under Deployment archive, select an existing deployment archive from the list, or type a new name to create one.
   
   If you are typing a new name for the deployment archive, we recommend that you do not use spaces in the name. If the name of the new deployment specification matches the name of an existing deployment archive, the characters _# are added to the end of the name, where # is a number such as 1.

18. If you want to secure the archive, under Encryption, click Set the encryption password, type a password, and then click OK.

19. Click Next.

   The summary information appears.

20. Review the summary information and click Next.

   Tip: If you want to change information, click Back and follow the instructions.

21. Review the summary information and click Next.
22. Select the action you want:
   - To run now or later, click **Save and run once** and click **Finish**. Specify the time and date for the run. Then click **Run**. Review the run time and click **OK**.
   - To schedule at a recurring time, click **Save and schedule** and click **Finish**. Then, select frequency and start and end dates. Then click **OK**.
     Tip: To temporarily disable the schedule, select the **Disable the schedule** check box. To view the schedule status, see "Manage Scheduled Activities" (p. 357).
   - To save without scheduling or running, click **Save only**, and then click **Finish**.

After you run the export, you can move the deployment archive. You can also see the export run history (p. 359).

**Steps to Modify an Existing Export Deployment Specification**
1. In the target environment, open IBM Cognos Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Configuration** tab, click **Content Administration**.
4. In the **Actions** column, click the properties button for the deployment specification you want to modify, and then click the **Export** tab.
5. Modify the deployment options as required.
   Tip: If you want to change the export target location, click the edit button next to the export name in the **Target name** column, the **Public Folders content** section, and choose the package or folder you want.
6. Click **OK**.
   This saves the options and you can run the export now or at a later time (p. 392).

**Steps to Run an Export**
1. In the **Actions** column, click the run with options button.
2. Click **Now** to run the export immediately, or click **Later**, and enter the time, that you want the export to run.
   You can also schedule a task to run on a recurring basis, and view a list of scheduled tasks. For more information, see "Schedule Management" (p. 365).
   Tip: To avoid warning messages when logged into multiple namespaces, before you run the export next time, renew your credentials. In IBM Cognos Connection, in the upper-right corner, click the my area options button, and then click **My Preferences**. On the **Personal** tab, in the **Credentials** section, click **Renew the credentials**.
   You can now move the deployment archive.
**Move the Deployment Archive**

Move the deployment archive that you created in the source environment to the target environment. Later, you use the deployment archive to import in the target environment.

If the source and target environments use the same content store, you can import without moving the deployment archive.

The location where deployment archives are saved is set in the configuration tool. The default location is `c10_location/deployment`.

If you plan to move the deployment archive to a location on a LAN, ensure that there is enough disk space. If you did not encrypt the deployment archive, we recommend that you copy it to a secure location.

**Steps**

1. Copy the deployment archive from the source environment to a location on the LAN or to a CD.

2. Copy the deployment archive from the LAN or CD to the target environment in the location set in the configuration tool.

You can now include configuration objects if you’re importing an entire content store or import to the target environment.

**Import to a Target Environment**

You import entries from the deployment archive (p. 376) into the target environment. To import the entries, you create an import deployment specification (p. 375).

You can import using an existing deployment specification if you previously saved it without importing, or if you want to redeploy your IBM® Cognos® entries. You can update the entries in the target environment with entries from the deployment archive.

For information on conflict resolution during deployments, see "Deployment Conflict Resolution Rules When Importing and Exporting" (p. 385).

When you import, you select from entries that were exported. You can either accept the default options set during the export, or change them. You cannot select options that were not included in the deployment archive during the export. For information about how specific objects in the content store are imported, see "Deployment Conflict Resolution Rules When Importing and Exporting" (p. 385).

You can also use the New Import wizard to upgrade entries from previous releases of the product. You can upgrade report specifications during the import, or choose to upgrade them at a later time using the New Report Upgrade wizard. For more information, see "Upgrade Report Specifications" (p. 397).

To use an existing import deployment specification, see "Steps to Modify an Existing Import Deployment Specification" (p. 395)
Partial Deployment
If you do a partial deployment of specific public folders and directory content, the import wizard shows whether packages and folders already exist in the target environment and the date and time they were last modified. You can use this information to help you decide how to resolve conflicts. When you redeploy, the wizard also shows whether the packages and folders were in the original deployment.

Steps to Create a New Import Deployment Specification
1. In the target environment, open IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Content Administration.
4. On the toolbar, click the new import button. The New Import wizard appears.
5. In the Deployment archive box, click the deployment archive that you want to import.
6. If the deployment archive is encrypted, type the password, and then click OK.
7. Click Next.
8. Type a unique name, an optional description, and a screen tip for the deployment specification, select the folder where you want to save it, and click Next.
9. Select the content that you want to include in the import.
   **Tip:** To ensure that the required target package or folder exists in the target content store, click the edit button next to the package, and check the location. If you want, you can change the target location now.
10. Select the options you want, along with your conflict resolution choice for options that you select.
11. In the Specify the general options page, select whether to include access permissions and references to namespaces other than IBM Cognos, and who should own the entries after they are imported in the target environment.
12. Specify the Recording Level for the deployment history (p. 383).
13. Click Next.
   The summary information appears.
14. Review the summary information and click Next.
15. Select the action you want:
   - To run now or later, click Save and run once and click Finish. Specify the time and date for the run. Then click Run. Review the run time and click OK.
   - To schedule at a recurring time, click Save and schedule and click Finish. Then, select frequency and start and end dates. Then click OK.
Tip: To temporarily disable the schedule, select the **Disable the schedule** check box. To view the schedule status, see "Manage Scheduled Activities" (p. 357).

- To save without scheduling or running, click **Save only** then click **Finish**.

When you run the import, you have the option of selecting to upgrade the report specification. If you choose not to upgrade the deployment specification at this time, you can upgrade it later. For more information, see "Upgrade Report Specifications" (p. 397).

After you run the import, you can **test the deployment**. You can also see the import run history (p. 359).

**Steps to Modify an Existing Import Deployment Specification**

1. In the target environment, open IBM Cognos Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Configuration** tab, click **Content Administration**.
4. In the **Actions** column, click the properties button for the deployment specification you want to modify, and then click the **Import** tab.
5. Modify the deployment options as required.

   **Tip:** If you want to change the import target location, click the edit button next to the import name in the **Target name** column, the **Public Folders content** section, and choose the package or folder you want.

6. Click **OK**.

   This saves the options and you can run the import now or at a later time (p. 395).

**Steps to Run an Import**

1. In the **Actions** column, click the run with options button.
2. Click **Now** to run the import immediately, or click **Later**, and enter the time, that you want the import to run.
3. If you want to upgrade the report specifications, click **Upgrade all report specifications to the latest version**.

   You can also schedule a task to run on a recurring basis, and view a list of scheduled tasks. For more information, see "Schedule Management" (p. 365).

You can now **test the deployment**.

**Include Configuration Objects in Import of Entire Content Store**

You can include configuration objects when importing an entire content store. For example, you may want to import the configuration because you have a series of advanced settings for your services that you want from the source environment.
By default, configuration objects are excluded when you import an entire content store, even though they are included in the export. Configuration objects include dispatchers and configuration folders used to group dispatchers. For more information, see "Conflict Resolution Rules For Deploying the Entire Content Store" (p. 386).

We recommend that you do not import configuration objects. Dispatchers should be configured in your target environment before you import data from a source environment. If you must import configuration objects, you should either stop the source dispatcher services before the import, or restart IBM Cognos software in the target environment after the import. Otherwise, you may get errors with the status of dispatchers. If you want to import configuration objects, you must be prepared for a brief interruption of services.

Steps
1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Dispatchers and Services.
3. Click the dispatcher you want.
4. Next to ContentManagerService, click the set properties button.
5. Click the Settings tab.
6. In the Value column, click Edit.
7. Select the Override the settings acquired from the parent entry check box.
8. In the Parameter column that appears, type the following in uppercase:
   CM.DEPLOYMENTINCLUDECONFIGURATION
9. In the Value column, type true.
10. Click OK to finish.

Testing Deployed Applications
After you import the packages from the deployment archive, you may want to verify that all the entries were deployed successfully in the target environment.

You can test your deployment by
- reviewing the run history for a deployment
- ensuring that the correct packages and folders were imported along with their contents
- ensuring that the data sources, distributions lists and contacts, and Cognos groups and roles were imported
- verifying the permissions for the imported entries
- ensuring that the schedules were imported
- ensuring that any references to renamed packages were updated
• running imported reports and report views

Upgrade Report Specifications

If you did not upgrade report specifications when you ran the import wizard, you can upgrade them using the New Report Upgrade wizard.

**Important:** Do not upgrade your report specifications if you have Software Development Kit applications that create, modify, or save report specifications. You must first update your Software Development Kit applications to comply with the IBM® Cognos® report specifications schema. Otherwise, your Software Development Kit applications may not be able to access the upgraded report specifications. For information about upgrading report specifications, see the IBM Cognos Software Development Kit Developer Guide.

**Steps**

1. Log on to IBM Cognos Connection as an administrator with execute permissions for the Content Administration feature (p. 289).

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Configuration tab, click Content Administration.

4. Click the arrow on the new content maintenance button on the toolbar, and then click New Report Upgrade.

5. Type a name for the upgrade task and, if you want, a description and screen tip. Click Next.

6. Select the packages and locations for the report specification you want to upgrade. Click Next.

   If you upgrade report specifications by package, all reports in the content store that are based on the model in the package will be upgraded. If you upgrade report specifications by folder, all reports in the folder will be upgraded.

7. Choose one of the following:

   - **Save and run once** opens the run with options page.
   - **Save and schedule** opens the scheduling tool.
   - **Save only** allows you to save the upgrade so that you can run it at a later time.

Deploy Human Task and Annotation Services

Unlike other services, Human Task service and Annotation service do not have content in the content store, so you must deploy them separately. You deploy them by running a batch file, which retrieves your human tasks or annotations from a source database. Then you run another batch file to install them on a destination server.

**Steps**

1. Create task data in your database by creating a selection of tasks pointing to valid reports.
For instructions on creating user tasks, see the IBM® Cognos® Event Studio User Guide. For more information about annotations (comments), see the IBM Cognos Dashboard User Guide.

2. On the source server, open a command prompt in c10_location/bin.

3. Run the file htsDeployTool with the following arguments:

   htsDeployTool -camUsername camUsername -camPassword camPassword -camNamespace camNamespace -exportFile exportFileName -password exportFilePassword

   where:
   - `camUsername` is the username for the namespace.
   - `camPassword` is the user password for the namespace.
   - `camNamespace` is the name of the namespace.
   - `exportFileName` is the name of the export file that will be created, for example, HumanTaskExportFile1.
   - `exportFilePassword` is the password for the export file.

   Enclose arguments that contain spaces in quotes. Precede special characters with a backslash. For example:

   htsDeployTool -exportFile "jan\'s file" -password test2Password -camNamespace default -camUsername myId -camPassword myPassword

   To allow anonymous access, omit the -cam arguments.

   To export annotations, add the argument -persistenceUnit annotations. For example:

   -camPassword <camPassword> -camNameSpace <camNamespace> -exportfile AnnotationExportFile1 -password <exportFilePassword> -persistenceUnit annotations.

4. Check to make sure that the file <exportFileName>.xml.gz was created in c10_location/deployment. For example, HumanTaskExportFile1.xml.gz. Copy it.

5. On the destination server, paste the file <exportFileName>.xml.gz in c10_location/deployment.

6. On the destination server, open a command prompt in c10_location/bin and run the file htsDeployTool with the following arguments:

   htsDeployTool -camUsername camUsername camPassword -camNamespace camNamespace -importFile importFileName -password importFilePassword

   where:
   - `camUsername` is the username for the namespace.
   - `camPassword` is the user password for the namespace.
   - `camNamespace` is the name of the namespace.
   - `importFileName` is the name of the file that you created in step 3.
   - `importFilePassword` is the password for the file that you created in step 3.
See additional syntax tips in step 3.
You can use packages to group the data that is used for reports and to define a subset of data that is relevant to a certain group of users. For example, a package might contain information that is relevant to marketing managers for market research. The package can then be distributed to report authors by publishing it to the portal. When you run a report, the result depends on the data source that is defined in the package.

Administrators can create packages from IBM® Cognos® Administration. Data modelers can use Framework Manager to create models for similar purposes.

Working with Packages
In IBM Cognos Connection, you can manage packages the way you manage other entries. For example, you can organize packages in folders, create shortcuts to packages, hide, and move or copy packages.

You can also create a package from IBM Cognos Connection (p. 402) and view the data sources that are used by a package (p. 406).

If you are an administrator, you can perform the following tasks related to packages:
- Create a package for a PowerCube (p. 403) or SAP BW data source (p. 404).
- Set the maximum number of objects used in a SAP BW package (p. 405).
- Configure or reconfigure a package (p. 407).
- Set permissions for package configuration (p. 407).
- Remove a package configuration (p. 408).
- Select which data sources can be used in a package (p. 408).

Data Modeling
A model is a data structure that contains imported data from one or more data sources. IBM Cognos data modelers use Framework Manager to create models.

For more information about creating models and packages in Framework Manager, see the Framework Manager User Guide. You might also want to refer to the information on data tree settings in "Data Trees" (p. 401).

For information about setting object capabilities for a package, see "Object Capabilities" (p. 293).

Data Trees
Data trees can contain many hierarchical levels and items (members). If all levels and members appear, the data trees might be difficult to use. After packages are deployed to IBM® Cognos® software (p. 375), you can specify how data trees appear in the studios.
The settings do not affect the model. They affect only the package configuration. The settings for a package are obtained by the studios when a report is opened. The settings are also obtained when an Analysis Studio analysis is opened in IBM Cognos Viewer.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default member limit in a data tree level</td>
<td>In Analysis Studio, specifies the number of members that appear at one time in one level of the data tree. For example, if this is set to 10, and the maximum member limit is set to 20, Analysis Studio users see only the first ten members and must click More to see the next ten. At this point, they see the maximum number and they must then search for a specific member. If your data tree has only 50 members, you may want to set this to 55 so that users do not have to click a link to see all members. Default: 20</td>
</tr>
<tr>
<td>Maximum member limit in a data tree level</td>
<td>For all studios, specifies the maximum number of members that appear in one level of the data tree. If a member does not appear in the data tree, the user can search for that specific member. If your data tree is large, you might want to set this to a low number so that users can find the member they are looking for faster when they are searching. Default: 50</td>
</tr>
</tbody>
</table>

**Creating a Package**

You can create packages for SAP BW and PowerCube data sources from IBM® Cognos® Connection (p. 402). Packages are listed in Public Folders or My Folders, along with your other entries. You can perform the same kinds of functions on packages as you can on your other entries.

For information about controlling which users can create packages using capabilities, see "Set Entry-Specific Capabilities " (p. 289). For information about setting object capabilities for a package, see "Object Capabilities" (p. 293).

You can create and publish packages using Framework Manager. For information, see the Framework Manager User Guide.

**Create a Package**

You can create a package for SAP BW and PowerCube data sources from IBM® Cognos® Connection.

If you are an administrator, you can also create a package from IBM Cognos Administration.
To perform this task, you must have execute permissions for the Self Service Package Wizard capability "Secured Functions and Features" (p. 283). You must enable the self service package capability for any data sources that you want to show up in the list. For instructions, see "Select Which Data Sources Can Be Used to Create a Package" (p. 408).

**Steps to Create a Package from IBM Cognos Connection**

1. In IBM Cognos Connection, click Public Folders or My Folders and then click the New Package icon in the upper right corner.
   
   Note that the default location for packages is My Folders, even when you create them from the Public Folders tab.

2. Select the data source that you want to use in the package and click OK.

   The New Package Wizard appears. Proceed with the steps to "Create a Package for a PowerCube" (p. 403) or "Create a Package for SAP BW" (p. 404).

**Steps to Create a Package from IBM Cognos Administration**

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

   Tip: If you are creating a package at the end of "Create a Data Source" (p. 227), go directly to step 3.

2. On the Configuration tab, click Data Source Connections.

3. Click More beside the data source, then click Create a Package.

   The New Package Wizard appears. Proceed with the steps to "Create a Package for a PowerCube" (p. 403) or "Create a Package for SAP BW" (p. 404).

**Create a Package for a PowerCube**

Before you can use a PowerCube data source in any of the IBM® Cognos® studios, you must create a package.

When you create a PowerCube data source from IBM Cognos Administration (p. 227), you are given the option to create a package using your new data source. You can also create a package for an existing PowerCube data source.

**Note:** You can also create a package while publishing PowerCubes from Transformer. For more information, see the Transformer User Guide. You can also create and publish packages using Framework Manager. For information, see the Framework Manager User Guide.

To perform these tasks, you must have execute permissions for the Data Source Connections secured feature "Secured Functions and Features" (p. 283).

**Steps**

1. Complete the steps in "Create a Package" (p. 402).

2. Enter a name for the package, and click Next.
3. Select the null-suppression options you want to make available to the IBM Cognos studio user:
   - **Allow Null Suppression** enables suppression.
   - **Allow Multi-Edge Suppression** allows the studio user to suppress values on more than one edge.
   - **Allow Access to Suppression Options** allows the studio user to choose which types of values will be suppressed, such as zeros or missing values. By default, all null values are suppressed when suppression is enabled.

4. Click **Finish**.

**Create a Package for SAP BW**

Before you can use a SAP BW data source in any of the IBM® Cognos® studios, you must create a package.

When you create a SAP BW data source from IBM Cognos Administration (p. 227), you are given the option to create a package using your new data source. You can also create a package for an existing SAP BW data source.

To edit a SAP BW package after it is created, see "Steps to Edit a SAP BW Package" (p. 405).

To set the maximum number of objects used in SAP BW packages, see (p. 405)

To perform these tasks, you must have execute permissions for the Data Source Connections secured feature "Secured Functions and Features" (p. 283).

You can set how many objects can be used in a SAP BW package (p. 405). For information about creating and publishing packages using Framework Manager, see the Framework Manager User Guide.

**Steps to Create a SAP BW Package**

1. Complete the steps in "Create a Package" (p. 402).

2. Enter a name for the package, and click **Next**.

3. Select the objects to include in the package.
   - There is a limit on the number of objects that you can select. By default, you can select a maximum of 2 cubes and 5 info queries.

4. To import SAP BW queries that contain dual structures and use the structures in IBM Cognos queries to control the amount and order of information that your users see, click **Enable SAP BW Dual Structures support**.
   - For more information about dual structures, see the Framework Manager User Guide.

5. Click **Next**.

6. Select the languages to include in the package and click **Next**.
   - If it is possible that the package might not contain the content locales of users, select the **Design Language** that is used as the default locale.
7. Specify the object display name.

8. To have objects in the model organized the same way that they are organized in Business Explorer Query Designer, click **Enhance the package for SAP BW organization of objects**.

9. Click **Finish**.

10. When **Package successfully created** appears, you have two options:
   - If you want to edit variable properties or reselect the metadata used in the package, click **Edit the SAP BW variable properties for the package after closing this dialog**. Continue with step 11.
   - Click **Close** to finish.

11. If there are variables for the package, the **Edit SAP BW Variables** page appears.
   - Click the value you want to edit, then select or type the new variable.

12. Click **Save**.

**Steps to Edit a SAP BW Package**

1. Click **More** beside the package, then click **Edit Package**.

2. To edit the package variables, click **Edit variables**. Click the value you want to edit, then select or type the new variable. Click **OK**.
   - To modify metadata selections, click **Modify metadata selections**. Return to step 5 in "Steps to Create a SAP BW Package" (p. 404).

**Set the Maximum Number of Objects Used in SAP BW Packages**

You can set the maximum number of cubes and info queries that can be included when a SAP BW package is created. The longer a SAP BW import takes, the more time the server spends processing the request, which could have an impact on its performance for other applications. Find a balance between the number of cubes and info queries commonly needed by users and the potential impact on server performance.

The following parameters are available:

- **com.ibm.cognos.metadatuservice.sap.maxcubes**
  - The maximum number of cubes that can be used in a SAP BW package. Valid settings are zero and greater. The default is 2.

- **com.ibm.cognos.metadatuservice.sap.maxinfoqueries**
  - The maximum number of info queries that can be used in a SAP BW package. Valid settings are zero and greater. The default is 5.
For more information about SAP BW data sources and creating SAP BW packages, see "Data Sources and Connections" (p. 197).

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu, and then click Services.
5. Click Metadata.
6. Click the arrow next to Metadata service to display the Actions menu, and click Set properties.
7. Click the Settings tab.
8. Next to Advanced Settings, click Edit.
9. Select Override the settings acquired from the parent entry.
10. In the Parameter column, type the parameter name.
    
    For example, type `com.ibm.cognos.metadatauiservice.sap.maxCubes`.
11. In the Value column, type the associated value for the setting.
12. Continue typing setting names and values as required.
13. Click OK.
14. On the Set properties page, click OK.

**View Data Sources Used by a Package**

You can view the data sources that are used by a package.

You can view data sources for packages that are in the Public folder only, not in My Folders.

If you want to see if the package is using dynamic query mode for a data source, check the Properties page for the package.

You must have set policy permission on the package and traverse and read permission on the model.

If you have read access for the data source, the localized name of the data source is shown with its associated icon. If you do not have read access for the data source, Unavailable is displayed instead of the name.

If you have the Data Source Connection capability and the data source referenced in the package does not exist, Unavailable is displayed with the default icon and the data source name in square
brackets. If you do not have the Data Source Connection capability, Unavailable is displayed instead of the name.

**Steps**
1. Start IBM® Cognos® Connection.
2. Find the package in the Public folder and click More.
3. In the Actions column, click View the package data sources.
   A list of the data sources for the package is displayed under View the data sources consumed by this package.

**Configure or Reconfigure a Package**

After a new package is deployed, the default settings are used. You can configure a new package to use different settings or you can modify the settings of an existing package configuration at any time.

You must have Administration capability. You must have write and traverse permission for the package. To modify the package configuration, you must also have write permission for package configuration (p. 407).

**Steps**
1. In IBM Cognos Connection, locate the package you want.
2. In the Actions column, click More.
3. Click New package configuration or Modify the package configuration.
4. Click Select an analysis.
5. Select the default analysis to be used for this package when a new analysis is created.
6. Click OK.
7. Change the package settings as required and click Finish.

**Set Permissions for Package Configuration**

To modify a package configuration, you must have write permission for package configuration. For more information on permissions, see "Access Permissions and Credentials" (p. 275).

**Steps**
1. In IBM® Cognos® Connection, locate the package you want.
2. In the Actions column, click More.
3. Click Modify the package configuration.
4. Click the Permissions tab.
5. Click OK.

**Remove a Package Configuration**

After you configure a new package, you can remove the configuration at any time. You might want to do this to return to the default settings.

You must have write and setPolicy permissions on the package (p. 407).

**Steps**

1. In IBM® Cognos® Connection, locate the package you want.
2. In the Actions column, click More.
3. Click Remove the package configuration.
4. Click OK.

**Select Which Data Sources Can Be Used to Create a Package**

You can select which data sources can be used to create a package.

You must have administration permissions to set the property on a data source. You can only use the Self Service Package Wizard if you have execute permissions for it (p. 289).

**Steps**

1. Beside the data source, click Properties.
2. Click the Connection tab and click Allow personal packages.
Chapter 24: Managing User Profiles

User profiles define the portal tabs, including Public Folders and My Folders, that a user can access in IBM® Cognos® Connection. They also specify user preferences, such as the product language, preferred output format of reports, and the style used in the user interface.

A user profile is created when the user logs on to IBM Cognos software for the first time. It can also be created by an administrator. Initially, the profile is based on the default user profile.

You can perform the following tasks on user profiles in IBM Cognos software:

- editing the default user profile (p. 409)
- viewing or changing user profiles (p. 410)
- deleting user profiles (p. 411)
- copying user profiles (p. 412)

Users can view and change the preferences associated with their profile in IBM Cognos Connection. For more information, see "Personalize the Portal" (p. 325).

To copy, edit, or delete user profiles, an administrator must have write permissions for the namespace that contains the applicable users. The IBM Cognos predefined role, Directory Administrators, does not have write permissions for namespaces other than the Cognos namespace. System Administrators must grant write permissions to Directory Administrators so that they can administer user profiles for the namespace (p. 298).

To manage user profiles, you must have the required access permissions for IBM Cognos Administration (p. 283).

Note: User entries are created in authentication providers. For more information, see "Users, Groups, and Roles" (p. 269).

Edit the Default User Profile

The default user profile is defined in the Cognos namespace. It contains settings that apply to all new users. You can edit the default user profile for your users to minimize the number of changes you need to make to individual user profiles.

After you change the default user profile, it applies only to users who log on to IBM® Cognos® software for the first time. The existing user profiles of other users are not affected.

For more information, see "Hide Inaccessible Tabs Referenced in the User Account Preferences" (p. 651).

Steps

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

3. Click the Cognos namespace.

4. On the toolbar, click the edit default user profile button.

5. Set the default user profile and click OK.

Each user who logs on to IBM Cognos software for the first time will automatically inherit these settings but can change them later.

**View or Change a User Profile**

You can view or change user profiles. You can also delete specific items in the user’s profile, such as the content of My Folders (p. 321) or pages (p. 331). This may be useful in the following situations:

- The content in the user’s My Folders or pages is taking up so much space that performance is affected. You want to delete some or all of the content.

- You want to view a user profile before deleting it to ensure that you do not delete any important content.

If a user was deleted in your authentication provider, the user no longer appears in IBM® Cognos® software and you cannot change the user profile.

You can only see the profiles of users who logged on at least once. When users log on, a date is displayed in the Modified column.

To view a user profile, delete content, or change content, you must have traverse permissions for the user account and any other folder that must use Public Folders. You must also have write permissions for the entry and the parent of the entry that you want to delete.

You can change the user profile for individual users, but not for groups or roles.

**Steps to View or Change a User Profile**

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.


3. Click the namespace that contains the user.

4. Find the user whose preferences you want to view or change. You can use the Search feature to find a user (p. 323).

5. In the Actions column, click More.

6. Click Set preferences.

7. Click the different tabs to view or change the settings.
8. Click **Cancel** to exit without making changes, or make changes and click **OK**.

**Steps to Delete Content**

1. In IBM Cognos Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.

2. On the **Security** tab, click **Users, Groups, and Roles**.

3. Select the namespace that contains the user.

4. Find the user.
   
   You can use the Search feature to find a user (p. 323).

5. In the **Name** column, click the user name.
   
   **Tip:** If the user name is not a link, it means that the user profile was not created. To create the profile, in the **Actions** column, click the create this user’s profile button and proceed with the rest of the steps.
   
   A list of the user’s folders appears.

6. Click a folder to see its contents.

7. Click the item that you want to delete from the folder, and click the delete button on the toolbar.

   You cannot delete the folders themselves.

**Delete a User Profile**

You can delete user profiles from the content store. When deleting a user in your authentication provider, you may first want to delete the user profile from the content store so that it no longer uses storage space.

You should delete the user profile from IBM® Cognos® software before deleting the user in the associated namespace. After the user is deleted, the user information no longer appears in IBM Cognos software and you cannot manage the user profile in **IBM Cognos Administration**.

If the user account was already deleted from the associated namespace, you can use content store maintenance (p. 157) to find, and optionally remove, all associated user account information from IBM Cognos software.

If a user with a deleted user profile logs on, an account is created using defaults. If a user is logged on while the associated user profile is being deleted, the user’s passport expires and the logon page appears.

Before you delete a user profile, you may want to view its contents (p. 410) to ensure that you are not deleting anything important.

You can work only with profiles of users who logged on at least once. When users log on, a date is displayed in the **Modified** column and the user name changes into a link.
Chapter 24: Managing User Profiles

To delete a user profile, you must have write permissions for the parent object.

**Steps**
1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
3. Click the namespace that contains the user.
4. Find the user whose user profile you want to delete. You can use the Search feature to find a user (p. 323).
5. In the Actions column, click More.
6. Click Delete this user’s profile.
7. Click OK.

**Copy a User Profile**

You may want to copy a user profile. This is useful in the following situations:
- A user changes names and you are setting up an account in the new name.
- A user moves to another namespace or your organization changes namespaces and you must set up new accounts.
- You are creating many new similar user accounts.

If you plan to delete the source user in your authentication provider, copy the user account information before you delete it. After you delete the user, the user no longer appears in IBM® Cognos® software and you cannot copy the user’s account information.

You can only work with profiles of users who have logged in at least once. When users log on, a date is displayed in the Modified column and the user name changes into a link.

To copy user profiles, you must have write permissions for the namespaces for both the source and target users.

**Note:** When you copy a user profile, trusted credentials are not copied.

**Steps**
1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
3. Click the namespace that contains the source user (the user you want to copy from).
   **Tip:** You can select only the namespaces that you have write access to.
4. Find the source user. You can use the Search feature to find a user (p. 323).
5. In the **Actions** column for the source user, click **More**.

6. In the **Perform an action** page, click **Copy this user’s profile**.

7. In the **Copy the user profile** page, click **Select the target user** and navigate to find the target user.

8. After you have selected the target user, in the **Copy the user profile** page, select one or more of the following profile settings that you want to copy: **Preferences**, **Portal tabs and personal folders content**, or **Personal folders content**.

9. If required, select the **Delete the source user’s profile after the copy completes** check box.

10. Click **Copy**.
Microsoft® Office users can import data from IBM® Cognos® Business Intelligence reports into workbooks, presentations, and documents using IBM Cognos for Microsoft Office and then publish the workbooks, presentations, and documents to the IBM Cognos portal. For more information, see the IBM Cognos for Microsoft Office User Guide and the IBM Cognos Analysis for Microsoft Excel® User Guide. IBM Cognos Connection users can then download the workbooks, presentations, and documents for viewing or editing in the Microsoft Office application that was used to create it.

Note: The only way to publish Microsoft Office workbooks and presentations in IBM Cognos BI is to use IBM Cognos for Microsoft Office or IBM Cognos Analysis.

Before users can import IBM Cognos BI data into Microsoft Office documents or publish those documents in the IBM Cognos portal, you must deploy the IBM Cognos for Microsoft Office and IBM Cognos Analysis Analysis client to the users’ workstations.

Deploying IBM Cognos for Microsoft Office Client

IBM Cognos for Microsoft Office is available for installation with IBM Cognos BI components. After IBM Cognos BI is installed and configured, you can deploy IBM Cognos for Microsoft Office to client workstations.

When you deploy IBM Cognos for Microsoft Office, you install Microsoft® .NET Framework and the support files using the provided setup executable and then configure security as required.

IBM Cognos for Microsoft Office Client is available as a 32-bit installation only. It must be installed on a 32-bit Windows® computer.

Deploying IBM Cognos for Microsoft Office to Client Computers

IBM Cognos for Microsoft Office uses Microsoft .NET Framework to allow users to interact with server-based components. Microsoft .NET Framework and the required updates are downloaded and installed by the setup file when you install IBM Cognos for Microsoft Office. The setup file must be run on all user computers.

For a list of supported versions of Microsoft .NET Framework, see the IBM Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter/).

Use the following checklist to guide you through the deployment process:

- Install .NET Framework and IBM Cognos for Microsoft Office.
  
  For more information about installing IBM Cognos for Microsoft Office, see the IBM Cognos for Microsoft Office Installation Guide.

- Set the macro security level for Microsoft Office XP, if required.
Install the CA certificate for secure sockets layer support, if required.

**Set Macro Security Level for Microsoft Office XP**

For Microsoft® Office XP applications to run IBM® Cognos® for Microsoft® Office, you must set your macro security level to an appropriate level. You must set this for Microsoft Office Excel, Microsoft Office Word, and Microsoft Office PowerPoint.

**Steps**
1. Open your Microsoft Office XP application.
2. From the Tools menu, click Macros, and then click Security.
3. Choose whether to change the security level or the trusted publishers.
   - On the Security Level tab, click Medium or Low, and then click OK
   - On the Trusted Publishers tab, select Trust all installed add-ins or templates, and then click OK.

**Install the CA Certificate for the HTTPS Interface to Series 7 PowerPlay**

If your environment includes IBM® Cognos® Series 7 PowerPlay® Enterprise Server and you are using the HTTPS (https://) interface to access Series 7 PowerPlay, you must install a certificate issued by a certificate authority (CA). The CA certificate is required for secure sockets layer (SSL) support.

**Steps**
1. Retrieve the CA certificate from your administrator.
   The file has a .cer extension.
2. Double-click the .cer file, click Install Certificate, and then click Next.
3. Click Place all certificates in the following store.
4. Click Browse, click Trusted Root Certification Authorities, and then click Next.
5. Click Finish.

**Download a Microsoft Office Document**

You can download a Microsoft® Office document from IBM® Cognos® Connection if it was published in IBM Cognos Business Intelligence using IBM Cognos for Microsoft Office or IBM Cognos Analysis for Microsoft Excel®. For more information, see the IBM Cognos for Microsoft Office User Guide and the IBM Cognos Analysis for Microsoft Excel User Guide.

You can download documents created in Microsoft Office Excel spreadsheet software, Microsoft Office PowerPoint and Microsoft Office Word. The default action for any Microsoft Office document is to download it.
You must have read and traverse permissions to access Microsoft Office documents in IBM Cognos Connection.

For more information, see "Secured Functions and Features" (p. 283).

**Steps**

1. In IBM Cognos Connection, locate the document that you want to open.

2. Click **more** on the actions toolbar to the right of the document that you want to download.
   The IBM Cognos Connection actions page opens.

3. **Download the Microsoft Office document:**
   - For a Microsoft Office workbook, click the **View most recent document in Excel** object.
   - For a Microsoft Office presentation, click the **View most recent document in PowerPoint** object.
   - For a Microsoft Office word document, click the **View most recent document in Word** object.
   - For a Microsoft Office document of unknown type, click the **View most recent document** object.
   
   The **File Download** dialog box appears.

4. Click **Open** or **Save** and follow the prompts that appear.

   When you open the document, it opens in the application that was used to create it.

You can now perform the same actions that you would perform for any Microsoft Office document of the selected type.
Chapter 26: Reports and Cubes

You can use reports, cubes, and documents to analyze data and help you make informed and timely decisions. In IBM® Cognos® Business Intelligence, reports and cubes can be published to the portal to ensure that everyone in your organization has accurate and relevant information when they need it.

Query Studio and Report Studio Reports
Typically, for Query Studio and Report Studio reports, your data modeler creates models from subsets of corporate data. These models are then published as packages in IBM Cognos BI. Your administrator can also create packages based on relevant data sources and you can create packages in IBM Cognos Connection. For more information about packages, see "Packages" (p. 401).

Query Studio and Report Studio users can create reports based on the packages and publish them in IBM Cognos BI. In IBM Cognos Connection, a Query Studio report is called a query and a Report Studio report is called a report.

OLAP sources do not need additional modeling.

Analysis Studio Reports and Cubes
An Analysis Studio administrator can publish Analysis Studio reports and cubes in IBM Cognos BI. Analysis Studio users can create reports and publish them in IBM Cognos BI. In IBM Cognos Connection, an Analysis Studio report is called an analysis.

Working with Reports and Cubes
A report can refer to the specification that defines the information to include in a report, or the results themselves. For Report Studio and Query Studio, report specifications can have saved results or you can run a report to produce new results. For Analysis Studio, reports are always run against the latest data in the cube.

After a report is published to the portal, you can view, run, or open it (p. 420) or view report output versions (p. 438). You can also view the report in various formats (p. 431).

You can distribute reports by saving them, sending them by email, sending them to your mobile device, printing them, or bursting them (p. 449). You can also set run options for the current run (p. 422), and set advanced run options for the current run (p. 423).

You can create an ad hoc report using Query Studio or you can use Report Studio to define layouts, styles, and prompts for your report (p. 427). You can also create Analysis Studio reports (analyses).

You can schedule a report to run at a later time or on a recurring basis. You can schedule a report as part of a job or based on a trigger. You can view the run history for a report. For more information, see "View the Run History for Entries" (p. 359). You can also include a report in an agent (p. 461).
You can add yourself to the alert list for a report so that you are alerted when new versions of the report are created (p. 440). You can also specify watch rules in saved HTML report output so that you are alerted whenever the events specified by the watch rules are satisfied (p. 442).

You can disable selection-based features (p. 447), such as drilling up and down and drill-through.

**Mixed Currencies**

Mixed currency values occur when you calculate values with different currencies. When using an OLAP data source, mixed currency values use the asterisk character (*) as the unit of measure.

**Accessibility for the Disabled**

We are committed to assisting people with disabilities, and promotes initiatives that make workplaces and technologies accessible. IBM Cognos BI provides an accessible report reading solution. This solution allows disabled users and users of Assistive Technology the ability to access and display reports in IBM Cognos Viewer.

**Series 7 Reports and Cubes**

For information on working with Series 7 reports and cubes in IBM Cognos BI, see "Series 7 Reports in IBM Cognos Connection" (p. 455).

**IBM Cognos Active Reports**

You can use IBM® Cognos® Report Studio to create active reports. IBM Cognos Active Report is a report output type that provides a highly interactive and easy-to-use managed report. Active reports are built for business users, allowing them to explore their data and derive additional insight.

Active reports make business intelligence easier for the casual user. Report authors build reports targeted at their users' needs, keeping the user experience simple and engaging. Active reports can be consumed by users who are offline, making them an ideal solution for remote users such as the sales force.

Active reports are an extension of the traditional IBM Cognos report. You can leverage existing reports and convert them to active reports by adding interactive behavior, providing end users with an easy-to-consume interface.

Like existing IBM Cognos reports, you can execute active reports from IBM Cognos Connection as well as schedule and burst them to users.

For more information, see the Report Studio User Guide.

**View, Run, or Open a Report**

You can view the most recent run of a report, run a report, or open a report in the authoring tool. The default action is to view the most recent run of a report but you can select the default action that you prefer (p. 421).

When you run a report in an export format such as PDF, delimited text (CSV), Microsoft® Excel spreadsheet software (XLS), the IBM® Cognos® report name is used as the exported file name.
You must have execute permission to run a report. You must have read and traverse permissions for the folder that contains the report.

You may be requested to enter your data source credentials. For information on data source credentials, see "Trusted Credentials" (p. 280).

Step

- In IBM Cognos Connection, click the report that you want.
  
  For more information about using PowerPlay® Web Explorer, see PowerPlay Web User Guide.
  
  For information about using Analysis Studio, see the Analysis Studio User Guide.

### Set Default Report Options

You can set one of the following actions as the default when a report is run (p. 420):

- view the most recent report or run if it has not been previously run (default)
- run the report
- open the report in the authoring tool that was used to create it (Query Studio, Report Studio, or Analysis Studio)

You can set default report options such as format and language. You can also set the default to prompt for values (p. 435) and run as the owner. For information about properties, see "Entry Properties" (p. 307).

You must have execute permissions for the report. You must have read and traverse permissions for the folder that contains the report.

Steps

1. In IBM® Cognos® Connection, click the set properties button on the actions toolbar to the right of the report.

2. Click the Report tab for a Report Studio report, the Query tab for a Query Studio report, or the Analysis tab for a Analysis Studio report.

3. Under Default action, select the default action for when the report is run.

4. If you want to override report options, under Report options, click the Override the default values check box.
   
   You can change some or all of the options, such as format, language, and accessibility support.
   
   For information about setting advanced PDF options, see "Set Advanced PDF Options for a Report" (p. 426).

5. If you want to prompt for values to filter the data in the report, click select the Prompt for values check box under Prompt Values.
   
   Note: You are prompted for values only if the report specification or model includes prompts or if you have access to multiple data source connections or signons.
6. If you want to run the report using the owner credentials, click the check box next to the owner listed under Run as the owner.

7. To set additional report options, click Advanced options.
   - Under Number of rows per Web page in HTML reports, click the number of rows you want to allow.
   - To allow such features as drill up and drill down, drill through, IBM Cognos Search, watch rules, and agent notification when the report is viewed in IBM Cognos Viewer, select Enable selection-based interactivity in HTML reports.
   - If you want to allow the creation of additional output formats so that watch rules can be evaluated and saved output versions can be imported into IBM Cognos for Microsoft® Office, select Enable enhanced user features in saved output versions.
   - If you want users to receive alerts when new report output is generated, select Enable alerts about new versions.
   - To create an expiry date for the report cache data, select Day or Month and type a corresponding number under Cache duration. Report cache data is created only if there is no cache data or if the cache data is expired.

8. Click OK.

Set Report Options for the Current Run

You can set the following options for the current run of a report:

- report output format (p. 431)
- language (p. 433)
- delivery method (p. 449)
- prompt for values (p. 435)

These options override the defaults for a report for a one-time run.

Tip: You can also force database access by clicking More next to the report, and then clicking Clear the cache.

You can change default run options for reports (p. 421)

If you change the delivery method while a report is running, the run operation is canceled. The report is run again using the new delivery method that you select. This can be time-consuming for large reports. To save time, specify the delivery method before you run the report.

To specify a time for the report to run, to choose additional formats or more than one language, or for additional delivery methods, use advanced run options (p. 423).
You must have execute permissions for the report you are attempting to run. You must have read and traverse permissions for the folder that contains the report.

Steps

1. In IBM® Cognos® Connection, click the run with options button on the actions toolbar to the right of the report you want to run.

2. Under Format, click the format that you want for the report output.

3. Under Accessibility, select Enable accessibility support to create accessible report output.

4. Under Language, click the language that you want for the report output.

5. Under Delivery, choose to view the report now, save the report, print the report, or send the report your mobile device.

6. If you choose to print, click Select a printer, click the button next to the printer you want to use, and click OK. If the printer is not listed, you can type the printer information.

Tip: If you have administrator privileges and want to set up the printer for future use, click New printer. You must type the network address of the printer by using the format \server_name\printer_name for a network printer on a Microsoft® Windows® operating system installation and printer_name for a UNIX® operating system installation or for a local printer.

7. If you want to prompt for values to filter the data in the report, under Prompt Values, click the Prompt for values check box.

You are prompted for values only if the report specification or model includes prompts or if you have access to multiple data source connections or signons.

8. Click Run.

Set Advanced Report Options for the Current Run

You can specify the following advanced run options for a report for the current run:

- time when the report should run
- multiple report output formats if you choose to run the report later and additional format choices for HTML and PDF (p. 431)
- one or more languages (p. 433)
- accessibility support (p. 437)
- one or more delivery methods (p. 449)
- prompt for values (p. 435)
- burst the report (p. 449)

The report runs in the background if you run the report later, select multiple report formats or languages, select to save, print or email the report, send the report to your mobile device, or burst
the report. If you set your preferences to show a summary of the run options (p. 325), the summary appears whenever the report is not run interactively.

The report runs in the background. When done, the output versions button appears next to the report on the Actions toolbar.

**Tip:** Click the output versions button to view the selected formats. For more information, see "View Report Output Versions" (p. 438).

Default options are set by the report author. You can change default run options for reports "Set Default Report Options" (p. 421).

If you choose to save, print, or send the report by email, you can choose multiple formats. If you choose to run the report later, the delivery option is automatically changed to save. For more information on saving report output, see "Save Report Output" (p. 436).

You must have execute permissions for the report you are attempting to run. You must have read and traverse permissions for the folder that contains the report. You need the appropriate permissions to set advanced run options.

**Steps**

1. In IBM® Cognos® Connection, click the run with options button on the actions toolbar to the right of the report you want to run.

2. Click **Advanced options**.

3. Under **Time and mode**, click **Run in the background**, and then click **Now** or **Later**. If you specify **Later**, set a date and time for the report to run.

4. Under **Format**, click the formats you want for the report output.

   - The Enable selection-based interactivity check box is selected by default. For information about deselecting this option, see "Disable Selection-based Interactivity" (p. 447).

5. Under **Accessibility**, select **Enable accessibility support** to create accessible report output.

6. If you want to select a different or additional languages for the report, under **Languages**, click **Select the languages** and use the arrow keys to move the available languages to the Selected languages box and click **OK**.

   **Tip:** To select multiple languages, use the Ctrl key or use the Shift key.

7. Under **Delivery**, choose the delivery method that you want:

   - If you schedule a report for a future time, select multiple formats or languages, or burst the report. You cannot view the report now. Select one of the other delivery methods.

   - If you choose to print, click **Select a printer**. Click the button next to the printer you want to use and click **OK**. Or, if the printer is not listed, you can type the printer information.

   - If you choose to save using report view, you can change the name or destination folder of the report view. Click **Edit the save as options**, make the changes and click **OK**.

   - If you choose to email the report, proceed to step 7.
Tip: If you have administrator privileges and want to set up the printer for future use, click **New printer**. You must type the network address of the printer by using the format `\server_name\printer_name` for a network printer on a Microsoft® Windows® operating system installation and `printer_name` for a UNIX operating system installation or for a local printer.

- If you choose to send the report to your mobile device, enter your **Mobile device ID**.

8. If you select **Send the report by email**, click **Edit the email options** and set the following options:

- To display the blind copy field, click **Show Bcc**.

- To choose IBM Cognos Business Intelligence recipients, click **Select the recipients**. Select the check box next to the names you want to include, and click **To**, **Cc** (copy), or **Bcc** (blind copy). The entries that you select are listed under **Selected entries**.

  **Tip:** To select all entries in a list, click the check box in the upper-left corner of the list. To remove names from **Selected entries**, select the check box next to the name and click **Remove**. To search, click **Search**. In the **Search string** box, type the phrase you want to search for. For advanced search features, click **Edit**. For more information, see "Search for an Entry" (p. 323).

  When you are done, click **OK**.

- To send the email to other recipients, in the **To**, **Cc**, or **Bcc** boxes, type the email addresses separated by semicolons (;).

  **Tip:** If you logged on, your name automatically appears in the **To** list box.

- Under **Subject**, type the subject of the email.

- Under **Body**, type a message to be included in the email.

  **Tip:** By default, the body of the email is in HTML format, which provides advanced editing features such as font type and size, text color, text formatting and justification, numbers and bullets, indentation, and tables. To use plain text, click **Change to plain text**.

Note: To insert HTML format from an external source, you must view the text in a Web browser, and then copy and paste the rendered HTML into the e-mail body. If HTML text is manually typed in the body of the e-mail, the markup is treated as plain text. For security reasons, the email options dialog accepts a limited set of HTML elements and attributes. If your pasted HTML is not accepted by the validation schema you might receive the following error message: The "VALIDATE" transform instruction could not validate the given XML content.

- To include a hyperlink to the report, select the **Include a link to the report** check box. To include the report as an attachment, select the **Attach the report** check box.

- Click **OK**.

You can prevent users from including attachments. For more information, see "Disable Report Attachments in Email Messages" (p. 676).
9. If you want to be prompted for values to filter the data in the report, under **Prompt Values**, select the **Prompt for values** check box.

   If you run the report later, the prompt values you provide are saved and used when the report runs.

   **Note:** You are prompted for values only if the report specification or model includes prompts or if you have access to multiple data source connections or signons, even if the Prompt for values check box is selected.

10. Under **Bursting**, specify whether the report should be bursted.

   This option is available only if the report author defined burst keys in the report.

11. Click **Run**.

## Set Advanced PDF Options for a Report

Using the advanced PDF options, you can control access to the PDF report output and the report contents.

You must have administrator privileges to the report to use the advanced options.

### Steps

1. In IBM® Cognos® Connection, click the set properties button on the actions toolbar to the right of the report you want to run.

2. Click the **Report** tab for a Report Studio report, the **Query** tab for a Query Studio report, or the **Analysis** tab for a Analysis Studio report.

3. Click the **Override the default values** check box.

4. Under **PDF options**, click **Set**.

5. In the **Set the PDF options** page, select the PDF properties you want for the report, and click **OK**.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>Specifies the report orientation, which is portrait or landscape</td>
</tr>
<tr>
<td>Paper size</td>
<td>Specifies the paper size, such as legal or letter</td>
</tr>
<tr>
<td>Requires a password to open the report</td>
<td>Specifies the password to open the report</td>
</tr>
<tr>
<td>Requires a password to access options</td>
<td>Specifies the password for accessing report options, such as whether to allow printing, modifying the report contents, and copying text</td>
</tr>
</tbody>
</table>
When you run the report, the PDF settings are applied. For example, if you specified a password to open the report, then users must enter the password before viewing the contents of the report. You can now customize PDF format printing for UNIX® and Linux® server platforms. For more information, see Customizing Server-side Printing for UNIX and Linux Platforms.

Create a Report

You can create reports to analyze data and answer specific questions related to your business. Use Query Studio to intuitively explore data by creating ad hoc reports. Report Studio is a comprehensive report authoring environment. Use it to create both highly interactive and sophisticated production reports for mass consumption by specifying queries and layouts for each report. Use Analysis Studio for analyses.

Access to the report authoring tools is controlled by the capabilities defined for your logon. If you require access to the report authoring tools but the links are not available on the top navigation bar, contact your system administrator.

An existing report may contain most of the information you require, but you may need new prompt values or changes to the layout or style. Instead of creating a new report, you can create a report view to satisfy your requirements (p. 428).

For instructions about using the studios, see the following guides:

- Query Studio User Guide
- IBM® Cognos® Report Studio User Guide
- IBM Cognos Analysis Studio User Guide

Before creating a report, confirm that the package containing the data for your report is available in the portal. If you do not have access to the package, contact your administrator.

Tip: A package is identified by the package icon.

You must have write and traverse permissions for the folder in which you want to save the new report.

Steps

1. In IBM Cognos Connection, choose whether you want to create a simple or complex report:
   - To create a simple report, in the upper right corner, click the Query Studio link.
   - To create a complex report, in the upper right corner, click the Report Studio link.
   - To create an Analysis Studio report, in the upper right corner, click the Analysis Studio link.

2. If the Select Package dialog box appears, do one of the following to select the package containing the data you want to use in your report:
   - In the Recently used packages list, click the package.
In the **List of all packages** list, navigate to the package and click it.

**Creating a Query Studio Report Without Using Actual Data**

You can create a report without accessing the data that will eventually be used in the report. Query Studio’s preview mode lets you create or modify reports without retrieving actual data from the database. Instead, simulated data is shown.

For more information about preview mode, see the Query Studio *User Guide*.

You can make preview mode the default for Query Studio. For more information, see "Start Query Studio in Preview Mode" (p. 660).

**Create a Report View**

You can create a report view, which uses the same report specification as the source report, but has different properties such as prompt values (p. 435), schedules, delivery methods, run options, languages (p. 433), and output formats (p. 431).

Creating a report view does not change the original report. You can determine the source report for a report view by viewing its properties. The report view properties also provide a link to the properties of the source report.

If the source report is moved to another location, the report view link is not broken. If the source report is deleted, the report view icon changes to indicate a broken link, and the properties link to the source report is removed.

If you want to use a generic report as the underlying structure for additional reports, make a copy of the report (p. 315). If you want a report to appear in more than one location, create a shortcut (p. 304).

To create a report view, you must have execute or read permissions for the original report.

**Steps**

1. In *IBM Cognos® Connection*, locate the report you want to use to create the report view.

2. Under **Actions**, click the report view button next to the report.

3. In the **Name** box, type the name of the entry.

4. If you want, in the **Description** and in the **Screen tip** box, type a description of the entry.

   The description appears in the portal when you set your preferences to use the details view (p. 325). The screen tip, which is limited to 100 characters, appears when you pause your pointer over the icon for the entry in the portal.

5. If you do not want to use the target folder shown under **Location**, click **Select another location** and select the target folder and click **OK**.

6. Click **Finish**.
In the portal, report view entries are identified by the report view icon 📊. The report view has the same run options and properties as the original entry. To change the default properties of a report view, see "Set Default Report Options" (p. 421). For information about properties, see "Entry Properties" (p. 307).

**View Lineage Information for a Data Item**

Lineage information traces the metadata of a data item in an HTML report or a report view back through the package and the data sources used by the package. Lineage also displays any data item filters that were added by the report author, or that were defined in the data model. For example, you can click a cell in a crosstab to see how the cell value was calculated.

You can view the data item's lineage in the **Business View** or in the **Technical View**.

The business view shows high-level textual information that describes and explains the data item and the package from which it comes. This information is taken from IBM® Cognos® Connection and the Framework Manager model.

The technical view shows a graphical representation of the lineage of the selected data item. The lineage traces the data item from the package to the data sources used by the package. When you click the item, its properties appear at the bottom of the page. If you click an item in the **Package** area, you see the item's model properties. If you click an item in the **Data Sources** area, you see the item's data source properties.

You cannot view lineage information when running a report from a mobile device.

IBM® Cognos® Business Intelligence can be configured to use the default lineage solution that comes with the product, or a custom lineage solution. IBM InfoSphere™ Metadata Workbench is also supported.

To access lineage information in a report, an administrator must configure the lineage solution, enable the **Lineage** capability, and grant read permissions for you on the report.

For more information, see "Configure the Lineage Solution" (p. 190), "Secured Functions and Features" (p. 283), and "Object Capabilities" (p. 293).

**IBM Cognos Lineage and Drill-down Actions**

The IBM Cognos lineage solution shows lineage on reports at their highest level. The lineage does not change after drilling down on a report. Because the selection context used to launch lineage can be affected by drill-down actions, we recommend that you always launch lineage at the highest report level before drilling down on the report. Otherwise, the lineage may not launch properly.

**Steps**

1. Open an HTML report or report view in IBM Cognos Viewer.
2. Right-click the data item you want, and click **Lineage**.
   
   The lineage views appear.
Access the IBM InfoSphere Business Glossary

If you already use the IBM® InfoSphere™ Business Glossary, you can access the Glossary from IBM Cognos® Viewer, and from the metadata tree in Report Studio, Query Studio and Analysis Studio.

Before you can access the Glossary, you must have permissions for the Glossary capability, and the Glossary URI must be configured by an administrator.

For more information, see "Secured Functions and Features" (p. 283), "Object Capabilities” (p. 293), and "Configure the IBM InfoSphere Business Glossary URI" (p. 191).

Steps for IBM Cognos Viewer
1. Open an HTML report or report view in IBM Cognos Viewer.
2. Right-click the data item you want, and click Glossary.

Edit a Report

You can use the IBM® Cognos® Business Intelligence authoring tools to edit an existing report. You may want to change the report layout, style, or font. The report may need to be updated because of changes to the data or to add language support.

If the report was created in Report Studio, you can edit the report in Report Studio. If the report was created in Query Studio, you can edit the report in either Query Studio or Report Studio. If you edit a Query Studio report in Report Studio, you cannot go back and edit the report in Query Studio. For more information about modifying reports, see the IBM Cognos Report Studio User Guide, and the Query Studio User Guide.

If the report was created in Analysis Studio, you can edit the report in either Analysis Studio or Report Studio. If you edit an Analysis Studio report in Report Studio, you cannot go back and edit the report in Analysis Studio. For more information about modifying Analysis Studio reports, see the Report Studio User Guide, and the Analysis Studio User Guide.

The edit button differs depending on whether the report is a Query Studio report, a Report Studio report, or an Analysis Studio report.

Editing a report modifies the report specification so that everyone who views the report sees the changes you made.

Report properties, such as the preferred output format, language, prompt values, or report retention, can be specified by changing the run options in the portal (p. 420). For information about properties, see "Entry Properties" (p. 307).

If you want to use a generic report as the underlying structure for additional reports, make a copy of the report (p. 315). If you want a report to appear in more than one location, create a shortcut (p. 304). If you want to keep the underlying report specifications but want the choice of another report format, language, delivery method, or run option, create a report view (p. 428).
You must have read and write permissions for the report you are attempting to edit. You must have traverse permissions for the folder containing the report.

**Step to Edit a Report in IBM Cognos Connection**
- In IBM Cognos Connection, click the open button on the Actions menu for the report you want to edit.

The report opens in the authoring tool used to create the report.

**Step to Edit a Query Studio Report in Report Studio**
- Click the More link on the actions toolbar and click Edit with Report Studio

**Report Formats**

You can choose the output format for a report. You may want to view reports in a browser, or you may want the report in a format that is easily imported into another application.

You can choose from the following formats:
- HTML (p. 431)
- HTML fragment (p. 431)
- XHTML (p. 431)
- XML (p. 432)
- PDF (p. 432)
- Microsoft® Excel 2002 (p. 432)
- Excel 2007 (p. 432)
- Delimited text (CSV) format (p. 433)

You can specify the default format to be used when a report is run (p. 421). All shortcuts to a report acquire the default format from the source entry.

You can specify the report format in the run options page (p. 422), in the report properties (p. 307), or in your preferences (p. 325). When you run a report without specifying run options, the format specified in the report properties is used. When it is not specified in the report properties, the format specified in your preferences is used.

XHTML and some PDF formats are only available when you set advanced run options (p. 423). You can also select multiple formats when you set advanced run options.

To specify the report format, you must have read and write permissions for the report and traverse permissions for the folder that contains the report.

**HTML Formats**

You can select from the following HTML formats:
- HTML for standard HTML formatting
• HTML fragment if you must embed the HTML in an existing Web page

• XHTML for HTML that is passed through a parser

To select an HTML fragment and XHTML or the number of rows per web page, see "Set Advanced Report Options for the Current Run" (p. 423).

XML Format

XML report outputs save the report data in a format that conforms to an internal schema, xml-data.xsd. You can find this schema file in c10_location/bin.

This format consists of a dataset element, which contains a metadata element and a data element. The metadata element contains the data item information in item elements. The data element contains all the row and value elements.

You can create models from reports and other data that conform to the xml-data.xsd schema. This is useful if you want to use a report as a data source for another report, or if you use a database that cannot be read by Framework Manager. In this case, export the data from the data source to an XML file, in conformance with the xml-data schema, and then open the XML file in Framework Manager.

For more information, see the Framework Manager User Guide.

PDF Format

Use the PDF format to view and distribute reports in an online book format.

You must have administrator privileges to specify the advanced PDF options.

For more information about setting advanced PDF options, see "Set Advanced PDF Options for a Report" (p. 426).

Microsoft Excel Formats

IBM® Cognos® Business Intelligence can produce reports in Microsoft® Excel spreadsheet software format. The following options are available:

• Excel 2007 will produce reports that you can view in Microsoft Excel version 2007.

• Excel 2002 will produce reports that you can view in Microsoft Excel versions earlier than 2007.

Excel 2007 format renders report output in native Excel XML format, also known as XLSX, that provides a fast way to deliver native Excel spreadsheets to Microsoft Excel 2002, Microsoft Excel 2003, and Microsoft Excel 2007. Users of Microsoft Excel 2002 and Microsoft Excel 2003 must install the Microsoft Office Compatibility Pack, which provides file open and save capabilities for the new format. The output is similar to other Excel formats, with the following exceptions:

• Charts are rendered as static images.

• Row height can change in the rendered report to achieve greater fidelity.

• Column width that are explicitly specified in reports are ignored in Microsoft Excel 2007.
Merged cells are used to improve the appearance of reports.

Excel 2002 format also offers the following benefits:

- Works with SSL protocol.
- Works with a single signon.
  Secure reports can be accessed without subsequent signons because the system automatically identifies users and provides security information.
- Works with Netscape 7.01.
- Spreadsheets are contained in a single file for reliable spreadsheet navigation.

By default, Excel 2002 spreadsheets sent by email are created in Excel Multipart HTML format with the .mht file extension. Administrators can change the default file extension to .xls using an advanced settings parameter. For more information, see "Change the Default File Extension for Excel 2002 Spreadsheets" (p. 679).

CSV Format

Reports saved in delimited text (CSV) format open in the application associated with the .csv file type, usually Microsoft® Excel spreadsheet software, Microsoft Windows® Wordpad, or Star Office.

Reports saved in CSV format

- are designed to support Unicode data across many client operating systems
- are UTF-16 Little Endian data-encoded
- include a BOM (Byte Order Mark) at the beginning of the file
- are tab-delimited
- do not enclose strings in quotation marks
- use a new line character to delimit rows
- show only the results of a report query. Page layout items, such as titles, images, and paramDisplay values do not appear in the CSV output.

You can modify the CSV output format to suit your environment. For more information about customizing the functionality of IBM® Cognos® software, see "Modify Properties for the CSV Output Format" (p. 666).

Report Languages

You can choose the languages for a report. You can specify the report language on the run options page (p. 422), in the report properties (p. 307), or in your preferences (p. 325). When you run a report, the language specified in the report properties is used. When it is not specified in the report properties, the language in your preferences is used.

You can run a report using the default language (p. 420), select a different language for a single run of the report (p. 422), or select more than one language for a report (p. 423).
You can add multilingual properties for each of the entries in the portal (p. 434). You can specify the default language to be used when a report is run (p. 421).

Selecting a language for your report does not change the language used in the portal. You can change the language used in the portal interface by personalizing the portal (p. 325). All shortcuts to a report acquire the default language from the source entry.

To specify the report language, you must have read and write permissions for the report and traverse permissions for the folder that contains the report (p. 275).

The package used to create the report must contain multilingual data before the report outputs are shown in the selected languages. For more information about packages, see "Packages" (p. 401).

**Report Languages When Using an SAP BW Data Source**

When a report runs, the report server connects to the underlying data source to obtain data. When using an SAP BW data source, if the SAP BW server does not support the language associated with your content locale, IBM Cognos Business Intelligence checks a locale map for a corresponding locale. If the SAP BW server supports the language for the corresponding locale, this language is used. Otherwise, the report runs using the default language installed on the SAP BW server.

**Add Multilingual Properties**

You can set multilingual properties for each of the entries in the portal. You can add a name, screen tip, and description for each of the locales defined by your administrator. A locale specifies linguistic information and cultural conventions for character type, collation, format of date and time, currency unit, and messages.

If the entry has multilingual properties defined for the selected language, the entry shows the properties. If the entry does not have multilingual properties defined, they are empty.

For information about changing the language to be used by the portal, see "Personalize the Portal" (p. 325).

**Steps**

1. In IBM Cognos Connection, click the set properties button next to the entry you want to change.
2. Click the General tab.
3. Under Language, select a language from the list.
   - Languages that already have multilingual properties defined appear at the top of the list above a separator line.
4. If you want, type a description in the Name, Description, and Screen tip box.
   - The name appears in the list of portal entries. The description appears when you set your preferences to use the details view (p. 325). The screen tip, which is limited to 100 characters, appears when you pause your pointer over the icon for the entry in the portal.
   - **Tip:** To remove multilingual properties for a language, select the language in the list and click Remove values for this language.
5. Click OK.

**Specify the Default Language for a Report**

To specify the default language for a report, change the report properties.

**Steps**

1. In IBM Cognos® Connection, click the set properties button next to the report you want to change.
2. On the **Report options** tab, under **Language**, select the default language from the list box and click OK.

**Specify the Default Prompt Values for a Report**

You can use prompt values to specify the range of data included in a report when it is run. For example, you can specify a date range that is a subset of the dates available in the report.

You may be prompted for values if the report author defines prompts in the report or if there is more than one connection or signon. For information about adding prompts to reports, see the IBM Cognos® Report Studio *User Guide*, the Query Studio *User Guide*, or the Analysis Studio *User Guide*.

If you are the report author, you can create default prompt values for a report. When the report is run, the data is automatically filtered based on the prompt values that you specify. The user does not have to specify prompt values when the report is run. You may find this useful if most users use the same prompt values each time they run a report.

If you have write access to a report and change the prompt values, those values are saved for everyone running the report after you. If you consistently use prompt values that differ from the majority of users, create a report view of the report (p. 428) in your personal folders.

By default, you are prompted for values each time the report runs. You can change this in the report properties (p. 307) or when you set run options for a report (p. 422).

To set default prompt values, you must have read and write permissions for the report and read or traverse permissions for the folder that contains the report.

**Steps**

1. In IBM Cognos Connection, click the set properties button next to the report you want to change.
2. On the **Report** tab for Report Studio reports, the **Query** tab for Query Studio reports, or the **Analysis** tab for Analysis Studio reports, under **Prompt values**, click either **Set** or **Edit**.
   
   If the report does not have saved prompt values, the run options show **No values saved** and clicking **Set** results in a message indicating that the report does not contain prompts.

3. Select the default value for the prompts and click OK.
4. If you want to be prompted each time the report is run, select the **Prompt for values** check box. If the check box is selected, you will be prompted for values if the report contains prompts or if you have access to multiple data source connections or signons. If the check box is not selected and the report is run interactively, you will be prompted only if there are missing values or if you have access to more than one connection or signon. The report will have missing values if saved prompts or default prompts were specified for the report. If the check box is not selected and the report is run in the background, the report fails if prompt values are missing.

5. Click **OK**.

**Save Report Output**

All report output is stored automatically in IBM® Cognos® Business Intelligence. You may also be able to save copies of reports in other file locations:

- in IBM Cognos BI so that it can be used again and for archive purposes
- outside of IBM Cognos BI for use in external applications such as web sites and for use by people who don’t have access to IBM Cognos BI

You select how to save report copies as a delivery option.

You can also choose how to save a report when you schedule it (p. 365).

Before you can save report output to file locations, your administrator must set up the locations.

For more information about setting up file locations, see "Saved Report Output" (p. 186).

**Steps**

1. In IBM Cognos Connection, click the run with options button on the actions toolbar to the right of the report you want to run.

2. Click **Advanced options**.

3. Under **Time and mode**, click **Run in the background**, and then click **Now** or **Later**.

4. Under **Delivery**, choose where you want to save your report:
   - To save a copy in IBM Cognos BI, click **Save**. Then, click **Save the report** or **Save the report as report view**. If you choose to save as report view, you can change the name or destination folder of the report view. Click **Edit the options**, make the changes and click **OK**.
   - To save a copy outside IBM Cognos BI, click **Save to the file system**. To change the report name, click **Edit the options**. You can also change how file conflict is resolved. Click **Keep existing files** to not overwrite existing files, **Replace existing files** to simply overwrite existing files. Click **Make the file names unique and append a timestamp** or **Make the file names unique and append a sequence number** to avoid overwriting existing files by making new files with unique timestamps or sequence numbers and click **OK**.
5. If more than one file location is defined, select the location where you want to save from the Location list.

6. Click Run.

Enable Accessible Report Output

Accessible reports contain features, such as alternate text, that allow users with disabilities to access report content using assistive technologies, such as screen readers. In IBM® Cognos® applications, you can create accessible output for reports, jobs, steps within jobs, and scheduled entries in PDF, HTML, and Microsoft® Excel spreadsheet software 2007 format.

You can enable accessible report output in the following ways:

- in the IBM Cognos Report Studio run options, so that the report has accessibility features enabled when you run the report from within Report Studio.
- in IBM Cognos Connection as a run option, so that report consumers can run the report once with accessibility features.
- in IBM Cognos Connection as a property on the Set Properties dialog box, so that report consumers can always run the report with accessibility features.
- in IBM Cognos Connection, as a user preference, so that report consumers can enable accessibility features for all of their reports. Accessibility settings in the report properties overwrite this setting.
- in IBM Cognos Administration, as a server-wide option, so that all reports for all IBM Cognos users have accessibility features enabled. Accessibility settings in the user preferences and report properties overwrite this setting.

For information about specifying system-wide accessibility settings, see "Enable Accessible Report Output Using System-wide Settings" (p. 189).

Accessible reports require more report processing and have a greater file size than non-accessible reports. Consequently, making reports accessible can have a negative impact on performance.

Steps to enable accessible report output using the run option

1. In IBM Cognos Connection, click the run with options button on the actions toolbar to the right of the report you want to run.

2. Under Accessibility, select Enable accessibility support.

Steps to enable accessible report output using set properties

1. In IBM Cognos Connection, navigate to the report, and in the Actions column, click Set properties.

**Steps to enable accessible report output as a user preference**

1. In IBM Cognos Connection, click the my area options icon and click My Preferences.
2. On the General tab, click Enable accessibility support for reports I run or schedule.

**Steps to enable accessible output for a scheduled entry**

1. In IBM Cognos Connection, click the schedule button for the entry you want to schedule.
2. Under Options, select Override the default values.
3. Under Accessibility, select Enable accessibility support.

**Steps to enable accessible output for a job**

1. In IBM Cognos Connection, in the Actions column, click the set properties button for the job.
2. Click the Job tab and under Defaults for all steps, click Set.
3. Click Report options.
4. If it is not already selected, select Specify default values for all the reports of this job.
5. Under Accessibility, select Enable accessibility support.

**Steps to enable accessible output for a step in a job**

1. In IBM Cognos Connection, in the Actions column, click the set properties button for the job.
2. Click the Job tab and in the Steps section, select the step.
3. In the Options and prompt values column, click the edit icon for the step.
4. Under Report options, select Override the default values, and select Enable accessibility support.
   
   Note that the report options specified for the step appear in the Options and prompt values column in the Job tab. To edit the report options again, click the edit icon. To revert to the default settings, click the clear icon.

**View Report Output Versions**

Reports are run directly against the data source so that they reflect the latest data. However, viewing the most recent data may not always meet your needs. You may want to view older data. For example, you may want to compare monthly sales volume for a product before and after new features are added.
The report output is saved when a report runs in the background. A report cannot be viewed at the time it is run when it

- runs later
- has multiple formats or languages
- has a delivery method of save, print, or email
- is a burst report

Report output versions are listed by report format (p. 431). By default, the list contains report output versions for the language that is defined in your content locale. If no reports versions are found for that language, report formats for all languages are shown.

If burst keys are used, they appear next to the report format sorted by burst key and then by language.

You can specify how long you want to keep report output (p. 439).

**Steps**

1. In IBM® Cognos® Connection, click the view report output versions button next to a report that has multiple output versions.

2. Choose the output version that you want to view:
   - To show report formats in a specific language or all languages, click Languages and select from the list.
   - To show a different output version, select the version from the Versions list.
   - To show the current version, click the report format.

   **Tip:** To delete a version that you have write access to, click Manage versions, select the versions that you want to delete, click Delete and then click the close button to return to the review report output versions page.

3. If you want to download a report output version, click the download icon in the Actions column.

You control the report output formats that are available for download. For more information, see "Customize Report Output Formats in IBM Cognos Connection and IBM Cognos Viewer" (p. 649).

**Specify How Long to Keep Report Output**

You can keep report output for a specific number of runs or for a specific number of days or months. For example, you can keep the report output for the ten latest occurrences or you can keep the report output for the 2 days or 6 months. You can also choose to keep all report output.
You must have read and write permissions for the entry and read or traverse permissions for the folder that contains the entry.

**Steps**

1. Click the set properties button \( \square \) next to the entry you want.
2. On the *General* tab, under *Run history*, choose the retention method and type the value:
   - To keep report output for a specific number of occurrences, click *Number of occurrences* and type the number. To save an unlimited number of report outputs, set this value to 0.
   - To keep report output for a specific length of time, click *Duration* and click either *Days* or *Months*. Type the appropriate value in the box.
3. Click OK.

**Enable an Alert List for a Report**

Granting permission for an alert list lets the report user decide whether to be alerted when new versions of the report output become available. Whenever the report is run and report output is saved, the report user is alerted by email as a Bcc recipient. The email contains a link to the latest report output.

The permission to enable an alert list for a report does not extend to a report view associated with the report. You must grant permission for the report view independently.

The alert list is independent of any distribution lists associated with the report (*p. 451*).

To grant permission for an alert list, you must have write permission.

**Steps**

1. In IBM® Cognos® Connection, click the set properties button next to the report for which you want to enable an alert list.
2. On the *Report* tab for Report Studio reports, the *Query* tab for Query Studio reports, or the *Analysis* tab for Analysis Studio reports, click *Advanced options*, and then click the *Enable alerts about new versions* check box.
3. Click OK.

Users can now add their names to the alert list for notifications of the report outputs.

**Add Yourself to or Remove Yourself from the Alert List for a Report**

By adding yourself to the alert list for a report, you receive an email notification when new versions of the report output are saved. In this way, you can monitor changes in the output of reports that are of interest to you. If you no longer want to receive notifications about new versions of a report, you can remove yourself from an alert list.
In the email, you are included as a Bcc recipient. The email contains a link to the latest report output. Being on the alert list is independent of any distribution lists associated with the report (p. 451).

You can view and manage the alert list for a report as a watch item.

You can add yourself only once to the alert list for a report.

Before you can add yourself to an alert list for a report, the report owner must enable the alert list. To receive alerts, you must have an email address defined in the My Preferences, Personal tab or in your LDAP security profile (used only in special circumstances). Also, you must belong to the same namespace as the person who schedules the report.

**Steps to Add Yourself to an Alert List in IBM Cognos Connection**

1. In the portal, locate the report.
2. In the Actions column, click More.
3. In the Perform an action page, click Alert me about new versions.
4. Click OK.

In the My Watch Items area of the portal, note the change in the watch list.

**Steps to Remove Yourself from an Alert List in IBM Cognos Connection**

1. In IBM® Cognos® Connection, click My Area Options, My Watch Items.
2. On the Alerts tab, from the list of alerts, select the alerts to delete.
3. Click Remove me from the alert list.

**Steps in IBM Cognos Viewer**

1. Open the saved report output.
2. On the toolbar, under Watch New Versions, click Alert Me About New Versions or Do Not Alert Me About New Versions.

**Remove Users From an Alert List**

Report authors can remove any users who are currently on the alert list for a report. When users are removed from an alert list, they are no longer alerted when new versions of the report become available.

**Steps**

1. In the portal, locate the report.
2. In the Actions column, click More.
3. In the Perform an action page, click Do not alert any about new versions.
Watch Rules in Saved Reports

Report users define watch rules in IBM® Cognos® Viewer so that they can monitor events of interest to them in saved reports. You can view and edit watch rules in a single location from the My Watch Items area in IBM Cognos Connection.

Watch rules are based on numeric event conditions that are evaluated when a report is saved, not when the report runs interactively. When an event condition is satisfied, an email message or news item alerts the report user. Alternatively, the report user can alert other users by sending notifications to their task inbox.

There are two types of watch rule for a saved report:

- **Watch rules that send an alert when a specific condition is satisfied** (p. 443)
  
  For example, you could set up a watch rule that sends an alert when sales figures for a product fall below a specific level.

- **Watch rules that send different alerts depending on the status of a condition** (p. 443)

  In this case, you set up thresholds to map a range of numeric values to performance status (good, average, and poor). You define the threshold boundaries, and the association between boundary values and status.

  For example, you could set up a watch rule that sends different alerts to a sales team depending on the sales figures for a product. If sales fall below 50 (the minimum threshold), the performance is poor. The alert for poor performance may be to send an urgent notification to the sales manager to review the figures. When sales exceed 100 (the maximum threshold), the performance is good. The alert for good performance may be to distribute the sales figures to the team.

You can create event conditions using numeric measures only in saved HTML reports. You can define an unlimited number of conditions for a report. The conditional report output uses the same locale information as the report that contains the event condition.

The report owner must enable watch rules for the report (p. 442) before a report user can create watch rules and send alerts.

To create watch rules, the report user must have read and traverse permissions to the report output.

Enable Watch Rules for a Report

Enabling watch rules lets the report user specify conditions in saved HTML report output, and send alerts based on these conditions.

For information about creating a watch rule, see "Create a Watch Rule for a Specific Condition" (p. 443) and "Create a Watch Rule for Different Condition Status Indicators" (p. 443).

You must have write permission for the report to enable watch rules for a report.

**Steps**

1. In IBM® Cognos® Connection, click Set properties next to the report.

2. On the Report tab for IBM Cognos Report Studio reports, or the Analysis tab for IBM Cognos Analysis Studio reports, under Advanced options, select both the Enable selection-based inter-
activity in HTML reports and Enable enhanced user features in saved output versions check boxes.

Selecting these options specifies that additional context information is saved with the report output.

3. Click OK.

Report users can now run the report and save the output in HTML format before creating watch rules.

Create a Watch Rule for a Specific Condition

You can set up a watch rule to send an alert when a specific condition in a saved report is satisfied.

**Note:** You can only create watch rules for reports saved in HTML format.

You must have read and traverse permissions to the report output to create watch rules.

**Steps**

1. Run the required report and save the output in HTML format.
   
   For more information, see "Set Report Options for the Current Run" (p. 422).

2. In the IBM® Cognos® Connection portal, open the saved HTML report in IBM Cognos Viewer.

3. In the report, right-click a numeric data item and then click Alert Using New Watch Rule.

4. In the Specify the rule - Alert Using New Watch Rule page, select Send an alert when the report contains.

5. In the conditional expression, from the drop-down list, select the expression to use for the watch rule, for example, \( \geq \) (greater than or equal), and specify a value in the box.

6. Under For the selected context, select the report items to which the rule applies.

7. Click Next.

You must now set up the alert details for the watch rule. For more information, see "Define the Alert Details for the Watch Rule" (p. 444).

Create a Watch Rule for Different Condition Status Indicators

You can set up a watch rule that sends alerts depending on a metric-like change in the performance status of a condition (good, average, or poor).

To set up the watch rule, use thresholds to map a range of numeric values to performance status. When setting up your threshold boundaries, you must decide whether low, medium, or high values are favorable for the condition. For example, if you are setting up a condition to monitor sales figures for a product, you would indicate that high values are favorable. This is known as the performance pattern.

You can only create watch rules in saved HTML reports.
You must have read and traverse permissions to the report output to create watch rules.

**Steps**

1. In the IBM Cognos® Connection portal, open the saved HTML report in IBM Cognos Viewer.
2. In the report, right-click a numeric data item, and then click **Alert Using New Watch Rule**.
3. In the **Specify the rule - Alert Using New Watch Rule** page, select **Send an alert based on thresholds**.
4. In the **Performance pattern** box, select the range of values to associate with "good performance" status.
5. In the **Threshold boundaries** box, specify the boundary values for the condition.
   **Tip:** For each boundary value, click the arrow attached to the numeric value box to adjust them as follows:
   - To include the specified boundary value in the higher threshold, click the up arrow.
   - To include the specified boundary value in the lower threshold, click the down arrow.
6. Under **For the selected context**, select the report items to which the rule applies.
7. Click Next.

You must now set up the alert details for the watch rule. For more information, see "**Define the Alert Details for the Watch Rule**" (p. 444).

**Define the Alert Details for the Watch Rule**

When you have defined the type of watch rule that you are creating, you must define the type of alert that you want to generate. You can choose one or more of the following options:

- **Send the report by email** to be alerted by email.
- **Publish a news item** to be alerted by news item.
- **Send a notification** to alert other users by sending notifications to their task inbox.

If you have set up a watch rule for different condition status indicators, you can define multiple alerts, depending on performance. For example, for average or poor performance, you could choose to be alerted both by email and by sending a notification to the sales manager to review the sales figures. For good performance, you could send a notification to the sales manager to distribute the figures to the sales team.

**Steps**

1. In the **Specify the alert type - Alert Using New Watch Rule** page, specify the alerts to send when the rule is satisfied.
   **Tip:** To change the details for an alert type, click **Edit the options**.
2. If you have defined a watch rule for different condition status indicators, select the required check boxes to associate the alert with poor, average, or good performance.
Performance is defined by the performance pattern.

Click Next.

3. In the Specify a name and description - Alert Using New Watch Rule page, specify a name, description, screen tip, and location for the watch rule.

Tip: You can organize watch rules in folders on the Rules tab of the My Watch Items area of the portal.

4. Click Finish.

View, Edit, or Delete a Watch Rule in IBM Cognos Viewer

You can use IBM® Cognos® Viewer to edit and delete watch rules you created in saved HTML reports.

For information about creating a watch rule, see "Create a Watch Rule for a Specific Condition" (p. 443), and "Create a Watch Rule for Different Condition Status Indicators" (p. 443).

You can also delete and edit watch rules from the My Watch Items area of the portal. For more information, see "My Watch Items" (p. 328).

You must have write access to edit or delete a watch rule.

Steps

1. Open the saved report output in IBM Cognos Viewer.

2. On the toolbar, click Watch New Versions and, then click
   - Modify to edit the watch rule. When the Set properties dialog box appears, proceed to step 3.
   - Delete to delete the watch rule, and then click OK to complete the deletion.

3. Click the General tab to change properties, such as the language, name, and description of the watch rule.

4. Click the Rules tab to edit the rules properties, such as the conditional expression for the rule, the items to which the rule applies, and the alert type.

Changes made to a watch rule in IBM Cognos Viewer are also made in the My Watch Items area of the portal.

Comments in Saved Reports

Report users can add comments to saved reports using IBM® Cognos® Viewer. Comments can be added to HTML, PDF and XML reports, but not Microsoft® Excel spreadsheet software or CSV reports.

Comments are added to a specific version of a report and are deleted with that report version. The comments are not available in other versions of a report, unless they are manually added by a report user.
Comments are included when a report is viewed online or when a burst report is distributed via the portal, but they are not included in printed or emailed reports.

Before a user can add comments, the report owner must enable comments in saved output versions. To add comments, a report user must have read permission to the report output. These comments are visible to all other users who have read permission to the report output. However, only the comment owner, or an administrator, can modify or delete comments.

**Enable Comments in Saved Output Versions**

Enabling comments lets a report user add comments to saved HTML, PDF or XML reports.

For information about adding comments, see "Add Comments to a Report Version in IBM Cognos Viewer" (p. 446).

To enable comments for a report, you must have write permission for the report.

**Steps**

1. In IBM® Cognos® Connection, click Set properties next to the report.
2. On the Report tab for Report Studio reports, the Query tab for Query Studio reports, or the Analysis tab for Analysis Studio reports, under Advanced options, select the Enable comments in saved output versions check box.
3. Click OK.

You must now run the report and save the report output in HTML, PDF or XML format before users can add comments to it.

**Add Comments to a Report Version in IBM Cognos Viewer**

Use comments to add simple, unformatted text notes to saved reports. You can add multiple comments to a report.

Comments can be added to HTML, PDF and XML reports only. You cannot add comments to other report formats.

You must have read permission to the report output to add comments to it.

**Steps**

1. Open the saved report output in IBM® Cognos® Viewer.
2. On the toolbar, click Add Comments and then click Add a Comment.
3. In the Add a Comment window, type the comment name and description.
4. Repeat steps 2 to 3 to add further comments as required.
5. Click Finish to save the comment.

Each comment is added to a drop-down list available from the Add Comments button.
View, Modify, or Delete Comments in IBM Cognos Viewer

Comments added by a report user can be viewed by all other users who have read permission to the report output. Only the comment owner, or an administrator, can modify and delete comments.

Tip: You can use the Search feature to find specific comments. For more information, see "Search for an Entry" (p. 323).

For information about adding comments, see "Add Comments to a Report Version in IBM Cognos Viewer" (p. 446).

Steps to View Comments
1. Open the saved report output in IBM Cognos® Viewer.

2. On the toolbar, click Add Comments and then select the required comment from the list of comments available.
   A summary of the comment appears, which includes the comment name and description, the date it was last modified, and the owner.

3. To view the full details of the selected comment, click View.
   The View Comment window appears.

4. Click Finish.

Steps to Modify Comments
1. Open the saved report output in IBM Cognos® Viewer.

2. On the toolbar, click Add Comments, select the required comment from the list of comments available, and then click Modify to edit the comment.
   The Modify Comments window appears.

3. Edit the comment name or description.

4. Click Finish.

Steps to Delete Comments
1. Open the saved report output in IBM Cognos® Viewer.

2. On the toolbar, click Add Comments, select the required comment from the list of comments available, and then click Delete.

3. Click OK to confirm that you want to delete the comment.

Disable Selection-based Interactivity

You can disable selection-based interactivity for an HTML report that is viewed in IBM Cognos® Viewer to shorten the time that it takes the report to run. After you disable this functionality, you cannot:
drill up and down in a report
• drill through to other reports
• use IBM Cognos Search
• use conditional report delivery
• use agent notification

If selection-based interactivity is enabled in IBM Cognos Connection, a user can perform drill up and down and drill-through actions in Report Viewer or Query Studio. If selection-based interactivity is disabled in IBM Cognos Connection, the ability to perform drill up and down and drill-through are disabled regardless of how the drill through definitions and settings are authored in Report Studio and IBM Cognos Connection.

Selection-based interactivity is enabled by default.

Tip: You can instead enable or disable selection-based interactivity for the current run only.

Click Run with options next to the report and then click Advanced options. Click Enable selection-based interactivity in HTML reports.

Steps

1. In IBM Cognos Connection, click the set properties button on the actions toolbar to the right of the report.

2. Click the Report tab for a Report Studio report, the Query tab for a Query Studio report, or the Analysis tab for an Analysis Studio report.

   Tip: Disabling selection-based interactivity on an Analysis Studio report has no effect.

3. Click Advanced options.

4. Clear the Enable selection-based interactivity in HTML reports check box.

Note that disabling selection-based interactivity on an Analysis Studio report has no effect.

Exclude Blank Pages in PDF Reports

When you generate a PDF report, all pages, including blank pages are included. You can specify that PDF reports do not include blank pages. This applies to all PDF reports.

You must be a server administrator to exclude blank pages.

Steps

1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Dispatchers and Services.

3. Click the dispatcher you want.
4. For the **ReportService**, in the **Actions** column, click the set properties button.
5. Click the **Settings** tab.
6. For the **Environment** category, next to **Advanced settings**, click the **Edit** link.
7. Select the **Override the settings acquired from the parent entry** check box.
8. In the **Parameter** column, type `rsvp.removeblankpages`.
9. In the **Value** column, type `true`.
10. Click **OK**.

**Distributing Reports**

You can distribute reports to other users to share information with them. In IBM® Cognos® Business Intelligence, you can distribute reports by

- saving them (p. 449) where other IBM Cognos users can access the reports at their convenience
- sending them to users by email (p. 450)
- printing them (p. 450)
- bursting them (p. 450)

You can schedule the distribution of your reports so that recipients receive the reports regularly (p. 365).

Recipients must have read permissions for the report and traverse permissions for the folder that contains the report.

When you attach a report to an email, the report is no longer secured by the IBM Cognos security system.

When sending a report by email, note that if you choose the recipient from a list, such as a group, role, or distribution list, you must have read access to both the list and the recipient’s email account. Otherwise, the report delivery fails. However, if you type the email address manually, read access is not required.

To distribute reports to more than one recipient, you can create distribution lists (p. 451), which contain references to users, groups, and roles. If a recipient is not part of the IBM Cognos security system, you can create a contact (p. 451) for that person and add it to a distribution list.

**Saving a Report**

You can share a report with others by saving the report in a location that is accessible to other users, such as in the public folders. Public folders typically contain reports that are of interest to many users.

You can save a report when you set options for the current run (p. 422) or you can use advanced report options (p. 423) to save a report in Report View (p. 428).
To share a report that is currently located in your personal folders, copy the report (p. 315), move the report (p. 316), or create a shortcut to the report (p. 304) and save it in the public folders.

For information about saving reports, see Query Studio User Guide, the IBM® Cognos® Report Studio User Guide, or the Analysis Studio User Guide.

### Sending a Report by Email

You can share a report with others by sending the report by email. This is especially useful if you want to share the report with a group of people who do not have access to the portal. To send a report by email, you must have Directory Administrator privileges.

You can attach reports to email (p. 423). You can also include a URL to the report in an email. Entries that are sent as attachments to emails are no longer secured by the IBM® Cognos® security system.

You can disable the use of email attachments. For more information, see "Disable Report Attachments in Email Messages" (p. 676).

To send a report to others by email, both you and the email recipients must have valid email addresses. Also, if you choose the recipient from a list, such as a group, role, or distribution list, you must have read access to both the list and the recipient’s email account. Otherwise, the report delivery fails. However, if you type the email address manually, read access is not required.

### Sending a Report to your Mobile Device

You can choose to send a report to your mobile device. You must have IBM® Cognos® Mobile installed.

### Printing a Report

It may be convenient for you to have a printed copy of a report. You may need to review a report when your computer is not available, or you may need to take a copy of a report to a meeting.

You can use run options to print a report and choose a printer (p. 423).

You can set up printers for users to select from. For more information, see "Set Up Printers" (p. 59).

### Distributing a Report by Bursting

Bursting is the process of running a report once and then sending the results to recipients, each of whom sees only a subset of the data. Distribute reports by bursting them when you want users to receive or view reports that contain data applicable only to them.

If you distribute burst reports by email, the recipients are specified by the burst options. Note that if you choose the recipient from a list, such as a group, role, or distribution list, you must have read access to both the list and the recipient’s email account. Otherwise, the report delivery fails.

If the burst report contains a drill-through link to another report and the burst report is distributed by email, set the email options to include a link to the report. Otherwise, if you include the report in the email, the drill-through links in the burst report will not work.

You can burst reports only if the report author defined burst options for the report.
You can use advanced run options (p. 423) to distribute a report by bursting.
You must have read and write permissions for the report to enable bursting.

**Create Distribution Lists and Contacts**

Use distribution lists if you want to send a report to more than one recipient at a time. Distribution lists contain a collection of users, groups, roles, contacts, or other distribution lists.

If a recipient is not part of the IBM® Cognos® security system, you can create a contact for this person. The contacts you create can also be assigned as contacts for reports.

Note that if you choose the email recipient from a list, such as a group, role, or distribution list, you must have read access to both the list and the recipient’s email account. Otherwise, the report delivery fails.

To access the directory administration tool, you must have execute permissions for the Data Source Connections secured feature and traverse permission for the Administration secured function. You must have write permissions for the Cognos namespace.

**Steps for a Distribution List**

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Distribution Lists and Contacts.

3. Click the Cognos namespace.

4. On the toolbar, click the new distribution list button.
   
   Tip: To remove a distribution list, select the entry and click the delete button.

5. Type a name and, if you want, a description and screen tip for the distribution list, and click Next.

6. If you want to add to the distribution list, click Add and choose how to select entries:
   
   • To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, or roles.

   • To search for entries, click Search and in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.

   • To type the name of entries you want to add, click Type and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:

   namespace/group_name;namespace/role_name;namespace/user_name;

   Here is an example:

   Cognos/Authors;LDAP/scarter;

7. Click the right-arrow button and when the entries you want appear in the Selected entries box, click OK.
Tip: To remove entries from the Selected entries list, select them and click Remove. To select all entries in a list, click the check box in the upper-left corner of the list. To make the user entries visible, click Show users in the list.

8. Click Finish.

You can now choose this list when you specify recipients for a report.

**Steps for a Contact**

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Distribution Lists and Contacts.

3. Click the Cognos namespace.

4. On the toolbar, click the new contact button.

   Tip: To remove a contact, select the entry and click the delete button.

5. Type a name and email address for the contact and, if you want, a description and screen tip, and click Finish.

**Drilling to View Related Data**

Reports that you run in IBM® Cognos® Connection and view in IBM Cognos Viewer support various drill operations so that you can view different layers of related data. You can perform drill operations in lists, crosstabs, and charts.

You can

- drill up or drill down within the same report
- drill through to another target
- drill through to another target passing multiple values

**Drill Up or Drill Down**

You can drill up and drill down within a report that is run from IBM Cognos Connection. Reports run from IBM® Cognos® Connection appear in IBM Cognos Viewer.

In lists and crosstabs, hyperlinks identify drillable items. In charts, the pointer changes to a hand when you pause the pointer over a drillable item, and a tooltip indicates what you are drilling on. For example, a column chart shows revenue by product line by year. You can drill on a single axis, such as product line or year. You can also drill on both axes, such as Camping Equipment and 2005. In this case, you are drilling on the intersection of Camping Equipment and 2005.

If groups of data items from different queries are linked, when you drill up or drill down in one query, the data item also drills up or drills down in the linked queries. For more information about how to link groups of data items, see the IBM Cognos Report Studio User Guide.
After you drill up or drill down, you can save the report as a report view for later viewing. For more information, see "Create a Report View" (p. 428).

The drill-up and drill-down functionality is available only when you use dimensionally structured data and view the report in HTML format. You can drill only on members in a level.

By default, the drill-up and drill-down functionality is enabled.

**Steps**

1. Run the report in IBM Cognos Connection and view it in IBM Cognos Viewer.

   **Tip:** Alternatively, you can open an Analysis Studio report or Query Studio report in their respective studios.

2. Right-click the report item you want to drill on and click Drill Up or Drill Down.

**Drill Through to Another Target**

You can navigate from a report to one of the following targets:

- a Query Studio report
- a Report Studio report
- an Analysis Studio analysis
- a PowerPlay® Studio report
- a package that contains a PowerCube
- a Microsoft® SQL Server Analysis Services (SSAS) action

You can also navigate from a report or analysis authored in one package to more detailed information in a report which was authored in another package. For example, this is useful when you want to drill from a summarized OLAP source, such as your sales information, into the detailed relational or transactional information, such as your inventory volumes.

Drilling through from one report to another is a method of passing information from the source (your starting report) to the target (your ending report). For example, you may be evaluating a report and discover something you need to investigate in a certain product line. You can drill through to the detailed target report which provides a focused view of that product line. When drilling through to the target, the product line you selected in the source is passed and the target report is run with that filter, making a more focused report.

By default, the ability to drill through from one report to another is enabled. You can disable it by using the *Enable selection-based interactivity* option. For more information, see "Disable Selection-based Interactivity" (p. 447).

For information about drill-through concepts and setting up drill-through access, see "Drill-through Access" (p. 511).
Before you can navigate to another target, a drill-through definition must be created in either the Report Studio source report or in IBM® Cognos® Connection.

**Steps**

1. Run the report in IBM Cognos Connection and view it in IBM Cognos Viewer.
   
   **Tip:** Alternatively, you can open an Analysis Studio report or Query Studio report in their respective studios.

2. Right-click the report item from which you want to navigate and click **Go To**, **Related Links**. The **Go To** page appears, showing the available targets.
   
   **Note:** If there is only one possible target for the column, the report runs and appears in IBM Cognos Viewer.

3. Click the target you want to navigate to.

Depending on how the drill-through definition was set up and the report type, the target opens in either IBM Cognos Viewer, Query Studio, PowerPlay Studio, or Analysis Studio.

**Drill Through to Another Target Passing Multiple Values**

You can have a report that contains a drill-through definition that can be filtered by multiple values in a single query item. For example, while analyzing an OLAP source, you may want to focus on Canada and the United Kingdom. When you drill through, the target report is filtered by both countries. After you run the report in IBM® Cognos® Viewer, you are prompted to choose values when you navigate from the report to the drill-through target. The values you specify are used to filter the results in the target.

For more information about drilling through to a target, see "Drill Through to Another Target" (p. 453).

Drilling through using multiple values is available regardless of whether the drill-through definition is authored in the Report Studio source report or in IBM Cognos Connection, Drill-through Definitions. In previous releases, this functionality was available only when the definition was authored in IBM Cognos Connection.

**Steps**

1. Run the report in IBM Cognos Connection and view it in IBM Cognos Viewer.
   
   **Tip:** Alternatively, you can open an Analysis Studio, Query Studio, or PowerPlay® Studio report in their respective studios.

2. Ctrl+click to select more than one value in a column.
   
   - If hyperlinks appear in the column in which you are attempting to select cells, click in the empty area around the hyperlinks.
   
   - If there are no visible hyperlinks but you know that a drill-through target exists, select the cells you want to use as the filter, regardless of whether they are in the same column. Note that when you select multiple values from different columns, the resulting filter in the target
report performs an *and* rather than an *or* operation with the values passed, for example, Canada and Camping Equipment; United Kingdom and Fax.

3. Right-click in one of the selected cells from which you want to navigate, and from the menu that appears, do one of the following:

- Under **Go To**, click the drill-through target name, if one exists.
- Under **Go To**, click **Related Links**. On the **Go To** page, click the target report you want to run.

The target report runs and if it can be filtered by the selection made in the source report, the target is filtered by those values.

**Data Sources With Named Sets May Produce Unpredictable Results**

If your dimensional data sources include named sets, which are sets of members or set expressions that are created for reuse, the data results are unpredictable in Query Studio when combined with filtering and level nesting.

Additionally, if your data sources include multi-level named sets, the data results are unpredictable in Analysis Studio when aggregated.

We therefore recommend that you avoid exposing named sets or multi-level named sets to Query Studio and Analysis Studio users.

Working with named sets may also cause unpredictable results in Report Studio. For more information, see the IBM® Cognos® Report Studio *User Guide*.

**Series 7 Reports in IBM Cognos Connection**

If your administrator configures IBM® Cognos® Business Intelligence to use the IBM Cognos Series 7 namespace, you can see Series 7 entries in IBM Cognos Connection. When you run a Series 7 report, the report runs in the Series 7 application used to create it.

The contents of the Series 7 NewsIndex appears at the bottom of the page in **Public Folders**. The contents of your Series 7 personal NewsBox appears at the bottom of the page in **My Folders**.

Alternatively, PowerPlay® 7.3 or later can be configured to use IBM Cognos Connection rather than Upfront as a portal. However, if you are accessing content from other IBM Cognos applications or versions previous to PowerPlay 7.3, the administrator may still depend on the Upfront portal.

When you access Series 7 entries from IBM Cognos Connection, consider the following things:

- If the Series 7 namespace and the IBM Cognos BI namespace are different, you must log on to both. Otherwise, you cannot see content in both areas.
- If you log off when you are in Upfront, you can no longer access Series 7 entries in IBM Cognos Connection. You should always log off in IBM Cognos Connection.
If you belong to several Series 7 user classes, you are unable to select a different user class when you access Upfront through IBM Cognos Connection.

If you use an Upfront theme other than standard70, an error message may appear when you click the More link in the Actions column. You cannot access Series 7 entries.

If you want to cut, copy, and paste Series 7 entries, use the More link in the Actions column, and then use the Upfront toolbar.

If you perform a search in IBM Cognos Connection, the Series 7 entries are not included in the search.

You cannot combine IBM Cognos version 10.1 entries and Series 7 entries in a single folder or NewsBox.

For information about working with Series 7 entries in Upfront, see the IBM Cognos Series 7 Web Portal User Guide.

Series 7 PowerPlay Reports and Cubes

After Series 7 PowerPlay® reports and cubes are published to the IBM® Cognos® portal, you can use PowerPlay authoring tools to create and edit Series 7 PowerPlay reports. For more information about PowerPlay authoring tools, see the PowerPlay Web User’s Guide.

You can change the default run options of Series 7 PowerPlay reports and cubes (p. 458) and select multilingual properties (p. 459).

Series 7 PowerPlay reports and cubes function differently from other reports. The following actions do not apply to Series 7 PowerPlay reports and cubes:

- viewing the run history and report output versions
- specifying how long to keep report outputs and histories
- canceling and suspending reports
- specifying prompt values for report formats other than PDF
- specifying language for the content of reports
- running a report as the owner
- scheduling reports
- distributing reports

Single Signon

Single signon ensures that users who are logged on to one IBM® Cognos® application are not prompted for authentication when they run another IBM Cognos application.

You can ensure that your users benefit from single signon by ensuring that both IBM Cognos Business Intelligence and PowerPlay® use the same Series 7 namespace as their authentication source. Alternatively, you can ensure that the authentication namespaces used for both IBM Cognos BI
and PowerPlay are configured to use an external single signon mechanism for authentication, such as operating system signons for Series 7 PowerPlay or LDAP provider with External Identity Mapping in ReportNet®.

For instructions about setting up Series 7 single signon, see the Access Manager Administrator Guide.

For instructions about setting up single signon for the IBM Cognos reporting product, see the Installation and Configuration Guide.

Run or Open a Series 7 PowerPlay Report

You can run Series 7 PowerPlay® reports in the following formats:

- If the HTML icon is visible, the report opens in PowerPlay Web Explorer.
- If the PDF icon is visible, the report runs in the PowerPlay Web Viewer.

PowerPlay administrators can restrict who can open cubes. For information about publishing Series 7 PowerPlay reports and cubes in IBM® Cognos® Business Intelligence, see the PowerPlay Enterprise Server Guide.

If you use secured Series 7 cubes, the namespace against which the cubes are secured must be configured as an authentication source in IBM Cognos BI. This namespace need not be the only authentication namespace or the primary logon for the user. For more information about configuring authentication namespaces see the Installation and Configuration Guide.

Before you can run or open Series 7 PowerPlay reports and cubes directly from IBM Cognos BI, you must have both PowerPlay 7.3 and IBM Cognos BI installed and configured. You also must have the following permissions:

- execute and read permissions to run or open a report or cube
- read and traverse permissions to access the folder that contains the report or cube
- read and write permissions to set properties for cubes and reports

Step

- In IBM Cognos Connection, click the report that you want.

Depending on the default action for the report, the report runs in either PDF format (default) or opens with PowerPlay Web Explorer.

If you have the required permissions, you can change the run options for Series 7 PowerPlay reports and cubes (p. 458). For information about using PowerPlay Web Explorer and PowerPlay Web Viewer, see the IBM Cognos PowerPlay Web User’s Guide.

Tip: To run any Series 7 PowerPlay report in PowerPlay Web Explorer, click the open with PowerPlay Explorer button in the actions toolbar. You can also click More next to the report you want and then open the report in Analysis Studio or Report Studio. The migration tools must already be installed. For information about installing these tools, see the IBM Cognos BI Migration Assistant Installation and Configuration Guide. When you open the report, it is upgraded to the format of
the studio that you opened it in. If you save the report, it is saved in the upgraded format. There may be differences between the original PowerPlay report and the IBM Cognos BI version of the report. If you do not save the report, it remains a Series 7 PowerPlay report. For more information about upgrading Series 7 PowerPlay reports, see the IBM Cognos BI Migration Assistant User Guide.

Change the Defaults for a Series 7 PowerPlay Report

You can change the defaults for Series 7 PowerPlay® reports. You can select one of the following default actions when a report is run:

- run the report in PDF format (default)
- open the report with PowerPlay Web Explorer

For HTML format reports, you can choose to open the report in design mode (without data). Opening a report in design mode is useful to quickly view the structure of the report.

For PDF format reports, you can choose to be prompted for values that filter the range of data included in a report. For example, you can specify a date range that is a subset of the dates available in the report. If the Series 7 PowerPlay report was created with prompt values, you are prompted to enter values when the report runs.

Steps

1. In IBM® Cognos® Connection, click the set properties button on the actions toolbar to the right of the report you want to run.
2. Click the PowerPlay report tab.
3. Under Default action, select the default action for when the report is run.
4. For HTML reports, if you want to open the report without data, design mode, select the Open in design mode check box.
   
   Tip: You can also click the open with PowerPlay Web Explorer in design mode button if it appears in the actions toolbar.
5. For PDF reports, if you want to be prompted for values, select the Prompt for values check box.
   
   Tip: The Prompt for values check box appears only if prompt values are created for the report. You can also click More next to the report you want and then click the run the report in PDF format and prompt for values button.

Open a Series 7 Cube

You can open Series 7 cubes and work with them in PowerPlay® Web Explorer.
For more information about using PowerPlay Web Explorer, see PowerPlay Web User’s Guide.

**Step**
- In IBM® Cognos® Connection, click the cube that you want.

**Multilingual Properties for Series 7 Reports and Cubes**

In IBM® Cognos® Connection, you can select the multilingual properties of a Series 7 report or cube. The name, screen tip, and description uses the language that you select.

The content, data, category labels, and other labels do not change. The language for these items is set by the PowerPlay® administrator who creates the report or cube.
You can create agents in Event Studio (p. 463) to monitor your organization’s data for occurrences of business events, and then perform tasks. For example, tasks can include sending an email, adding information to the portal, and running reports. For more information, see the Event Studio User Guide.

After an agent is published to the portal, use IBM® Cognos® Connection to do the following:

- run the agent (p. 461)
- change default properties (p. 462)
- create an agent view (p. 463)
- enable an alert list (p. 464)
- add or remove yourself from an alert list (p. 464)
- receive news item headlines (p. 465)
- view a list of the most recent event instances for an agent (p. 465)
- view the run history (p. 359)
- rerun a failed agent with the initial parameters (p. 362)

You can schedule agents to run at a specified time or based on a trigger, such as a database refresh or an email. You can also view the run history of scheduled agents and change the schedule credentials. For more information, see “Schedule Management” (p. 365).

### Run an Agent

Usually, agents run automatically according to the schedule specified by the agent author. However, you can run the agent manually at any time if you want to check for occurrences of specified events and perform specified tasks if those events occur.

For example, an agent is created to send an email to sales staff when they reach 75 percent of their sales quota for the month. The agent prompts for the sales region. A sales manager specifies Spain, and emails are sent only to sales staff in Spain.

You must have execute permission to run an agent. You must have traverse permissions for the folder that contains the agent.

#### Steps

1. In IBM® Cognos® Connection, click the run with options button on the actions toolbar next to the agent you want to run.
2. Under Time, click Now to run the agent now or click Later to specify a later date and time.
3. If you want the agent to prompt for values to filter the results it retrieves, under **Prompt Values**, select the **Prompt for values** check box.

4. Click **Run**.

   The confirmation page appears.

   You are prompted for values if the agent specification or model includes prompts or if you have access to multiple data source connections or signons.

5. To view the run history of the agent, select **View the details of this agent after closing this dialog**.

6. Click **OK**.

   The options override the default agent options for the current run only.

---

**Change Default Agent Properties**

You can change the defaults that are set for agents in Event Studio, such as whether to use prompt values and run as the owner. If the agent contains one or more tasks with a destination of **My Folders**, and someone other than the owner runs the agent, the task fails unless run as the owner is selected.

You can run an agent (p. 461), create agent views (p. 463), and create and edit agents in Event Studio (p. 463).

You must have execute permissions for the agent. You must have traverse permissions for the folder that contains the agent.

**Steps**

1. In IBM® Cognos® Connection, click the set properties button on the actions toolbar next to the agent you want to run.

2. Click the **Agent** tab.

   The tasks in the agent are shown.

3. Under **Default action**, specify the default action for the agent.

4. If you want the agent to prompt for values to filter the results that it retrieves, under **Prompt Values**, select the **Prompt for values** check box. The **Prompt for values** check box appears only if prompt values are created for the agent in Event Studio.

5. If you want the agent to run using the owner credentials, click the check box next to the owner listed under **Run as the owner**.

6. To allow users to add themselves to the alert list for the agent, click the **Allow users to add themselves to the alert list** check box.

7. Click **OK**.

   The next time the agent runs, it uses these properties instead of the original defaults.
Create an Agent View

Agent views share event definition and tasks with the agent but can have different properties, such as prompt values and run as the owner (p. 313).

Creating an agent view does not change the original agent. Except for changes to notification lists, any changes to the original agent are automatically reflected in the agent view. You can determine the source agent for an agent view by viewing its properties. The agent view properties also provide a link to the properties of the source agent.

If the source agent is deleted or moved to another location, the agent view icon changes to indicate a broken link, and the properties link to the source agent is removed.

If you want to change the properties of an agent and do not need to retain an agent with the original properties, change the default agent properties (p. 462). If you want to use a generic agent as the basis for a new agent, make a copy of the agent (p. 315). If you want an agent to appear in more than one location, create a shortcut (p. 304).

To create an agent view, you must have execute or read permissions for the original agent.

**Steps**

1. In IBM Cognos® Connection, locate the agent you want to use to create the agent view.

2. Under Actions, click the agent view icon next to the agent.

3. In the Name box, type the name of the entry.

4. If you want, in the Description and in the Screen tip box, you can type a description of the entry.
   
   The description appears in the portal when you set your preferences to use the details view (p. 325). The screen tip, which is limited to 100 characters, appears when you pause your pointer over the icon for the entry in the portal.

5. If you do not want to use the target folder shown under Location, choose another location, click Select another folder, select the target folder, and click OK.

6. Click Finish.

In the portal, agent view entries are identified by the agent view icon. The agent view has the same run options and properties as the original entry. For information about changing agent properties, see "Entry Properties" (p. 307).

Open or Create an Agent from IBM Cognos Connection

You can open or create agents from IBM Cognos® Connection and work with them in Event Studio.

To open an existing agent in Event Studio, do the following:

- In Public Folders or My Folders, click the agent.
To create a new agent in Event Studio, do the following:

- In IBM Cognos Connection, in the upper-right corner, click **Launch, Event Studio**.

For information about using Event Studio, see the Event Studio **User Guide**.

### Enable an Alert List for an Agent

By granting users permission to add an alert list to an agent, users can monitor business events that are important to them. With this permission, users can add themselves to the alert list (p. 464) and be alerted by email as a Bcc recipient when the agent runs and the associated tasks are performed.

The permission to add an alert list to an agent does not extend to an agent view associated with the agent. You must grant permission for the agent view independently.

To grant permission for an alert list, you must have execute permission for the agent and traverse permission for the folder that contains the agent.

**Steps**

1. In IBM® Cognos® Connection, click the set properties button next to the agent for which you want to enable an alert list.

2. Click the **Agent** tab, and select the **Allow users to add themselves to the alert list** check box.

Emails are sent whenever the agent is run interactively or in the background according to a schedule.

### Add Yourself to or Remove Yourself from an Alert List for an Agent

Because an agent monitors important business events, you may want to add yourself to the alert list for the agent. When you subscribe to an alert list, you receive an email notification when the agent is run. You can also view and manage the alert list for the agent as a watch item.

Adding yourself to the alert list of an agent does not automatically add you to the alert list for any agent views associated with the agent. If you want to receive alerts for an agent view, you must add yourself to the alert list for the agent view.

The agent author must include an email task with the agent and enable an alert list for the agent (p. 464).

To add yourself to the alert list of an agent, you must have read and traverse permissions for the agent. You must also have an email address defined in your LDAP security profile or in the **My Preferences, Personal** tab. Also, you must belong to the same namespace as the person who schedules the agent.

**Steps for One Alert List**

1. In IBM® Cognos® Connection, locate the agent.

2. In the **Actions** column, click **More**.
3. Click Add me to the alert list or Remove me from the alert list.

4. Click OK.

Note the change for the alert list in the watch item list. To view your watch items, from the My Area Options menu, click My Watch Items.

**Steps to Remove Yourself from Multiple Alert Lists**

1. In IBM Cognos Connection, click the my area options icon and then click My Watch Items.
2. On the Alerts tab, select the alerts to delete from the alert list.
3. Click the remove me from the alert list button.

**Remove All Users from the Alert List for an Agent**

You can remove all users from the alert list for an agent. Any user that is currently on the alert list is removed. For more information about alert lists, see "Add Yourself to or Remove Yourself from an Alert List for an Agent" (p. 464).

You must have set policy permission for the agent.

**Steps**

1. In IBM® Cognos® Connection, locate the agent.
2. In the Actions column, click More.
3. Click Remove all from the alert list.

**Receive News Item Headlines**

The author of an agent can specify that news item headlines be published to a folder in IBM® Cognos® Connection when an event occurs. To be able to read headlines as an RSS-style list, you must set up a page in IBM Cognos Connection that includes an IBM Cognos Navigator portlet that displays the folder where the headlines are published. Edit the properties of the portlet to view the entries as a news list. For instructions, see "Pages and Dashboards" (p. 331).

For more information about news items, see the Event Studio User Guide.

**View the Most Recent Event List**

The most recent event list compares current data with data from the last time the agent ran and groups events by event status.

For example, an agent is created to tell you when the quantity sold of any product by any sales person in your database changes. The first time the agent runs, the most recent event list identifies all sales as new events.
The second time the agent runs, it finds the following product sales.

<table>
<thead>
<tr>
<th>Product number</th>
<th>Sales person</th>
<th>Quantity sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>3345</td>
<td>Ashley McCormick</td>
<td>25</td>
</tr>
<tr>
<td>3345</td>
<td>Bayard Lopes</td>
<td>15</td>
</tr>
<tr>
<td>2256</td>
<td>Alessandra Torta</td>
<td>100</td>
</tr>
</tbody>
</table>

If you now view the most recent events list, you see the following list:

<table>
<thead>
<tr>
<th>Product number</th>
<th>Sales person</th>
<th>Quantity sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>3345</td>
<td>Ashley McCormick</td>
<td>35</td>
</tr>
<tr>
<td>3345</td>
<td>Bayard Lopes</td>
<td>15</td>
</tr>
<tr>
<td>2256</td>
<td>Ashley McCormick</td>
<td>15</td>
</tr>
<tr>
<td>2256</td>
<td>Alessandra Torta</td>
<td>150</td>
</tr>
</tbody>
</table>

**Steps**

1. In IBM® Cognos® Connection, locate the agent you want.
2. Under **Actions**, click the set properties icon.
3. Click the **Agent** tab.
4. Under Default action, click View most recent event list.

5. Click OK.
Chapter 28: Managing Human Tasks

In IBM® Cognos® Business Intelligence, there are three types of human tasks you can see in the task inbox: approval requests, ad-hoc tasks, and notification requests.

Tasks can be created from

- Event Studio (notification requests and approval requests)
  For more information, see the Event Studio User Guide.

- the My Inbox area of IBM Cognos Connection (notification requests and ad-hoc tasks) (p. 471)

- a watch rule set up for a report (notification requests only) (p. 442)

Open the Task Inbox

You can open your task inbox from

- the IBM® Cognos® Business Intelligence Welcome Page by clicking My Inbox

- IBM Cognos Connection or IBM Cognos Administration by clicking My Area Options, and then clicking My Inbox

View your Task Inbox

Your task inbox contains approval requests, ad-hoc tasks, and notification requests for which you are a specified recipient.

The task inbox is shown in the top pane. By default, for each task, you can see the task type, priority, subject, owner, status, and date on which the task was received. In addition, if you pause the mouse over a task, a pop-up containing further task details appears.

You can view the details of a task by selecting it. The task details are shown in the reading pane. If the task contains an attachment, such as a report, you can double-click to view it.

Tips

- To view the due date for tasks instead of the date received, from the Display Date Received drop-down list, select Next Deadline Date.

- To view your archived tasks, click the Archive tab.

Filter Tasks in your Inbox

By default, your task inbox contains all tasks that are relevant to you. You can set up a filter so that you see only a subset of tasks. You can set up filters for

- task type (task or notification)
Steps
1. View your task inbox.
2. For each filter you want to set, select the required filter option from the filter name drop-down list.
   For example, to view only notification request tasks, select Notifications from the All Types filter.
   The filter name is updated to show the current filter.

Approval Requests and Ad-hoc Tasks
You can create approval requests using Event Studio. For more information, see the Event Studio User Guide.
You can create ad-hoc tasks from your task inbox (p. 471).
An approval request or ad-hoc task can have various recipients:

- a task owner - one specific user
- potential owners - multiple users, groups, roles, or distribution lists
- stakeholders - one or more interested parties, who are not potential owners.

If a task only has one potential owner, that user automatically becomes the task owner. If a task has multiple potential owners, the user who claims the task becomes the task owner.

It is possible to create a task with one or more stakeholders, but no owner or potential owners. In this case, stakeholders can assign potential owners after it has been created.

Task Status
The status of an approval request or ad-hoc task can be one of the following:

- Not Started - the task is waiting to be started.
- Started - the task has an owner and is in progress.
- Completed - the owner has completed the task.
- Canceled - the task has been canceled by a recipient.

View Comments
You can view comments added by other recipients, as well as audit history comments, recorded by the system.
You can also add your own comments to a task (p. 476).

**Steps**

1. View your task inbox.
2. Select the task for which you want to view comments, and then click the **Discussion** tab in the reading pane.
   
   By default, only user comments are shown.
3. Select the type of comments you want to view from the comments drop-down list.
   
   You can view all user and audit comments, or you can filter the display by comment type.

**Subscribe to E-mail Notifications**

The default notification options are set up when the task is created. You can change your subscriptions for any task with a status of Not Started or Started.

You can choose to receive, or stop receiving, notifications when

- a task is not started by the start date
- a task is not completed by the due date
- the status of a task changes (started, completed or canceled)
- the owner of a task changes
- a user comment is added to a task

**Notes**

- Notifications are sent to the task owner and copied to all stakeholders.
- The recipient who changes the status or owner of a task, or adds a user comment, does not receive the associated notification.

**Steps**

1. View your task inbox.
2. Select the task for which you want to change your notification subscriptions, and then click the **Notification Options** tab in the reading pane.
3. Select the appropriate check boxes for the notifications you want to receive, and clear the boxes for those you do not require.
4. Click **Save**.

**Create an Ad-hoc Task**

Create an ad-hoc task to send a task to the task inbox of the recipients you specify.
You can add deadlines to an ad-hoc task when you create it. Alternatively, potential owners or stakeholders can add deadlines at a later date, by updating the task from their task inbox.

You can set up notification options for the task owner to receive e-mails when
- an ad-hoc task is not completed by the due date
- an ad-hoc task is not started by the start date

Note: Stakeholders are also copied on these e-mails.

In addition, you can set up notification options for the task owner and all stakeholders to receive e-mails when
- the status of an ad-hoc task changes (started, completed or canceled)
- the owner of an ad-hoc task changes
- a comment is added to an ad-hoc task

Note: Potential owners and stakeholders can unsubscribe from receiving specific notifications by updating the task from their task inbox.

Steps
1. View your task inbox.
2. From the task drop-down list, select New Task.
3. In the reading pane, click Add/Remove recipients.
   The Select recipients page appears.
4. Select the required users, groups, roles, and distribution lists to add as potential owners and stakeholders.
   - To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, roles or distribution lists.
     Tip: To make the user entries visible, click Show users in the list.
   - To search for entries, click Search and, in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.
   - To type the name of entries you want to add, click Type and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:
     namespace/group_name;namespace/role_name;namespace/user_name;
     Here is an example:
     Cognos/Authors;LDAP/scarter;
5. Click the Potential Owner or Stakeholder arrow button to update the Selected entries list, and click OK.
   Tip: To remove entries from the Selected entries list, select them and click Remove. To select all the entries in a list, click the check box in the upper-left corner of the list.
6. Click OK.

7. In the **Subject** box, type the subject of the task.

8. If required, add a completion deadline for the task in the **Due Date** box.

9. If required, add a start by deadline for the task in the **Start By** box.

10. Select the priority from the **Priority** list.

11. In the **Message** box, type text directly.

12. To add links, click **Add links**, select the entries you want, click the arrow button to update the **Selected entries** list, and click **OK**.

   **Tip:** To remove links, select them and click **Remove links**.

13. If you want to set up notification options, click **Advanced**, otherwise move on to step 16.

14. Select the task creation and deadline notification options as required:
   - Send notification if not started by the start date
   - Send notification if not completed by due date

15. Select the approval request change notification options as required:
   - Started
   - Comment
   - Owner changed
   - Completed
   - Canceled

16. Click **Save**.

**Action an Approval Request or Ad-hoc Task**

The actions you can perform on an approval request or ad-hoc task differ depending on your recipient type. The following table summarizes the actions that can be performed by each type of recipient.

<table>
<thead>
<tr>
<th>Action</th>
<th>Potential owner</th>
<th>Owner</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim ownership of a task</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change the recipients for a task</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Revoke ownership of a task</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Potential owner</td>
<td>Owner</td>
<td>Stakeholder</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>Set deadlines for a task</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Change the priority of a task</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Add comments to a task</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Start or stop a task</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Complete a task</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Cancel a task</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Claim a Task**

If you are a potential owner of a task that is Unclaimed, you can claim the task. The task is then owned by you.

**Note:** If you are the only potential owner of a task, the task is automatically owned by you. In this case, it is not necessary to claim the task.

**Steps**

1. View your task inbox.

2. Select the task you want to claim, and then click **Make me the owner** in the reading pane.

**Change the Recipients for a Task**

Any task recipient can change the current owner of a task. In addition, they can add or remove potential owners and stakeholders for a task. The status of the task must be Not Started or Started.

**Note:** If you are the owner of a task, you can revoke ownership of the task (p. 475).

**Steps to Change the Current Owner**

1. View your task inbox.

2. Select the task for which you want to change the current owner, and then click **Change Owner** in the reading pane.

   The **Select the user** page appears.

3. Select the user.

   - To choose from listed entries, click the appropriate namespace, and then select the required user.

   - To search for an entry, click **Search** and, in the **Search string** box, type the phrase you want to search for. For search options, click **Edit**. Find and click the entry you want.
4. Click OK.
5. Click Save.

**Steps to Change the Potential Owners and Stakeholders**
1. View your task inbox.
2. Select the task for which you want to change potential owners and stakeholders, and then click Add/Remove recipients in the reading pane.
   The Select recipients page appears.
3. Select the required users, groups, roles, and distribution lists.
   - To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, roles or distribution lists.
     Tip: To make the user entries visible, click Show users in the list.
   - To search for entries, click Search and in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.
   - To type the name of entries you want to add, click Type and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:
     namespace/group_name;namespace/role_name;namespace/user_name;
     Here is an example:
     Cognos/Authors;LDAP/scarter;
4. Click the Potential Owner or Stakeholder arrow button to update the Selected entries list, and click OK.
   Tip: To remove entries from the Selected entries list, select them and click Remove. To select all the entries in a list, click the check box in the upper-left corner of the list.
5. Click OK.
6. Click Save.

**Revoke Ownership of a Task**
If you are the owner of a task, you can remove yourself as the task owner. This changes the owner to Unclaimed and the status of the task to Not Started.

**Steps**
1. View your task inbox.
2. Select the task you want to revoke, and then click Remove me as owner in the reading pane.

**Set Deadlines for a Task**
Any task recipient can add a start date or due date for an approval request or ad-hoc task with a status of Not Started or Started. They can also amend existing deadlines.
Where notifications are set up, if a task is not started or completed by the required time, e-mail notifications are sent all subscribing potential owners and stakeholders. For more information on notifications, see "Subscribe to E-mail Notifications" (p. 471).

**Steps**
1. View your task inbox.
2. Select the task for which you want to update the deadlines.
3. If required, add a completion deadline for the task in the **Due Date** box.
4. If required, add a start by deadline for the task in the **Start By** box.
5. Click **Save**.

**Change the Priority of a Task**

The priority of a task is set when the task is created. Any task recipient can change the priority of a task with a status of Not Started or Started.

**Steps**
1. View your task inbox.
2. Select the task for which you want to change the priority, and then select the priority from the **Priority** list in the reading pane.
3. Click **Save**.

**Add Comments to a Task**

Any task recipient can add comments to a task.

For information on viewing comments added to a task, see "View Comments" (p. 470).

**Steps**
1. View your task inbox.
2. Select the task for which you want to add a comment, and then click the **Discussion** tab in the reading pane.
3. Click **Add Comment**，type your comments in the window that appears, and then click **OK**.
4. Click **Save**.

**Start or Stop a Task**

If you are the owner of a task that has not been started, you can start the task. This changes the status to Started so that other task recipients can view the progress of your task.

A potential owner can also start an unclaimed task. The user then becomes the owner of that task.
If you own a task that has already been started, you can stop the task. This changes the status to Not Started.

**Steps**
1. View your task inbox.
2. Select the task you want to start, and then select **Start task** from the **Status** drop-down list in the reading pane.
   
   **Tip:** To stop a task that has been started, select **Not Started** from the **Status** drop-down list.
3. Click **Save**.

**Complete a Task**

If you are the owner of a task with a status of Not Started or Started, you can complete the task by performing the required action. The action required differs depending on the task type.

For ad-hoc tasks, you must mark the task as complete.

For approval request tasks, the action depends on how the task creator set up the task. You must perform one of the following actions:

- approve or reject the request
  
  For this type of approval request, you must approve or reject the request from your task inbox to complete the task.

  Depending on how the task was set up, completion of the task may result in another action being performed. For example, if you approve a request to distribute a report, when the task is complete, the report may be automatically distributed. If the request is rejected, no further actions will occur.

- Specify the remaining tasks to approve and run
  
  This type of approval request contains one or more tasks that are scheduled to run after the task is complete. You must select which tasks you approve to run.

**Steps to Complete an Ad-Hoc Task**
1. View your task inbox.
2. Select the task you want to complete and then click **Mark as complete**.
   
   The status of the task changes to Completed.

**Steps to Approve or Reject a Request**
1. View your task inbox.
2. Select the task you want to complete and view the details in the reading pane.
3. If required, add a comment to explain your decision in the **Comment** box.
4. Click **Approve** or **Reject** to complete the task.
Chapter 28: Managing Human Tasks

Note: Approve and Reject are the default button names. The user who created the task may have used custom button names, which differ from the default.

The status of the task changes to Completed.

Steps to Specify the Remaining Tasks to Approve and Execute

1. View your task inbox.
2. Select the task you want to complete and view the details in the reading pane.
3. Select the remaining tasks to approve, and then click Submit.
   
   Note: Submit is the default button name. The user who created the task may have used a custom button name, which differs from the default.

   The status of the task changes to Completed.

Cancel a Task

A task owner or stakeholder can cancel an approval request or ad-hoc task with a status of Not Started or Started.

Steps

1. View your task inbox.
2. Select the task you want to cancel, and then click Mark as canceled in the reading pane.

   The status of the task changes to Canceled.

Notification Requests

You can create notification requests from

- Event Studio
  
  For more information, see the Event Studio User Guide.

- your task inbox (p. 479)

- a watch rule set up for a report (p. 442)

A notification request can have various recipients:

- users, groups, roles, and distribution lists to whom the request is sent

- stakeholders to whom the request is copied

Each recipient is assigned as the owner in their task inbox.

The status of a notification request can be

- Unread - the request has not been opened by a recipient

- Read - the request has been opened by a recipient

- Acknowledged - the request has been confirmed by a recipient to whom it was sent
Acknowledgements
When a notification request is created, it is possible to stipulate that an acknowledgement is required by each recipient to whom it is sent.

Note: Stakeholders are not required to acknowledge notification requests.

Deadlines
When a notification request is created, it is possible to include an acknowledgement deadline. If any recipient does not acknowledge a notification request within the specified number of days, e-mail notifications are sent to all recipients who have not yet acknowledged the request, and copied to all stakeholders.

When all the required recipients have acknowledged the request, the deadline is canceled.

Create a Notification Request
Add a notification request to an agent to send a secure notification about an event to the inbox of recipients you specify. You can request an acknowledgement, and add an acknowledgement deadline.

Steps
1. View your task inbox.
2. Select New Notification from the task drop-down list.
3. Click Add/Remove recipients in the reading pane.
   The Select recipients page appears.
4. Select the required users, groups, roles, and distribution lists to add as recipients.
   - To choose from listed entries, click the appropriate namespace, and then select the check boxes next to the users, groups, roles or distribution lists.
     Tip: To make the user entries visible, click Show users in the list.
   - To search for entries, click Search and, in the Search string box, type the phrase you want to search for. For search options, click Edit. Find and click the entry you want.
   - To type the name of entries you want to add, click Type and type the names of groups, roles, or users using the following format, where a semicolon (;) separates each entry:
     
     namespace/group_name;namespace/role_name;namespace/user_name;

     Here is an example:
     
     Cognos/Authors;LDAP/scarter;

5. Click the To or Cc arrow button to update the Selected entries list, and click OK.
   Tip: To remove entries from the Selected entries list, select them and click Remove. To select all entries in a list, click the check box in the upper-left corner of the list.
6. Click OK.
7. In the Subject box, type the subject of the notification request.
8. In the Message box, type text directly.

9. To add links, click Add links, select the entries you want, click the arrow button to update the Selected entries list, and click OK.

   **Tip:** To remove links, select them and click Remove links.

10. If you want to set up notification options, click Advanced, otherwise move on to step 13.

11. To request an acknowledgement from each recipient to whom the notification is sent, select the Request Acknowledgement box.

12. To send an e-mail notification to recipients who do not acknowledge the request by a specified date, and copy each stakeholder, select the Send notification if not acknowledged by the date box, and then select the required date.

13. Click Save.

### Read and Acknowledge a Notification Request

New notification requests in your task inbox have the status Unread. You can read the notification request, and if you are a recipient to whom the request was sent, you can acknowledge it, if this is required.

**Steps**

1. View your task inbox.

2. Select the unread notification request you want to read, and view the details in the reading pane.

   The status of the notification request changes to Read.

**Notes:**

- If your username appears in the To list, you are a recipient of the notification request. If it appears in the CC list, you are a stakeholder copied on the request.

- If there is a deadline set up for the notification request, it is shown in the Deadline box.

3. If your username appears in the To list, and an acknowledgement is required, click Acknowledge.

   The status of the notification request changes to Acknowledged.

### Archive Tasks

Archiving is a method of removing unwanted tasks from your inbox. When you archive a task, it remains active in IBM® Cognos® Business Intelligence, and other task recipients can continue to work with it. Any notifications associated with an archived task also remain active.

Tasks that are deleted from your archive also remain active, but you can no longer view them.

**Steps**

1. View your task inbox.
2. Select the tasks you want to archive, and then click **Archive** from the **Move to** drop down list.

**View the Task Archive**

You can view a list of tasks that you have archived.

**Step**

- View your task inbox, and then click the **Archive** tab.

  You can view the details of a task, by selecting it. The task details are shown in the reading pane. If the task contains an attachment, such as a report, you can double-click to view it.

  **Tips:**
  - To view the due date for tasks instead of the date received, select **Display Due Date** from the **Display Date Received** drop-down list.
  - To return to your task inbox, click the **Inbox** tab.
  - To delete unwanted tasks, select them, and then click **Delete**.

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Chapter 29: Metric Studio Metrics

Users create metrics in Metric Studio, a Web application for managing business metrics by monitoring, analyzing, and reporting them at all levels of the organization. As an administrator, you can configure security, access Metric Studio, create metric packages, run system tasks like scheduling and data loading, and view job history. You do these tasks in IBM® Cognos® Connection.

For information about administering IBM Cognos software security, see "Initial Security" (p. 297).

Create a Metric Package

Before users can use Metric Studio, you must create at least one metric package using the New Metric Package wizard. A metric package is an IBM® Cognos® Connection representation of a Metric Studio application. A metric package contains connection information, reports, and metric management tasks for that application. The metric package content is stored in a metric store.

You open the New Metric Package wizard from the toolbar in IBM Cognos Connection. Use the wizard to define the metric package name and the data source connection to the metric store. For a new metric store, you also provide the information necessary to initialize the database, including the start and end dates of the fiscal year.

When you create a metric package, it contains several default reports. If Report Studio is installed, you can open these reports in Report Studio. If not, you can open them in IBM Cognos Viewer. For more information about IBM Cognos reports, see "Reports and Cubes" (p. 419).

To create metric packages, you must have execute permissions for the Metric Studio Administration secured feature and traverse permission for the Administration secured function.

Steps

1. In IBM Cognos Connection, click the New metric package button.
2. Type a name and description for the Metric Studio application to represent this metric package, and click Next.
3. Click New data source.
4. Type a name and description for the data source connection for the metric store that contains the content for this metric package, and click Next.
5. In the Type box, click the database type.
6. Select the isolation level, and click Next.
7. Specify the information required for your database type:
   - For a Microsoft® SQL Server database, type the name of the database server and the database. Under Signons, select the Password and Create a signon that the Everyone group
can use check boxes, and type the user ID and password of the user account with access to the database.

- For an Oracle database, type the connection string. Select User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

- For a DB2® database, type the name of the database, the connection string, and the collation sequence. Select User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

Tip: To test whether the parameters are correct, click Test.

8. Click Next and then click Finish.

9. Click the new data source and click Next.

10. Click Next and follow the prompts to provide the information necessary to initialize the database. When you see the page that summarizes the data source details and the metric store settings, click Initialize.

11. Select Open this package with Metric Studio after closing the wizard and then click Finish.

Metric Studio opens, and the new metric package appears in IBM Cognos Connection.

**Change the Default Action for Packages**

The default action when you click a package name is shown by the icon to the left of the package name in the portal.

If the view metric package contents icon is visible, the package contents appear.

If the open with Metric Studio icon is visible, the package opens in Metric Studio. This is the default setting.

To change the default action of the package, do the following:

- In the Actions column, click the Set properties button for the package and select the default action you want.

**Run a Metric Task**

To run metric tasks, you must have execute permissions for the Metric Studio Administration secured feature and traverse permissions for the Administration secured function.

You can run a metric task immediately, or schedule it to run at a later time, or on a recurring basis.

**Steps to Run a Task Now**

1. In IBM® Cognos® Connection, in Public folders or My folders, open the Metric Studio package that you want.
Tip: Unless you changed the default action for the package, clicking the package name will cause the package to open in Metric Studio.

2. Click **Metric maintenance**, and click the metric task that you want to run.

**Steps to Schedule a Task**

1. In IBM Cognos Connection, in **Public folders** or **My folders**, open the Metric Studio package that you want.

2. Click **Metric maintenance**, and in the **Actions** column, click the run with options button.

3. Click **Later**, and enter the time that you want the task to run.

   You can also schedule a task to run on a recurring basis, and view a list of scheduled tasks. For more information, see "Schedule Management" (p. 365).

**Delete a Metric Task**

You can also **modify a metric task**.

You must have write permissions or set policy permissions for the task you are attempting to delete. You must also have write and traverse permissions for the current package.

**Steps**

1. In IBM® Cognos® Connection, in **Public folders** or **My folders**, select the check boxes next to the tasks you want to delete.

2. Click the delete button on the toolbar.

   A confirmation box appears.

3. Click **OK**.

**Modify a Metric Task**

If you want to modify an existing metric task to fit your organization’s needs, you can customize the options.

**Steps**

1. In IBM® Cognos® Connection, in **Public folders** or **My folders**, open the Metric Studio package that you want.

2. Click the set properties button on the actions toolbar to the right of the metric task that you want to modify.

3. Depending on what you want to change, click the **Metric maintenance**, **Metric import**, or the **Metric export** tab.

4. Select or clear the check boxes for the options you want to change.
5. Click OK.

**Metric Import Tasks**

Metric packages have default import tasks available for importing and transferring data. You can run these tasks as they are (p. 484), modify them to fit your organization’s needs (p. 485), or create new import tasks (p. 486).

These default tasks are available in your metric package, in the **Metric maintenance** folder.

**Import Data From Files Into the Staging Area**

You can use this task to load data from tab-delimited files into the staging tables. This is useful when your data is currently maintained in a spreadsheet or database. This task can be run at anytime without changing what is visible in Metric Studio.

**Import and Transfer Data From Files Into the Metric Store**

You can use this task to load data from all data sources into the staging tables and then transfer it into the metric store. The data will appear in Metric Studio but no derived values or calculated metrics will be visible. This task also updates the search index.

**Transfer Data From the Staging Area Into the Metric Store**

You can use this task to move data from staging tables into the metric store. The data in the staging tables can be from imported tab-delimited files, or from another source such as Metric Designer. You can run this task after importing data from files into the staging tables. This task also updates the search index.

**Create New Metric Import Task**

Use this wizard to create a new task to import data into Metric Studio.

**Steps**

1. In IBM® Cognos® Connection, click the new data integration task button on the toolbar, and then click **New metric import from files**.

2. Type the name and description to represent this new import task and if necessary, change the location to place the task, and click **Next**.

3. Click the **Transfer data from staging area into metric store** to change the pre- and post-import options for the task. Click the options you want to use when the task is run. Click **Next**.

4. Select the action you want:
   - To run now or later, click **Save and run once** and click **Finish**. Specify the time and date for the run. Then click **Run**. Review the run time and click **OK**.
   - To schedule at a recurring time, click **Save and schedule** and click **Finish**. Then, select frequency and start and end dates. Then click **OK**.
Tip: To temporarily disable the schedule, select the **Disable the schedule** check box. To view the schedule status, see see "Manage Scheduled Activities" (p. 357).

- To save without scheduling or running, click **Save only** then click **Finish**.

**Edit Metric Import Task Properties**

To edit a metric import task, in the **Actions** column, click the set properties button [ ] . Metric import properties appear on the **Metric import** tab of the **Set properties** page.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import data options: Transfer data from staging area into metric store</td>
<td>Check box to add pre- and post- import data options.</td>
</tr>
<tr>
<td>Pre-import data options</td>
<td>Options to clear history and calendar data, rejected data logs, and audit history.</td>
</tr>
<tr>
<td>Post-import data options</td>
<td>Options to recalculate derived values, send emails from Metric Studio Watchlist, and maintain the search engine index.</td>
</tr>
<tr>
<td>Run as the owner</td>
<td>Whether to use the owner credentials (p. 280) when the task is run.</td>
</tr>
</tbody>
</table>

**Metric Maintenance Tasks**

Metric packages have default metric maintenance tasks available for importing and transferring data. You can run these tasks as they are (p. 484), modify them to fit your organization’s needs (p. 485), or create new import tasks (p. 486).

These default tasks are available in your metric package, in the **Metric maintenance** folder.

**Clear Staging Area Rejected Data Logs**

Use this metric task to clear the rejects tables. The rejects tables are not cleared automatically after you reload the metadata and data. Each time there are rejects, they are added to the tables. You will need to clear the tables from time to time to prevent them from becoming too large. Do this after you finish troubleshooting and want to begin a new load.

**Clear Audit History**

Use this metric task to clear all existing audit log data from metric data store.

**Clear Data Store Metric History and Calendar Data**

Use this task to delete actual, target, and user-defined column values. This option also deletes any other calendar-dependent data, such as comments, actions, and mappings from PowerCube cells.
to metrics. Use this option when you want to change the calendar. You must then re-create the calendar before you can use the metric package again.

**Warning:** Clearing data store metric history and calendar data completely reinitializes the metric package database. All work will be lost.

**Clear Data Store Metric History Data Only**
Use this task to delete only actual, target, and user-defined column values.

**Recalculate Data Store Derived Values**
Use this task to recalculate scores and compute derived values and summary data in the data store. You should run this task after you load data into the data store, or after manually adding data. Concurrent recalculate processes are not permitted. This task also updates the search index.

**Synchronize Data Store Users With External Namespace**
Use this task to copy user information from an external namespace to the metric store.

**Update Search Engine Index**
Use this task to maintain the index used for searching in Metric Studio. You should run this task after loading or entering new data, to ensure new objects are indexed for searching.

**New Metric Maintenance**
Use this wizard to create a new task to maintain your metric data.

**Steps**
1. In IBM® Cognos® Connection, click the new data integration task button on the toolbar, and then click **New metric maintenance**.
2. Type the name and description to represent this new maintenance task and if necessary, change the location to place the task, and click **Next**.
3. Click the options you want to use when the task is run, and click **Next**.
4. Select the action you want:
   - To run now or later, click **Save and run once** and click **Finish**. Specify the time and date for the run. Then click **Run**. Review the run time and click **OK**.
   - To schedule at a recurring time, click **Save and schedule** and click **Finish**. Then, select frequency and start and end dates. Then click **OK**.
     **Tip:** To temporarily disable the schedule, select the **Disable the schedule** check box. To view the schedule status, see "Manage Scheduled Activities" (p. 357).
   - To save without scheduling or running, click **Save only** then click **Finish**.
Edit Metric Maintenance Properties

To edit a metric maintenance task, in the Actions column, click the set properties button. Metric maintenance properties appear on the Metric maintenance tab of the Set properties page.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric data options</td>
<td>Options to move data from the staging area to the metric store and compute derived values and summary data.</td>
</tr>
<tr>
<td>Clear data options</td>
<td>Options to clear history and calendar data, rejected data logs, and audit history.</td>
</tr>
<tr>
<td>Additional options</td>
<td>Options to send emails from Metric Studio Watchlist, synchronize user information, and maintain the search engine index.</td>
</tr>
<tr>
<td>Run as the owner</td>
<td>Whether to use the owner credentials (p. 280) when the task is run.</td>
</tr>
</tbody>
</table>

Metric Export Tasks

The following table describes the metric objects that can be exported using the new metric export wizard, and explains the content that is exported for each object.

<table>
<thead>
<tr>
<th>Metric object</th>
<th>Content exported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scorecards</td>
<td>Exports all scorecards in the metric store (does not include associated metrics, reports, or diagrams).</td>
</tr>
<tr>
<td>Metric Types</td>
<td>Exports all metric types and metric type properties including equations.</td>
</tr>
<tr>
<td>Metrics</td>
<td>Exports all metrics (does not include metric values, or associated reports, diagrams, or comments). Note that you will need the associated scorecards, metric types, and qualifiers in order to load these metrics into another metric store.</td>
</tr>
<tr>
<td>Business Calendar</td>
<td>Exports the Metric Studio business calendar including calendar levels and periods.</td>
</tr>
<tr>
<td>Qualifiers</td>
<td>Exports all qualifiers.</td>
</tr>
<tr>
<td>Reports</td>
<td>Exports all reports that have been associated with scorecards, metric types, strategies, projects, and metrics.</td>
</tr>
<tr>
<td>Metric object</td>
<td>Content exported</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Diagrams</td>
<td>Exports all diagrams that have been associated with score-cards, metric types, strategies, projects, and metrics.</td>
</tr>
<tr>
<td>Actions and Projects</td>
<td>Export all actions and projects that have been associated with metrics.</td>
</tr>
<tr>
<td>Strategies</td>
<td>Exports language tables and group associations for the Strategies feature.</td>
</tr>
<tr>
<td>Permissions</td>
<td>Exports all permissions that have been set on Metric Studio objects.</td>
</tr>
<tr>
<td>Import Sources</td>
<td>Exports flat file and relational import sources that have been defined in Metric Studio.</td>
</tr>
<tr>
<td>Metric Designer Import Sources</td>
<td>Exports cube import sources that have been defined in Metric Designer along with their associated time levels and time period mappings, currency mappings, and reportlet dimension selections.</td>
</tr>
<tr>
<td>User Defined Columns</td>
<td>Exports user defined column definitions.</td>
</tr>
<tr>
<td>Units</td>
<td>Exports any special units you have defined. Examples of default units are Currency and Percent.</td>
</tr>
<tr>
<td>Object Links</td>
<td>Exports all links including metric, scorecard, report, diagram, projects, strategies, and so on. You must export links in order for metrics to appear on scorecards and for reports and diagrams to appear on scorecards or metrics.</td>
</tr>
<tr>
<td>Custom URL parameters</td>
<td>Exports any special parameters you have staged against Metric Studio objects for use as URL parameters.</td>
</tr>
<tr>
<td>Watch Lists</td>
<td>Exports all watch lists to which you subscribe.</td>
</tr>
</tbody>
</table>

Use the new metric export wizard to create a new task to export metric data to files.

**Steps**

1. In IBM® Cognos® Connection, click the new data integration task button on the toolbar, and then click New metric export.

2. Type the name and description to represent the new export task and if necessary, change the location to place the task, and click Next.
3. Click to clear the objects you do not want to export, and click Next.

4. Select All data for selected objects, or choose to export data created or changed after a specified date, and click Next.

5. Under Metrics period, click All Values to export values for the entire time period, or Values for the period to export values created during a specified time period. Under Available value types, select the values you want to export, and click Next.

6. Select the currencies, and click Next.

7. Select the format to use when exporting security references.
   
   Note: Using IBM Cognos security references will execute faster. The Metric Studio 2.2 format exports users and groups by name, requiring directory searching.

8. Click Next.

9. Select the languages, and click Next.

10. Select an existing metric data archive to export to, or create a new one. Select the character set encoding and decimal separator value, and click Next.

11. Review your selected options for the export task, and click back if you want to change any options. When you are ready to proceed with the export, click Next.

12. Select the action you want:

   - To run now or later, click Save and run once and click Finish. Specify the time and date for the run. Then click Run. Review the run time and click OK.

   - To schedule at a recurring time, click Save and schedule and click Finish. Then, select frequency and start and end dates. Then click OK.

     Tip: To temporarily disable the schedule, select the Disable the schedule check box. To view the schedule status, see see "Manage Scheduled Activities" (p. 357).

   - To save without scheduling or running, click Save only then click Finish.

**Change Metric Export Properties**

You can edit the properties of a metric export task. For instance, you may want to add a language for your users.

**Steps**

1. In IBM® Cognos® Connection, in the Actions column, click the set properties button for the metric object that you want to export.

2. Click the Metric export tab.
   
   The metric export properties appear.
3. In the **Run as the owner box**, choose whether to use the owner credentials (p. 280) when the task is run.

4. Click **Update the metric export**.
   The Review the summary page appears, showing the current settings for the metric export.

5. Press **Back** as needed to change the settings.

6. Click **Save**.
Chapter 30: Managing Index Search

To use index search, you must create and manage the index. Other administrative tasks related to index search include controlling the scope of the index, adjusting results relevance, suggesting content, and integrating with and publishing index content to third-party search engines.

Search results depend on the access permissions of the person who indexes the content as well as the user who searches the content. For information about the index and search rules that apply to dashboards, see "Index and Search Rules for Dashboards" (p. 509).

Performance Considerations

Some index search settings may also impact overall IBM Cognos Business Intelligence performance. We recommend that you use the default configuration settings for the index update service, index data service, and index search service until you gain experience using index search in your IBM Cognos environment. You can change default settings later to change specific behavior or improve performance.

Initial indexing and index updates can take a considerable amount of time depending on your data set and the system resources available. You can change configuration settings to reduce indexing time for some types of installations and if sufficient system resources are available.

The default settings for the index update service and index data service assume that index search services share a common Java instance with other IBM Cognos services. For this type of installation, changes to default settings for index search to reduce indexing time can have a negative impact on overall IBM Cognos BI performance.

Deploying search services in their own Java instance can significantly improve both indexing and search performance.

We recommend that you make minor adjustments to the default settings, changing only one setting at a time, and then determining if the change reduces indexing time before making additional changes.

Create an Index Update Task

The index supports the full-text search option in IBM Cognos Connection, IBM Cognos Viewer, Query Studio, and Analysis Studio. You must run the index update task once before results are returned for a full-text content search.

The index is not automatically updated when content changes, such as when a report is redeployed or when an object is removed from Content Manager. You must update the index to capture all changes. An indication that removed content is still in the index is if the results of an index search display the broken link icon instead of the expected icon. Also, the name of the search object appears in IBM Cognos Connection as plain text rather than a hyperlink. To ensure that the most recent content additions and deletions are reflected in the index and search results, define a schedule to update the index.
To view a list of object types that are indexable, in IBM Cognos Administration, click Index Search, and Index.

Tip: To find out when an object was last indexed, in Cognos Connection, click the set properties icon for the object. On the General tab, see the Indexed property. If the Indexed property does not appear, the object has not been indexed.

Steps

1. In IBM Cognos Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.

2. Click **Configuration**, then click **Content Administration**.

3. To start the **New Index Update Wizard**, click the new index update icon.

4. Type a unique name and, if you want, a description and screen tip for the index update entry, select the folder where you want to save it, and then click **Next**.

5. To include entries in the index update task:
   - In the **Included Content** section, click **Add**.
   - Select the packages and folders to be included in the index update task.
   - Click the arrow button to move the selections to the **Selected Entries** list.
   - Click **OK**.

   Note: Object types that have been excluded from the index update service will not be indexed, even if they appear in a package, folder, or namespace that is included in the index update task. For more information see "Refine the Scope of the Index" (p. 496).

6. To exclude entries from the index update task:
   - In the **Excluded Content** section, click **Add**.
   - Select the packages and folders to be excluded from the index update task.
   - Click the arrow button to move the selections to the **Selected Entries** list.
   - Click **OK**.

7. Click **Next**.

8. Choose the action that you want:
   - To run now or later, click **Save and run once** and click **Finish**. Specify the date and time for the run, the content options, and the scope of the update. For more information about the options, see "Run an Index Update" (p. 495). Click **Run**. Review the summary and then click **OK**.
   - To schedule at a recurring time, click **Save and schedule** and click **Finish**. Then, select frequency and start and end dates, the content options, and the scope of the update. For more
information about the options, see "Run an Index Update" (p. 495). For more information about scheduling, see schedules.

- To save without scheduling or running, click Save only and then click Finish.

After the index update task runs once, full-text search is available to users.

**Run an Index Update**

Run an index update when you want to update or rebuild an index. For example, you have new objects that require indexing or deleted objects that should be removed from the index. Also, you must run an index update if you want to set data collection options for including or excluding data.

To execute index update tasks, you must have execute permissions for the Administration tasks secured feature and traverse permissions for the Administration secured function. For more information, see "Secured Functions and Features" (p. 283) and "Initial Access Permissions" (p. 851).

**Steps**

1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
2. Click Configuration, then click Content Administration.
3. For the Index Update task, in the Actions column, click the run with options icon.
4. On the Run with options page, click Now or Later.
   - **Now** runs the index update immediately
   - **Later** runs the index update at a specified time. Enter the date and time that you want the index update to run.

You can also schedule a task to run on a recurring basis, and view a list of scheduled tasks. For more information, see "Schedule Management" (p. 365).

5. Under Content Options, specify the information to collect for the content that is included in the index. You must select one or more of the content options. Note that including actual data values enables the most thorough searching, but it also requires additional processing and consumes more space.

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties and metadata</td>
<td>For objects within the scope of the indexing task and objects selected as &quot;Indexable Types&quot;, specifies that the object properties, related objects (for example, output), and metadata are indexed.</td>
</tr>
</tbody>
</table>
Options | Description
---|---
Data values - Referenced data | Specifies that only data referenced by the expressions encountered in reports, queries, and analyses that are included in the scope of the indexing task are indexed. Model objects in the selected content are ignored.

Data values - All data | Specifies that all data encountered in the models that are in the scope of the indexing task are indexed.

If you choose to include data values in the index, you can set additional data collection parameters to govern data collection. For information about these parameters, see "Manage Data Collection" (p. 498)

6. Under Scope, select whether to update the existing index or to rebuild the index.

   You can specify whether to index only entries that have changed since the last time the indices were updated, or to rebuild the indices for all entries.

   7. Click Run.

**Restrict Content Searches**

Because index search indexes the entire content store, inappropriate information may appear in the result list. To avoid exposing data not intended for the typical user, we recommend that you restrict the following types of content:

- **Archived Content** - This content, such as unused reports, is no longer useful for any active business process. Businesses may archive content to meet compliance requirements, or if aspects of this content may be reused.

- **Pre-Production Content** - In situations where the same content store is used to both develop and deploy Cognos content, you may wish to restrict content that is incomplete, under development, or in testing.

- **Specialized Content** - This is content that maintains the application, for example, reports that relate to system operation rather than to the actual purpose of the application.

- **Large datasets** - In some cases you may wish to enhance performance by restricting the indexing of large datasets that have little search value, such as telephone numbers.

If you do not wish to expose such content to end-users, you can restrict this information using the methods described below. You can also use security to restrict read access. For more information, see the IBM® Cognos® Administration and Security Guide.

**Refine the Scope of the Index**

You can control the scope of the index in different ways.
You can exclude all instances of a specific entry type from index updates. For example, you can exclude all report templates from future index updates.

You can also exclude specific entries or parts of an entry. For example, you can exclude a specific dimension in a package from future index updates.

You can include PowerPlay® cubes and reports that are not in the Cognos® content store. For example, you can index PowerPlay cubes and reports located on a different computer than any IBM® Cognos components.

**Steps to Exclude an Entry Type from the Index**

1. In IBM Cognos Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.
2. On the **Index Search** tab, click **Index**, then click **General**.
3. Under **Indexable Types**, deselect the objects to be excluded from the index.
4. Click **Save**.

Your changes take effect during the next index update.

**Steps to Exclude a Specific Entry or Part of an Entry from the Index**

1. In IBM Cognos Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.
2. On the **Index Search** tab, click **Index**, then click **Exclusion**.
3. Enter values for **Package Name**, **Object Type**, and **Object Path** for each entry to exclude.
   - **Tip:** **Object Path** can be either the search path or the ID of the IBM Cognos object you want to exclude. To obtain the search path or ID, click the object’s **Set Properties** button, then click **View the search path, ID and URL**.
4. Click **Save**.

Your changes take effect during the next index update.

**Steps to Include Remote PowerPlay 7 Cubes and Reports in the Index**

1. In IBM Cognos Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.
2. On the **Index Search** tab, click **Index**, then click **PowerPlay 7**.
3. Enter values for **Gateway**, **Encoding**, **Locale**, and **Use Compression** for each PowerPlay 7 cube to include.
   - For example,
     - Gateway = http://localhost/cognos/cgi-bin/ppdscgi.exe
     - Encoding = Windows-1252
     - Locale = en-us
• Use Compression = true

4. Click Save.

Your changes take effect during the next index update.

Manage Data Collection

When you create(p. 493), schedule(p. 366), or run an index update(p. 495), you can specify that data is collected. If you choose to collect data, you will want to review the default settings that control how data is collected. For example, you may want to set the page size or the maximum number of prompt values to collect.

Steps
1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Index Search tab, click Index, then click General.

3. Under Data Values Collection, review the following settings.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page size</td>
<td>Specifies the number of children of a category to request from the report server in one request. For example, if a dimension in a dimensional data source like a cube has 10000 child categories, groups of 1000 are requested until all levels are retrieved. The default value is 1000.</td>
</tr>
<tr>
<td>Maximum prompt values</td>
<td>Specifies the maximum number of prompt values to collect. The default value is 5000.</td>
</tr>
</tbody>
</table>

4. Click Save.

Your changes take effect during the next index update.

Limit Index by Language

You can specify whether to limit indexing by language. For example, specifying a value of en, fr would limit indexing to English and French content.

Steps
1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Index Search tab, click Index, then click General.
3. Under **Indexing Locales**, choose whether to index all the default languages or only a subset. You must specify the languages for a subset. The default language is the server locale.

4. Click **Save**.

Your changes take effect during the next index update.

---

**Adjust Results Relevance**

You can adjust the relevance of search results to give more or less weight to results that meet a specified search criteria. To adjust search score relevance, use the index data service CSN.Relevance advanced configuration setting. You can adjust results relevance for specific objects such as reports, PowerPlay® reports, agents, and screentips. You can also adjust results relevance for container objects such as folders and packages. If relevance is set for a container object, the results relevance adjustment will apply to all objects that reference the container. For more information, see "Change Index Data Service Parameters" (p. 508).

**Steps**

1. In IBM® Cognos® Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.

2. On the **Index Search** tab, click **Storage**, then click **Advanced**.

3. Add the **CSN.Relevance** parameter to the advanced configuration settings list and set the value to the path for the object.

   For example:
   
   CSN.Relevance.1 = 20;/content/folder[@name='Sales_2006']/report[@name='revenue']

   **Note:** Search paths are language-specific, so you must set separate parameters for each language.

4. Enter additional **CSN.Relevance** parameters and values as required.

   **Note:** You can add up to 50 instances of **CSN.Relevance**. Each instance must be appended with a number to distinguish it from other **CSN.Relevance** settings. For example, you can use CSN.Relevance.0 to CSN.Relevance.49 to identify each setting.

5. Click **Save**.

In the example above, any search queries on "revenue" that return reports from the "Sales_2006" package will have the relevance of the search result score increased by 20 percent. If the relevance of the search score was 45 percent prior to setting **CSN.Relevance**, the new relevance of the search results score will be 54.

To decrease the relevance of a search results score, use a negative number. For example, -10 would decrease the relevance of a score by 10 percent.
Suggest Content

You can associate specific search terms with reports or other IBM® Cognos® objects. When a user enters a term that is on the list, the associated IBM Cognos object is displayed above the search engine results, under Suggested.

For example, you have a widely used report called Total Revenue by Country. You decide to associate the report with the term "revenue" so the report will always be shown as a suggested result for that search term.

Steps
1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
2. On the Index Search tab, click Search, then click Suggested.
3. Under Terms, select a checkbox and enter one or more words.
4. Under Type, select the desired matching method:
   - All words results in a match if all the words are found, in any order.
   - Phrase results in a match if all the words are found together and in order.
   - Exact Phrase results in a match if all the words are found together, in order, and without any other words.
5. Under Location, enter the search path or ID of the IBM Cognos object you want to associate with the search term. To obtain the search path or ID, click the object’s Set Properties button, then click View the search path, ID and URL.
   - Note: Search paths are language-specific, IDs are not.
6. Click Save.

Integrate with Another Search Engine

Index search can integrate with other search engines to retrieve search results from enterprise data sources other than IBM® Cognos® Business Intelligence, or from the Web. If you specify another search engine, its search results will appear in a separate pane to the right of the index search results.

Index search can integrate with the following:
- IBM OmniFind™ Enterprise Edition
  - Ensure that the required .jar files have been copied to your IBM Cognos BI environment. For more information, see the topic about adding IBM OmniFind Enterprise Edition search functionality in the Installation and Configuration Guide.
- IBM OmniFind Yahoo! Edition
- Google Search Appliance
any Web search service that accepts REST queries and returns results in XML (typically in RSS or Atom format; index search includes stylesheets for both)

IBM Lotus® Connections

Note that to successfully extend searches to include Lotus Connections content, the Lotus Connections search index must be set up and configured for your environment. You may have to enable indexed search in Lotus Connections. For information about administering Lotus Connections search, see the Lotus Connections documentation. http://publib.boulder.ibm.com/infocenter/ltscnct/v2r0/index.jsp?topic=/com.ibm.connections.25.help/c_admin_homepage_search.html.

Steps

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Index Search tab, click Search, then click Related.

3. In the Related Search box, click the search engine you want to use.

<table>
<thead>
<tr>
<th>Option</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM OmniFind Enterprise Edition</td>
<td><strong>Host Name</strong> is the name of the server that hosts IBM OmniFind Enterprise Edition.</td>
</tr>
<tr>
<td></td>
<td><strong>Port</strong> is the port number that is used by IBM OmniFind Enterprise Edition on the host computer.</td>
</tr>
<tr>
<td></td>
<td><strong>Collection ID</strong> is the name of a specific collection (a collection is a named subset of an index, for example, human_resources). If blank, the entire index is used.</td>
</tr>
<tr>
<td></td>
<td><strong>Application Name</strong> is the named search application to use.</td>
</tr>
<tr>
<td></td>
<td><strong>Application Password</strong> is the password of the named search application.</td>
</tr>
<tr>
<td></td>
<td><strong>Timeout</strong> is the maximum number of seconds index search will wait for the search results to be returned. The default is 120 seconds.</td>
</tr>
<tr>
<td></td>
<td><strong>Username</strong> is the username to log into IBM OmniFind Enterprise Edition.</td>
</tr>
<tr>
<td></td>
<td><strong>Password</strong> is the password to log into IBM OmniFind Enterprise Edition.</td>
</tr>
<tr>
<td>Option</td>
<td>Properties</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IBM OmniFind Yahoo! Edition</td>
<td><strong>Host Name</strong> is the name of the server that hosts IBM OmniFind Yahoo! Edition.</td>
</tr>
<tr>
<td></td>
<td><strong>Port</strong> is the port number that is used by IBM OmniFind Yahoo! Edition on the host computer.</td>
</tr>
<tr>
<td></td>
<td><strong>Collection ID</strong> is the name of a specific collection (a collection is a named subset of an index, for example, human_resources). If blank, the entire index is used.</td>
</tr>
<tr>
<td>IBM Lotus Connections</td>
<td><strong>Protocol</strong> is either HTTP or HTTPS.</td>
</tr>
<tr>
<td></td>
<td><strong>Host Name</strong> is the name of the server that hosts IBM Lotus Connections.</td>
</tr>
<tr>
<td></td>
<td><strong>Port</strong> is the port number that is used by the server that hosts IBM Lotus Connections. The default is 80.</td>
</tr>
<tr>
<td></td>
<td><strong>Homepage</strong> is the IBM Lotus Connections homepage URL.</td>
</tr>
<tr>
<td></td>
<td>IBM Lotus Connections objects that can be included in a search are: Profiles, Communities, Blogs, Bookmarks, Activities, Files, and Wikis.</td>
</tr>
<tr>
<td></td>
<td><strong>Search PUBLIC content</strong> specifies that a search includes only public content, not private content.</td>
</tr>
<tr>
<td></td>
<td><strong>Search PUBLIC and PRIVATE content</strong> specifies that a search include both public and private content.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Private results are for the user performing the search, not the administrator configuring the search.</td>
</tr>
<tr>
<td>Google Search Appliance</td>
<td><strong>Host Name</strong> is the name of the Google Search Appliance server.</td>
</tr>
<tr>
<td></td>
<td><strong>Port</strong> is the port number that is used by Google Search Appliance.</td>
</tr>
<tr>
<td></td>
<td><strong>Collection ID</strong> is the name of a specific collection (a collection is a named subset of an index, for example, human_resources). If blank, the entire index is used.</td>
</tr>
<tr>
<td></td>
<td><strong>Front End</strong> is the Front End page to be used to change the colors, fonts, and design of the search results. The default is default_frontend.</td>
</tr>
</tbody>
</table>
### Properties

<table>
<thead>
<tr>
<th>Option</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td><strong>Atom URL</strong> is the URL of the search service. For example, <a href="http://news.google.com/news?output=atom&amp;q=cognos">http://news.google.com/news?output=atom&amp;q=cognos</a></td>
</tr>
<tr>
<td></td>
<td><strong>StyleSheet URL</strong> is the URL of the stylesheet to be applied to the search results. The following default stylesheets are available for Atom and RSS based search engines:</td>
</tr>
<tr>
<td></td>
<td>● <code>installation_location/configuration/gosearch_atom.xslt</code></td>
</tr>
<tr>
<td></td>
<td>● <code>installation_location/configuration/gosearch_rss.xslt</code></td>
</tr>
<tr>
<td></td>
<td>Copy the desired stylesheet to a Web server accessible to IBM Cognos BI. For example, <a href="http://localhost/gosearch_atom.xslt">http://localhost/gosearch_atom.xslt</a></td>
</tr>
</tbody>
</table>

4. Click **Save**.

---

### Publish Content to an Enterprise Search Engine

To make IBM® Cognos® Business Intelligence content available to an enterprise search engine, such as Google Search Appliance, you must create and publish index search cards. The enterprise search engine indexes the cards, in the same way as it indexes other content, to make the Cognos content available for searching. When a user runs an enterprise search, the results can include Cognos content.

The IBM Cognos Index Search installation includes a command line tool that you run to create IBM Cognos Index Search cards. Before you run this tool, you must create and run an Index Update Task in IBM Cognos Connection. For information about how your enterprise search engine indexes content, see the documentation for your enterprise search engine.

IBM Cognos index search cards are not required for OneBox integration.

### Security Considerations

When a full-text search is run from IBM Cognos Connection or one of the IBM Cognos studios, the result set is filtered based on the access permissions of the user. The result set shows only those items that a user has permission to access. However, when a user runs a search from a third-party enterprise search engine, the result set may show some Cognos content, such as report name and description, that the user would not see when searching in the IBM Cognos portal. This is because the index search cards and the enterprise search engine are outside the IBM Cognos security framework. IBM Cognos security is applied when a user attempts to access an item from the search result set.

When creating index search cards, you can control security for Cognos content by using one or more of the following techniques:

- Limit the number of cards.
When you create the cards, use authentication information that provides access only to public content. This creates cards that represent a subset of the items referenced in the index. When a user runs an enterprise search, only public Cognos content can appear in the result set.

- Create different sets of cards.
  Run the tool that creates the cards more than once using different authentication information. Each time that you run the tool you create a new set of cards that reference the content that the user profile has access to. If you use this technique, you must also manage collections and security using the administration tools of the enterprise search engine.

- Manage collections and security using the enterprise search engine administration tools.
  Your enterprise search engine provides options for controlling the possible result set for different users. This is typically accomplished by defining the content of different collections. A collection definition can include content locations, such as Web servers, or specific content, such as index search cards. You may not be able to duplicate IBM Cognos security settings using these options. You should test the search results to ensure that the expected security is achieved.

You use the following files and folders to expose IBM Cognos content to an enterprise search engine.

<table>
<thead>
<tr>
<th>Path and File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>installation_location\bin\card\card.txt</td>
<td>This text file contains information about the process used to create index search cards, and the parameters you can change for your environment.</td>
</tr>
<tr>
<td>installation_location\bin\card\card.bat (Windows)</td>
<td>You run this batch file from a command line to create the cards. Unless anonymous access is enabled in IBM Cognos BI, you must provide namespace, user ID, and password to run the file. For more information, see the Installation and Configuration Guide.</td>
</tr>
<tr>
<td>installation_location\bin\card\card.sh (UNIX)</td>
<td></td>
</tr>
<tr>
<td>installation_location\bin\card\card.xml</td>
<td>Before you run card.bat, modify the parameters in this file to specify details about your environment. The default settings are appropriate for a proof of concept installation where all IBM Cognos components are installed on the same computer.</td>
</tr>
<tr>
<td>installation_location\indexes\card</td>
<td>This folder is the default output location for the cards generated by card.bat.</td>
</tr>
</tbody>
</table>

**Steps for Windows**

1. Before generating index search cards, set the Index Data Service advanced setting CSN.StoreXML to true.
For information about where to set the CSN.StoreXML parameter, see "Change Index Data Service Parameters" (p. 508).

Existing content will need to be reindexed if you want it stored as XML documents.

2. Open the card.xml file in an XML or text editor.

3. Modify parameters to specify the location of IBM Cognos components and to change other default process settings.

4. Open a command prompt window and go to the \bin\card location in the IBM Cognos BI installation.

5. Run card.bat.

The index search cards are created by default in installation_location\indexes\card. Ensure that the enterprise search engine has access to the cards for indexing. You must regenerate the cards to include changes in the Cognos content.

**Steps for UNIX**

1. Before generating index search cards, set the Index Data Service advanced setting CSN.StoreXML to true.

   For information about where to set the CSN.StoreXML parameter, see "Change Index Data Service Parameters" (p. 508).

   Existing content will need to be reindexed if you want it stored as XML documents.

2. Open the card.xml file in an XML or text editor.

3. Modify parameters to specify the location of IBM Cognos components and to change other default process settings.

4. Go to the \bin\card location in the IBM Cognos installation.

5. Run card.sh.

The index search cards are created by default in installation_location\indexes\card. Ensure that the enterprise search engine has access to the cards for indexing. You must regenerate the cards to include changes in the IBM Cognos content.

**Include Access Control Information in the Index**

The index update service can retrieve the access control list from Content Manager during indexing. This option consumes additional resources, but it is turned on by default because it speeds up searching.

IBM® Lotus® Connections does not support the use of IBM Cognos® access control lists in searches. This affects search results. For example, a user who has access to a dashboard can get that dashboard
returned in the search results. However, if there is a related private activity, they will not be able to view the activity in either the IBM Cognos environment or in Lotus Connections.

**Steps**

1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Index Search tab, click Index, then click General.

3. Under Security, review the following settings:

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index Access Control List</td>
<td>Specifies whether the access control list for each object is retrieved from Content Manager during indexing. When selected, the internal security check is used. When deselected, the Content Manager security check is used. For more information, see the Installation and Configuration Guide. You must also select Index Access Control List in Search, General and in Storage, General. If all three settings do not match, the Content Manager security check is used. All three Index Access Control List settings are selected by default.</td>
</tr>
<tr>
<td>Update Policies</td>
<td>Specifies whether the index access control list is updated when an incremental index is run. The setting is selected by default.</td>
</tr>
</tbody>
</table>

4. Click Save.

Your changes take effect during the next index update.

**Secure Search Results**

You can verify search and refinement results to ensure they can be accessed by the current user.

**Steps**

1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Index Search tab, click Storage, then click General.

3. Under Security, review the following settings:
<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure search results</td>
<td>When selected, all search results are verified in real time with the service provider to ensure that results listed can be accessed by the current user. When deselected, validation of results is not performed.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Validation and verification is always performed when accessing an item in a result list. This security option controls whether or not the item is displayed.</td>
</tr>
<tr>
<td></td>
<td>The setting is selected by default.</td>
</tr>
<tr>
<td>Index Access Control List</td>
<td>Specifies whether the indexed access control list for each object is used for securing results during search.</td>
</tr>
<tr>
<td></td>
<td>The setting is deselected by default.</td>
</tr>
</tbody>
</table>

**Collect Statistics About the Index**

You can collect statistics on the index.

**Steps**

1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Index Search tab, click Index, then click General.

3. Under Indexing Statistics, review the following setting:

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable</td>
<td>Specifies whether the collection of index statistics is enabled. The statistics include total number of objects indexed, number of objects by type, number of data values collected, and number of categories indexed. Information about all running threads is also included. The statistics are saved in XML and HTML files in the logs folder. These files are constantly updated during indexing. The setting is selected by default.</td>
</tr>
</tbody>
</table>

4. Click Save.

Your changes take effect during the next index update.
Set Advanced Parameter to Control Resources for Index Update

You can set the advanced configuration parameter, CSN.Indexing.Level, to control the CPU and memory use of an indexing job and, thereby, manage the impact that the indexing job has on available resources. A value of "high" indicates that the server is dedicated to IBM® Cognos® searching and indexing, whereas a value of "low" indicates that the server runs indexing jobs in the background.

Note, as a general guideline, the resources that an indexing job uses depends on the number of available CPUs on the server.

**Steps**
1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
2. Go to the Index Search, Index, Advanced page, and use the following table to set the advanced parameters.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSN.Indexing.Level</td>
<td>Specifies the resources available for searching and indexing.</td>
</tr>
<tr>
<td></td>
<td>• High - server is dedicated to IBM Cognos searching and indexing</td>
</tr>
<tr>
<td></td>
<td>• Normal - other applications coexist with IBM Cognos search on the server</td>
</tr>
<tr>
<td></td>
<td>• Low - IBM Cognos searching and indexing runs in the background</td>
</tr>
<tr>
<td></td>
<td>• Debug - used for development and troubleshooting</td>
</tr>
</tbody>
</table>

Change Index Data Service Parameters

The following index data service properties are set in the Index Search, Storage, Advanced page.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSN.IndexLocation</td>
<td>Specifies the location of the index created by the index data service.</td>
</tr>
<tr>
<td></td>
<td>The default location is installation_location\indexes\csn</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CSN.IndexNFSSupport</td>
<td>Specifies whether UNIX® Network File System (NFS) is supported. This setting is required when configuring index sharing or index distribution on UNIX NFS. The default value is false.</td>
</tr>
<tr>
<td>CSN.StoreXML</td>
<td>Specifies whether XML documents for Content Manager objects and datasets are stored. The default value is false.</td>
</tr>
</tbody>
</table>

## Index and Search Rules for Dashboards

When you search for IBM® Cognos® BI content or IBM® Lotus® Connections content, the rules concerning whether dashboard activities are listed in the search results depend on the access permissions of the user who indexed the content as well as your own access permissions.

All public activities are included when content is indexed, so they can be retrieved in a search. Activities created from dashboards are private by default, unless they are changed to be public in Lotus Connections.

If the user indexing the content has access to a specific private activity, this activity is included in the index. When you search for a term that matches the private activity, you get the following results:

- If you have access to the private activity in Lotus Connections, the dashboard to which the activity is connected is listed in the IBM Cognos search results. The activity is also listed in the Lotus Connections results, provided that your system administrator has enabled public and private searches.

- If you do not have access to the private activity in Lotus Connections, the dashboard to which the activity is connected is listed in the IBM Cognos search results. The activity is not listed in the Lotus Connections results.

If the user indexing the content does not have access to a specific private activity, this activity is excluded from the IBM Cognos BI index. When you search for a term that matches the private activity, you get the following results:

- If you have access to the private activity in Lotus Connections, the dashboard to which the activity is connected is not listed in the IBM Cognos search results. The activity is listed in the Lotus Connections results, provided that your system administrator has enabled public and private searches.

- If you do not have access to the private activity in Lotus Connections, the dashboard to which the activity is connected is not listed in the IBM Cognos search results. The activity is not listed in the Lotus Connections results.
The following table shows the criteria that govern when an activity is seen or not seen in the Cognos search results for the dashboard user and the user running the index.

<table>
<thead>
<tr>
<th>Dashboard user sees an activity</th>
<th>Dashboard user cannot see an activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>The dashboard is listed in search results.</td>
<td>The Lotus Connections activity is not listed in the search results.</td>
</tr>
<tr>
<td>The Lotus Connections activity is listed in search results.</td>
<td>Dashboard is listed in the search results.</td>
</tr>
<tr>
<td>The Lotus Connections activity is listed in the search results.</td>
<td>The Lotus Connections activity is not listed in the search results.</td>
</tr>
<tr>
<td>This is the most common scenario.</td>
<td>Dashboard is not listed in the Lotus Connections activity</td>
</tr>
<tr>
<td>This is the most common scenario.</td>
<td>Lotus Connections activity is not listed in the search results.</td>
</tr>
</tbody>
</table>
Drill-through access helps you to build business intelligence applications that are bigger than a single report. Drill-through applications are a network of linked reports that users can navigate, retaining their context and focus, to explore and analyze information.

For example, you have an Analysis Studio report that shows revenue and you want to be able to drill through to a Report Studio report that shows details of planned and actual revenue. For more information, see "Example - Drill Through Between OLAP Reports in the Same Package" (p. 523).

Another example is an Analysis Studio report that lists the top 10 promotions by retailer and you want to be able to drill through to a Report Studio report that shows promotion plan revenue. For more information, see "Example - Drill Through from an OLAP Report to a DMR Report" (p. 526).

Drill-through access works by passing information from the source to the target object, usually a report. You define what is passed from the source report by having the system match information from the selection context of the source report to the content of the target (dynamic drill through) or by defining parameters in the target (parameterized drill through). You define drill-through access for the source, either at the package level, in IBM Cognos® Connection (Launch, Drill-through Definitions) or at the report level (Report Studio). Within a package, you control the scope of the data for which drill-through access is available in the drill through definition. Within a report, you define the drill-through access on a report item.

**What You Should Know**

For a drill-through link to work, it is necessary to know:

- what the source report is or is going to be
- what the target report is or is going to be
- whether the users of the drill through link in the source report have the appropriate permissions to view or run the target report
- how the data in the two reports is related

Depending on the underlying data, you may create a drill through definition and have IBM Cognos Business Intelligence match the data (dynamic drill through) or map the source metadata to parameters defined in the target report or package (parameterized drill through)

- whether to run the target report or to open it

The target of drill-through access is usually a saved report definition. The report can be created in Report Studio, PowerPlay® Studio, Query Studio, or Analysis Studio. The target of drill-through access can also be a package that contains a PowerCube, in which case a default view of the PowerCube is created.

- if the target is being run, in what format to run it and what filters to run it with

If you don’t want to run the target report on demand, you may link instead to a bookmark in the saved output.
Sources and Targets
In IBM Cognos BI, there are many different combinations of source and target. For example, you can drill through

- between reports created in different packages against different data source types (p. 519), such as from an analysis against a cube to a detailed report against a relational data source.
- from one existing report to another report using Report Studio (p. 532)
- between IBM Cognos Viewer reports authored in Report Studio, Query Studio, PowerPlay® Studio, and Analysis Studio
- from Series 7 PowerPlay Web cubes to IBM Cognos BI reports (p. 536)
- from Metric Studio to other IBM Cognos BI reports by passing parameters using URLs.

For more information, see the Metric Studio User Guide.

Understanding Drill-through Concepts
Before you set up drill-through access, you must understand the key concepts about drilling through. Knowing these concepts will help you to avoid errors so that report consumers drill through as efficiently as possible.

Drill-through Paths
You can create a drill-through path in a source report in Report Studio, or using Drill-through Definitions in IBM® Cognos® Connection. A drill-through path is the definition of the path that is taken when moving from one report to another, including how the data values are passed between the reports.

Using Drill-through Definitions, you can create a drill-through path from any report in the source package to any target report in any other package in IBM Cognos Connection. This type of drill-through definition is stored in the source package. Users of any report in the package can use the drill-through definition to drill between any combination of Analysis Studio, Query Studio, PowerPlay® Studio, or IBM Cognos Viewer reports in any package.

For any target report that contains parameters, you should map the target parameters to the correct metadata in the drill-through path. This ensures that the values from the source report are passed to the correct parameter values, and that the target report is filtered correctly. If you do not map parameters, then the users may be prompted for values when the target report is run.

A report-based drill-through path refers to a path created and stored in a Report Studio source report. This type of drill-through path is also called authored drill through. The path is associated with a specific data column, chart, or cross tab in the source report, and is available only when users select that area of the report. If an authored drill-through definition is available, a hyperlink appears in the source report when it is run.

Report-based drill-through is limited to Report Studio source reports and any target reports. Use this type of drill-through access when you want to pass data item values or parameter results from
within a source report to the target report, pass the results of a report expression to a target report, or a use URL link as a part of the drill-through definition.

**Selection Contexts**

The selection context represents the structure of the values selected by the user in the source. In Analysis Studio, this includes the context area. When a package drill-through definition is used, the selection context is used to give values for mapped parameters (parameterized drill-through) or also to map the appropriate data items and values.

Drill-through links can also be defined to open the target object at a bookmark. The content of this bookmark may also specified by the selection context.

Drill-through access is possible between most combinations of the IBM® Cognos® Business Intelligence studios. Each studio has been optimized for the goals and skills of the audience that uses it, and in some cases for the type of data source it is designed for. Therefore, you may need to consider how the various studios manage the selection context when you drill through between objects created in different studios, and how the data sources are conformed. During testing or debugging, you can see how source values are being mapped in different contexts using the drill-through assistant.

**Drilling Through to Different Report Formats**

The settings in the drill-through definition determine how users see the report results. For example, the users may see the reports in IBM® Cognos® Viewer as an HTML Web page, or the reports may open in Query Studio, PowerPlay® Studio, or Analysis Studio. If your users have PowerPlay Studio, then they may also see the default view of a PowerCube.

Reports can be opened as HTML pages, or as PDF, XML, CSV, or Microsoft® Excel spreadsheet software formats. When you define a drill-through path, you can choose the output format. This can be useful if the expected use of the target report is something other than online viewing. If the report will be printed, output it as PDF; if it will be exported to Excel for further processing, output it as Excel or CSV, and so on.

If you define a drill-through path to a report that is created in Analysis Studio, PowerPlay Studio, or Query Studio, consumers can open the report in its studio instead of in IBM Cognos Viewer. This can be useful if you expect a consumer to use the drill-through target report as the start of an analysis or query session to find more information.

For example, if an application contains a dashboard style report of high-level data, you can define a drill-through link to Analysis Studio to investigate items of interest. The Analysis Studio view can then be drilled through to a PDF report for printing.

**Note:** Report Studio does not display data results.

**Drilling Through Between Packages**

You can set up drill-through access between different packages. The two packages can be based on different types of data source, but there are some limits.

The following table shows the data source mappings that support drill-through access.
<table>
<thead>
<tr>
<th>Source data source</th>
<th>Target data source</th>
<th>Note: OLAP to OLAP drill through is supported only if the data source type is the same, for example, SSAS to SSAS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLAP</td>
<td>OLAP</td>
<td></td>
</tr>
<tr>
<td>OLAP</td>
<td>Dimensionally modeled relational</td>
<td></td>
</tr>
<tr>
<td>OLAP</td>
<td>Relational data</td>
<td>Note: For more information, see &quot;Business Keys&quot; (p. 517).</td>
</tr>
<tr>
<td>Dimensionally modeled relational</td>
<td>Dimensionally modeled relational</td>
<td></td>
</tr>
<tr>
<td>Dimensionally modeled relational</td>
<td>Relational</td>
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<tr>
<td>Relational</td>
<td>Relational</td>
<td></td>
</tr>
</tbody>
</table>

**Bookmark References**

When you drill through, the values that you pass are usually, but not always, used to filter the report. IBM® Cognos® Business Intelligence supports bookmarks within saved PDF and HTML reports so that a user can scroll a report to view the relevant part based on a URL parameter. For example, you have a large inventory report scheduled to run daily or weekly during off hours because of resource considerations. Your users may want to view this report as a target because it contains detailed information, but you want them to view the saved output rather than run this large report. Using this Action option and bookmark settings, users can drill through from another source location based on products to open the saved report to the page that shows the product they want to focus on.

When a bookmark in the source report is used in a drill-through definition, it provides the value for the URL parameter. When report consumers drill through using this definition, they see the relevant section of the target report.

Bookmark references are limited to previously run reports that are output as PDF or HTML and contain bookmark objects.

**Members and Values**

Dimensionally modeled data, whether stored in cubes or stored as dimensionally-modeled relational (DMR) data, organizes data into dimensions. These dimensions contain hierarchies. The hierarchies contain levels. And the levels contain members.

An example of a dimension is Locations. A Locations dimension may contain two hierarchies: Locations by Organization Structure and Locations by Geography. Either of these hierarchies may contain levels like Country and City.
Members are the instances in a level. For example, New York and London are members in the City level. A member may have multiple properties, such as Population, Latitude, and Longitude. Internally, a member is identified by a Member Unique Name (MUN) (p. 515). The method by which a MUN is derived depends on the cube vendor.

Relational data models are made up of data subjects, such as Employees, which are made up of data items, such as Name or Extension. These data items have values, such as Peter Smith.

In IBM® Cognos® Business Intelligence, the methods of drilling through available are
- Dimensional (member) to Dimensional (member)
- Dimensional (member) to Relational (data item value)
- Relational (data item value) to Relational (data item value)

If the target parameter is a member, the source must be a member. The source and target should usually be from a conformed dimension (p. 516). However, if the data will support it, you may also choose to define a mapping using different properties of the source metadata item.

If the target parameter is a value, the source can be either a value or a member. If the source is a dimensional member, you must ensure that the level or dimension is mapped to the target data item correctly in the drill-through definition. The business key from which the member is sourced should usually match the relational target value, which is most often the business key (p. 517). However, if the data will support it, you may also choose to define a mapping from the caption of the source metadata item.

**Member Unique Names**

The member unique name (MUN) is a unique identifier for a member in IBM® Cognos® reports. It is stored in the report specification when the member is referenced in the report directly. The MUN is used in drill-through between OLAP data sources. The member keys in the MUN for the different OLAP data sources must match.

The MUN is used to find the member in the data source, which is similar to how business keys are used to find records in a table. For example, when you create OLAP dimension Products, you use the Product Line database column as a label for the members in your Product Line level. However, you use the Product Line Code business key from the database table to ensure that all the Product lines are unique in that level. The source value that you used to create the members is used in combination with the data source name, hierarchy, and level information in the member unique name.

If the MUN changes, members that are directly referenced in expressions, filters, or reports are no longer found. Changes to the MUN may be related to other changes. For example, changes to the hierarchy and level structures may change the level unique name, and changes to the business key values may change the member key path. Other factors that can affect the MUN are application changes during the design stage or over time, IBM Cognos PowerCube category codes that are unpredictably unique, the production environment that has more members than the test environment, or removing the member from the data source.

To avoid potential problems, we recommend the following best practices when you build OLAP data sources:
Use unique codes and keys within a dimension for the member keys.

 Define your OLAP and relational packages using unique conformed values for the source values (business keys) within similar dimensions or data values where drill-through between applications may be required.

 Ensure that the business keys and dimension metadata structure are the same in the production and test environments.

 Do not change the business keys in Framework Manager in the production environment.

 Resolve the non-unique keys in a dimension in the data source before you build the cube.

 Ensure that there are no duplicate source values in all levels of a dimension before you build a PowerCube. We do not recommend using the tilde character (~) in the category codes.

 For more information, see the section about uniqueness in the IBM Cognos Series 7 Step-by-Step Transformer.

 For information about PowerCubes migrated from IBM Cognos Series 7, see the IBM Cognos PowerPlay®Migration and Administration Guide or the Migration Assistant User Guide.

Conformed Dimensions

If you work with more than one dimensional data source, you may notice that some dimensions are structured the same, and some are not. The reason that dimensions can be structured differently is that the data sources may serve different purposes.

For example, a Customer dimension appears in a Revenue data store, but not in an Inventory data store. However, the Products dimension and the Time dimension appear in both data stores.

Dimensions that appear in multiple data stores are conformed if their structure is identical for all of the following:

- hierarchy names
- level names
- level order
- internal keys

Drilling through is possible between different dimensional data stores only if the dimensions are conformed, and if the dimension data store is of the same vendor type, such as IBM® Cognos® PowerCube as the source and the target. For example, in two data stores for Revenue and Inventory that contain Products and Time dimensions, it is possible to define the Products and Time dimensions differently for each data store. However, for drill-through between the Products and Time dimensions to work, their structures must be identical in each data store.

If you are not sure whether your dimensions are conformed, then you should check with the data modeler to ensure that the drilling through will produce meaningful results.

IBM Cognos Business Intelligence does not support conformed dimensions generated by Framework Manager for SAP BW data sources.
**Dimensionally-modeled Relational Data Sources**

Ensure that each level contains a business key that has values that match your PowerCube or other DMR models. Also, you must also ensure that the **Root Business Key** property is set and uses the business key of the first level in the hierarchy. This helps to ensure that you have a conformed member unique name when attempting to drill through using members from this dimension.

**Business Keys**

When drill-through access is defined from a member to a relational value, the business key of the member is passed by default. This means that your relational target parameter must be set up using the data item with a matching value, which is most often the business key data item. You can also choose to pass the caption of the source metadata item.

For example, employees are usually uniquely identified by an employee number, not by their name, because their name is not necessarily unique. When you drill through from a dimensional member to a relational data item, the value provided is the business key. Therefore, the parameter in the target report must be defined to accept a business key value. The exact logic used to define the business key value supplied depends on the cube vendor. For IBM® Cognos® PowerCubes, the business key value is the **Source** property defined for the level in IBM® Cognos® Transformer. IBM Cognos Series 7 Transformer PowerCubes pass the source value if the drill-through flag was enabled before the cube was built. Otherwise, the category code is used.

In Report Studio, you can determine what the member business key is using an expression such as `roleValue('_businessKey', [Camping Equipment])`. This expression is case sensitive.

SSAS 2005 multi-part business keys are not supported in drill-through operations.

**Tip:** When other users run your drill-through report, you may not want them to be prompted for a business key. In Report Studio, you can build a prompt page with a text that is familiar to the users, but filters on the business key. Your Framework Manager modeler can also set the **Display Item Reference** option for the **Prompt Info** property to use the business key when the data item is used in a prompt.

**Scope**

Scope is specific to drill-through definitions created using **Drill-through Definitions** in IBM Cognos Connection (package drill-through definitions). The scope you set defines when the target report is shown to the users, based on the items they have in the source report.

Usually, you define the scope of a drill-through path to match a parameter that it passes. For example, if a target report contains a list of employees, typically you only want to display the report as an available drill-through choice when a user is viewing employee names in a source report. If employee names are not in the source report and the scope was set on the employee name in the drill-through definition, the employee report does not appear on the list of available drill-through target reports in the **Go To** page. You can set the scope to a measure or to an item in the report.

In report-based drill-through access, where the drill-through path is associated with a specific report column, the column serves as the scope.
Mapped Parameters

Drill-through targets may contain existing parameters, or you may choose to add parameters to the target for greater control over the drill-through link. You usually map all parameters in a drill-through target to items from the source.

When you map source items that are OLAP or DMR members to target parameters, you can select from a set of related member properties to satisfy the requirements of the target parameter. For a dimensional target, a dimensional source item uses the member unique name by default. For a relational target, a dimensional source item uses the business key by default.

For example, you could change the source member property that is used for a mapping to the member caption instead of the business key to match the parameter in a relational target. For a dimensional target, you could define a parameter that accepts a particular property (such as business key or parent unique name), then pass the appropriate source property to satisfy that target.

Note that if you define drill through between non-conformed dimensions, you should test carefully to ensure that the results behave as expected.

If you do not specify parameter mappings, then by default, you will be prompted for any parameters required in the target when you use the drill-through link. To customize this behavior, use the display prompt pages setting.

When the action is set to Run using dynamic filtering, then additional filtering is applied if names from the context in the source report match names of items in the target. Use this action as well when there are no parameters defined in the target.

If parameters are not mapped correctly, then you may receive an empty report, the wrong results, or an error message.

The source and target cannot contain identical parameter names when they are from different packages, even if the data structure is conformed. If the source and target are from the same package, there is no restriction.

If you have the necessary permissions, you can use the drill-through assistant to look at what source parameters are passed, and what target parameters are mapped for a given drill-through link.

You can change the dynamic drill-through filter behaviour if you want drill-through to generate a filter using the Member Business Key instead of the default Member Caption. For more information, see Changing Drill-Through Filter Behavior in the IBM® Cognos® Administration and Security Guide.

Drilling Through on Dates Between PowerCubes and Relational Packages

 Usually, drilling through from OLAP to relational packages requires that the target report parameter is set using the business key in the relational data. However, this method does not work well for dates. OLAP data sources typically view dates as members, such as Quarter 1 2006, while relational data sources view dates as ranges, such as 1/Jan/2006 to 31/March/2006.

A special feature exists for drilling through between PowerCubes and relational packages. Ensure that the target report parameter is set up using in_range. Note that the parameter must be of type date-time, and not integer.

An example follows:
Also ensure that the drill-through definition maps the parameter at the dimension level and that the PowerCube date level is not set to suppress blank categories. Enabling the option to suppress blank categories in the Transformer model before you build the cube may cause the drill-through on dates to be unsuccessful. This happens because there are missing values in the range.

**Set Up Drill-through Access in Packages**

A drill-through definition specifies a target for drill-through access, the conditions under which the target is available (such as the scope), and how to run or open, and filter the target. In IBM Cognos® Connection, a drill-through definition is associated with a source package. The drill-through path defined in the drill-through definition is available to any report based on the source package it is associated with. The target can be based on any target package in IBM Cognos Connection and can be stored anywhere. For example, all reports authored in the GO Data Warehouse (analysis) sample package or in a folder linked to this package can access any drill-through definition created in this package.

**Note:** For reports created in Report Studio, you can define drill-through access in specific reports by setting up the drill-through definition in the report instead of in the package, or restrict drill-through access by changing report settings so that the report is unavailable as a drill-through target. For more information, see the IBM Cognos Report Studio User Guide. Reports created in IBM Cognos Business Insight Advanced are not supported as drill-through targets.

You can define drill-through definitions between reports created in the different IBM Cognos Business Intelligence studios, and reports based on different packages and data sources (p. 513). The target report must exist before you start creating the drill-through definition in IBM Cognos Connection. Drill-through targets can be reports, analyses, report views, PowerCube packages and queries.

Drill-through definitions support both dimensional and relational packages, and are available to Analysis Studio, Query Studio, PowerPlay® Studio, and IBM Cognos Viewer.

**Steps to Create a Drill-through Definition**

1. Check the drill-through target:
   - Confirm that the drill-through users have access to the target.
   - Hide the target from direct access if you want.
   - If necessary, check what parameters exist in the target.

   When a drill-through definition links objects in different packages, you must consider the data types used in both the source and the target object. Review the structure and values of data that you intend to pass in the drill-through, and ensure that the created parameters are appropriate for your scenario, if you have defined parameters, or that dynamic drill through will work successfully. For more information, see "Conformed Dimensions" (p. 516) and "Business Keys" (p. 517).

2. In IBM Cognos Connection, in the upper-right corner, click **Launch, Drill-through Definitions**.
3. Navigate to the top level of the package for which you want to create the drill-through definition.

4. Click the new drill-through definition button on the toolbar.

   **Tip:** If you do not see the drill-through definition button, then confirm that you are at the top level of the package, and not in a folder in the package. Drill-through definitions must be stored at the package level.

5. Type a name for the drill-through definition.

6. If you want, type a description and screen tip, and then click **Next**.

7. Follow the instructions on the screen:
   - If you wish, restrict the scope to a query item or a measure in the source.
     
     If the target contains parameters, you should set the scope to the parameters that are mapped to the target report. For more information, see "Scope" (p. 517).
   
   - Select the target from any package available in IBM Cognos Connection.
     
     If PowerPlay targets are available, then you must choose whether to set the target as a report or a PowerCube.
   
   - Click **Next**.

8. In the **Action** section, specify how to open the target object when the drill-through link is run and if you chose to run the report, in the **Format** section, specify the format to run the report in.

   Users may be able to change the **Action** settings when they use the drill-through link. If you are using bookmarks in the target, then you must select the action **View most recent report**.

9. In the **Parameter values** table, specify how to map the source metadata to any parameters that exist in the target report or object.

   For example, if you drill through between OLAP data sources, then members are mapped to each other. If you drill through from an OLAP to a relational data source, then the source value (member) is mapped to the query item name (value).

   Usually, every parameter that exists in the target should be mapped to the source metadata. If not, then the report user may be prompted for any missing values when the drill-through link is used.

10. **Click Map to metadata**, or click the edit button [edit].

   - In the screen that appears, select the metadata from the source to map to the target parameter.
   
     If the source package is dimensional, you can select what property of the source metadata item to use in the mapping. By default, the business key is used for a relational target, and the member unique name is used for a dimensional target.
   
   - Repeat for each parameter in the list.
11. In the Display prompt pages section, specify when the prompt pages will appear.

You can only set this action when there are parameters in the target report and the target report will be run. If you change the action to View most recent report, for example, for bookmark references, the Display prompt pages property is disabled because you will use a previously-run report. If you choose to open the report directly in Analysis Studio, then the the Display prompt pages property is also disabled.

You specify prompt settings in IBM Cognos Connection (Report Properties, Prompt for Values).

12. Click Finish.

13. Run a report from the source package, and test the drill-through link.

Note: The drill-through definition is associated and stored with the source. Errors related to the target are only generated when you run the drill-through links, not when you save the drill-through definition.

**Steps to Edit an Existing Drill-through Definition**

1. In IBM Cognos Connection, in the upper-right corner, click Launch, Drill-through Definitions.

2. Click a package name to view its drill-through definitions.

3. Click the set properties button on the actions toolbar to the right of the drill-through definition that you want to modify.

Tip: If you do not see the drill-through definitions, check that you are not in a folder in the package. Drill-through definitions are all stored at the root level of the package. If you do not see a specific drill-through definition, confirm that you have the correct permissions.

4. Click the Target tab.

5. Make the necessary modifications, and click OK.

6. Run a report from the source package, and test the drill-through link.

Note: The drill-through definition is associated and stored with the source. Errors related to the target are only generated when you run the drill-through links, not when you save the drill-through definition.

**Set Up Parameters for a Drill-Through Report**

For greater control over drill-through access, you can define parameters in the target report. For more information about defining parameters, see the IBM® Cognos® Report Studio User Guide or the Query Studio User Guide.

**Steps in Report Studio**

1. Open the target report in Report Studio.

2. Ensure that the report is available for drill-through access:
   - From the Data menu, select Drill Behavior.
In the Basic tab, select **Accept dynamic filters when this report is a drill-through target** and then click OK.

3. Create a parameter that will serve as the drill-through column, or that will be used to filter the report. (Data menu, Filters).

For example, to drill through or filter on Product line, create a parameter that looks like this:

\[ \text{[Product line]} = \text{?prodline_p}\]

**Tip:** Use the operators **in** or **in_range** if you want the target report to accept multiple values, or a range of values.

4. In the Usage box, specify what to do when a value for the target parameter is not passed as part of a drill-through:

- To specify that users must click a value in the source report, click **Required**.
  - If a value for the target parameter is not passed, users are prompted to choose a value.

- To specify that users do not need to click a value in the source report, click **Optional**.
  - Users are not prompted to choose a value and so the value is unfiltered.

- To specify not to use the parameter, click **Disabled**.
  - The parameter is not used in the report, and therefore not available for drill-through definitions. For more information about defining report parameters, see the Report Studio User Guide.

  **Tip:** If the parameter is needed in the report for other reasons, then you can also specify not to use it in the drill-through definition (Parameters table, Method, Do not use parameter).

The drill-through definition controls when prompt pages or parameters are displayed.

**Steps in Query Studio**

1. Open the target report in Query Studio.

2. Confirm that the report is available for drill-through access:

   - From the menu, select **Run Report, Advanced Options**.
   - Select **Enable drill through from a package in the report output** and then click OK.

3. Create a filter that will serve as the drill-through parameter, or that will be used to filter the report.

   - Select the column that you want to filter on, and click the filter button.
   - Change the settings as needed, and click OK.
Set Up Parameters for a Drill-through Target in Analysis Studio

You can create a drill-through target analysis and add target parameters in the analysis by setting a dimension as the **Go To** parameter. When you create a drill-through definition for the analysis, this parameter appears in the target parameter list.

To support drilling down within the dimension and then drilling through, map the dimension in the source metadata to the target dimension. The member or members which are currently in your view are passed to the target analysis as filter values. This applies to any query, report, or analysis used in IBM® Cognos® Business Intelligence drill-through actions. To support drilling through directly from a particular level, map that level in the source metadata to the target dimension.

You can set multiple parameters in an analysis target. However, you cannot pass members within a selection set in Analysis Studio.

**Steps**

1. In Analysis Studio, create a cross-tab analysis using the package that was set up for drill-through analysis.

2. If you want, add as a row or column the data item that you want to be the prompt.

3. Move or add the dimension or level that you want to be a target parameter to the **Context** area.
   
   **Note:** You cannot pass members within a selection set in Analysis Studio.

4. View the list for the item in the **Context** area and click **Use as "Go To" Parameter.**

5. Save this analysis as your target report in IBM Cognos Connection.
   
   You can now create the drill-through definition under a source package.

When you create the drill-through definition (p. 519) and use the cross-tab analysis as a target, the **Go To** parameter item in the analysis appears as a drill-through parameter. You can map to this parameter the same way that you drill through to Report Studio or Query Studio reports.

**Example - Drill Through Between OLAP Reports in the Same Package**

You want to drill through from an IBM® Cognos® Analysis Studio report that shows revenue breakdown according to order method to a report created in Report Studio, which shows details of planned and actual revenue.

Both of these reports exist as samples in the **Sales and Marketing** (cube) package. The reports are both based on the same package, so the data is conformed (p. 516). You decide to use a parameterized drill-through definition for greater control, because prompt parameters exist in the target already.

You also decide to restrict the scope of access to the drill-through target, so it that it is only available to a report in the source package that uses the measure Revenue. This means that any reports created in the package will see this drill-through definition if they contain the measure Revenue. If the source report does not contain order year or order method, then users will be prompted for values for those parameters when the drill-through target is run.
You must have the IBM Cognos Business Intelligence samples from the deployment zip file IBM_Cognos_DrillThroughSamples installed to follow this exercise. If you want to check the target report, you must have access to Report Studio.

Steps to Check the Target and Source Report

1. Open the target report, Actual vs. Planned Revenue, in Report Studio.
   - Go to IBM Cognos Connection.
   - In Public Folders, open the package Sales and Marketing (cube), and then open the folder Report Studio Report Samples.
   - Select the report Actual vs. Planned Revenue, and click the Open with Report Studio icon.

2. In the Actual vs Planned Revenue report in Report Studio, confirm that you have parameters for order method and time.
   - Open the query explorer tab and select Query 1.
   - In the Detail Filters box, confirm that a filter parameter exists for each of Order Method and Year, and note the parameter names.

3. From the Data Items box, note the name of the measure that you plan to use for the scope (Revenue).

4. Close the Actual vs Planned Revenue report.

5. Open the source report, Custom Rank Sample, in Analysis Studio.
   - Go to IBM Cognos Connection.
In the Public Folders, open the package Sales and Marketing (cube), and then open the folder Analysis Studio Report Samples.

Select the report Custom Rank Sample, and click the Open with Analysis Studio icon.

6. In the Custom Rank Sample report in Analysis Studio, check the name of the measure that you want to use to restrict scope (Revenue).

7. Check the rows and columns in the report and confirm that the data structure will match the parameters in the Actual vs Planned Revenue report.
   
   Tip: Pause the mouse over a label in the crosstab to see the path.

8. Leave the Custom Rank Sample report open for testing.

Steps to Create and Test the Drill-through Definition

1. In IBM Cognos Connection, navigate to the Sales and Marketing (cube) package.

2. From the upper right-hand corner of the screen, click Launch, Drill-through Definitions.

3. Click New Drill-through Definition in the upper right hand corner of the screen.
   
   Tip: If you do not see the New Drill-through Definition button, check that you are at the root of the folder, and not still in the Analysis Studio Reports folder.

4. In the Drill-through Definition wizard, type the name Drill Through From Custom Rank to Revenue Details and a description, and click Next.

5. Click Set the scope, and in the screen that appears, set the scope to the Revenue measure, and then click OK.

6. Click Set the target, and in the screen that appears, set the target report to Actual vs. Planned Revenue, in the Report Studio Report Samples folder of the Sales and Marketing (cube) package.

7. In the Prompt Values table, map the parameters pMethod and pYear in the target to the metadata in the source:
   
   - confirm that values in the Type column are Connection
     
     Use the value Connection when you link dimensional data sources.
   
   - for the pMethod parameter, click the edit button and select [sales_and_marketing].[Order method].[Order method].[Order method type] from the metadata tree.
   
   - for the pYear parameter, click the edit button and select [sales_and_marketing].[Time].[Time].[Year] from the metadata tree.

8. Set Display Prompt Pages to Only when required parameter values are missing.

9. Follow the instructions on the screen to save the drill-through definition.

10. Go to the Custom Rank Sample report, right-click outside the report data, and select Go To, Related Links.

11. Go to the Custom Rank Sample report, right-click on a cell in the cross-tab, and select Go To.
A list of possible targets for the package and the data that is in scope appears, including the Actual vs. Planned Revenue report.

12. Click the Actual vs. Planned Revenue, and the report runs using the context you selected.

The drill-through definition that you have created should be identical to the sample definition MeasureDrill.

You can also try the following:

- In the drill-through definition, change the prompt settings for the target report.
- In the Sales and Marketing (cube) package, create a report that does not use the Revenue measure, and confirm that the Actual vs Planned Revenue report is no longer available as a drill-through target.
- A sample drill-through definition also exists for the same target report, Actual vs. Planned Revenue, from the PowerPlay Studio report Revenue by Order Method. If you use PowerPlay Studio, check the source and target reports and try to recreate the drill through definition.
- If you have permission to debug drill through definitions, then you can view the parameters passed from the source (View passed source values) and available in the target (from the drop down beside the target report name, select View Target Mapping).

**Example - Drill Through from an OLAP Report to a DMR Report**

You want to drill through from an IBM® Cognos® Analysis Studio report named Top 10 Promotions by Retailers, based on the package Sales and Marketing (cube) to a Report Studio report named Promotion Plan Revenue, based on the package Sales and Marketing (conformed). You set the drill-through definition up in the package, so that the Promotion Plan Revenue report is available to any report based on the source package, and you use dynamic drill through, instead of defining parameters.

You must have the IBM Cognos Business Intelligence samples from the deployment zip file IBM_Cognos_DrillThroughSamples installed to follow this exercise. By default, the samples are installed in the Public Folders in IBM Cognos Connection.
The target report shows data for the context of the source: Campaign. Other context, such as Time, is not used by the target.

**Steps to Check the Target and Source Reports**

1. Run the target report:
   - In IBM Cognos Connection, go to the Sales and Marketing (conformed) package, and open the folder Report Studio Report Samples.
   - Run Promotion Plan Revenue in IBM Cognos Viewer.

2. Note what information is available in the target, and how you will filter it. In this example, you filter on the campaign name.

3. Close the target report Promotion Plan Revenue.

4. Open the source report:
   - In IBM Cognos Connection, go to the Sales and Marketing (cube) package and open the Analysis Studio Report Samples folder.
   - Select Top 10 Promotions by Retailer, and open it in Analysis Studio.
   - Note the names of the dimension and level that you want use to drill through. In this example, you will drill through on Campaign.
5. Keep the **Top 10 Promotions by Retailer** report open for testing.

**Steps to Create and Test the Drill-through Definition**

1. In IBM Cognos Connection, navigate to the **Sales and Marketing (cube)** package.

2. From the upper right-hand corner of the screen, click **Launch, Drill-through Definitions**.

3. Click **New Drill-through Definition** in the upper right hand corner of the screen.

   **Tip:** If you do not see the **New Drill-through Definition** button, check that you are at the root of the folder, and not still in the **Analysis Studio Report Samples** folder.

4. In the **Drill-through Definition** wizard, type the name **Drill Through to Promotion Plan Revenue** and a description if you want, and click **Next**.

   **Tip:** This is the name that users see in the **Go To** page, for example when they have to select from more than one drill-through target. As with any other object in IBM Cognos Connection, you can create translations of this name.

5. Click **Set the scope**, and set the scope to **Campaign**, in the **Promotions** dimension.

   This drill-through definition will only be available when **Campaign** is part of the selection context.

6. Click **Select the target**, and set the target report to **Promotion Plan Revenue**, in the **Report Studio Report Samples** folder of the **Sales and Marketing (conformed)** package, click OK, and then click Next.

   **Note:** If PowerPlay® Studio is available in your installation, then you must also specify that the target is a report and not a PowerCube package.

7. Under **Action**, select **Run the report using dynamic filtering**.

8. Under **Parameter mapping**, in the **Source metadata item** column for the parameter **pcampaign**, click **map to metadata**.

9. In the screen that appears, click **Promotions** and select **Campaign**.

10. Click **Finish** to save the drill-through definition.

    You can edit the properties of the drill-through definition at any time.

11. From IBM Cognos Connection, run the Analysis Studio report **Top 10 Promotions by Retailers** and test the drill-through definition.

The target report appears, filtered by the context you selected.

The drill-through definition that you created should be identical to the drill-through definition **DrillToDMR**.

The sample drill-through definition **PPStoHidden** also goes from an OLAP to a DMR package, from the PowerPlay Studio report **Top 20 Product Brands**.
Debugging a Drill-through Definition

IBM® Cognos® Business Intelligence includes a debugging functionality that you can use to find problems with your drill-through definitions created in IBM Cognos Connection, and to correct any drill-through errors. It can also help you understand how the drill-through functionality works, especially across different types of data sources. This functionality is also referred to as the drill-through assistant. You can also debug drill-through definitions that were created in a PowerCube and migrated to IBM Cognos BI.

If your target report is not receiving any parameters, check the mapping in your drill-through definition, and ensure that your parameters were created against the correct data type for your drill-through scenario. For example, if you want to create a drill-through definition from an OLAP package to a target report based on a relational package, your target parameters need to be set up to a query item that has the same value as the OLAP business key or the member caption. For more information, see "Members and Values" (p. 514). If your target report is being filtered with the wrong values, check the values that are being mapped from the source to the target.

You must have the necessary permissions to use the drill-through assistant. The information that the drill-through assistant provides is available from the Go To page, when you run the drill-through. The drill-through assistant provides the following information.

Passed Source Values

The source values are the values from the selection context that are available for passing to the target report when the user chooses to drill through to the target report or object. For example, if you drill through from a source in Analysis Studio, you see the values at the intersection you selected prior to the drill-through action, and any values in the context area.

The values in the debug list are the values in the source report that were transformed by any drill-through operation.

- **Display Value**
  
  Shows the value that users see when using this data item or this member. For OLAP members, this is the member caption or label. For example: Telephone is a member from the Order Method dimension.

- **Use Value**
  
  Shows the value that IBM Cognos reports and analyses use when retrieving the data item or the member. For OLAP members, this is the member unique name (MUN). For example: [great_outdoors_company].[Order Method].[Order Method].[Order Method1]->:[PC].[@MEMBER].[2] is the MUN for the Telephone member in the Order Method dimension.

Target Mapping

If you chose to use parameters in the target, then the target mapping shows the name of each parameter that was mapped in the drill-through definition, and the values that the source is attempting to pass to that parameter.

- **Parameter Name**
Shows a list of valid target parameters mapped in the drill-through definition to receive information from the query item, level, or hierarchy on which you performed the drill-through action.

You can see only parameters for which there is a valid mapping and only the names of the parameters. For example, if the target report contains a parameter for Product Type and the drill-through definition maps that target parameter to the source Product Type level metadata, you see this target parameter only if you attempt to drill through on the Product Type level in the source report. Drilling through on the Product Line level does not display this parameter target.

You must ensure that the target parameters in your drill-through definitions are mapped correctly. Incorrectly mapped parameters can receive information from the wrong source metadata, especially where you have data values that are not unique. If you cannot see any target parameters or the parameters you expected to see in the View Target Mapping list, check the parameter mapping in the drill-through definition.

- **Display Value**
  
  Shows the value that users see when using a data item or member. For OLAP members, this is the member caption or label. For example: Telephone is a member from the Order Method dimension.

- **Use Value**
  
  Shows the transformed value that the drill-through definition uses when passing a data item value or member to the target parameter.

  OLAP members passed to relational target parameters obtain the business key from the members MUN and pass only the business key. Using the above example of the Telephone member in Order Methods, the business key is 2. If you are unsure of what the business key is for a member, you can write a Report Studio expression such as `roleValue('_businessKey', [member])`. This value is passed to the target parameter.

  OLAP members passed to a target parameter based on another OLAP package of the same OLAP type show a transformed MUN. Using the above Order Methods example, the MUN is now transformed and the drill-through definition uses the value of `[great_outdoors_company].[Order Method].[Order Method].[Order Method1]->[Order Method1].[2]:[PC].[@MEMBER].[2]`. The middle portion of `[Order Method1][2]` is where the drill-through definition finds the correct member in the target when the OLAP data sources are different. To see the MUN for a specific member, you can look at the properties of the member in Report Studio and look at the Member Unique Name property.

**Access the Drill-through Assistant**

You can use the drill-through assistant for debugging purposes when you work with drill-through definitions in IBM Cognos Connection.
To use this functionality, you must have the required permissions for the **Drill-Through Assistant** secured function in IBM® Cognos® Administration.

**Steps**

1. Select a link in your source report, right-click the link, and select **Go To**, or from PowerPlay Studio, click the drill-through button.

   The **Related links** page appears, showing the list of available target reports. If your target report is not shown, review the scope settings in your drill-through definition.

   **Tip:** If only one target is available, then when you select **Related links**, the target is opened without showing the **Go To** page.

2. Click **View passed source values** to see the values that are available for passing by the source report.

3. Next to the target report, click the down arrow and choose **View Target Mapping**.

   A list of the valid mapped data appears, showing the available source values, and the use and display values.

4. For either set of values, click **More information** to see the XML for the selection context (passed source) or the drill-through specification (target mapping).

**Example - Debugging a Drill-through Definition**

Your OLAP source has a Products dimension with the levels Line, Type, and Name. You have defined a parameter in your relational target to match each level of that OLAP source dimension. You can have a situation where you see all target parameters from a single dimension displayed in the **View Mapped Target** list. This is likely because the individual target parameters are mapped to a single dimension in the drill-through definition, in this case the Products dimension. In your OLAP data source, you have a business key value, or the source value used to create the members, that is duplicated in all three levels.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Display Value</th>
<th>Use Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prod Line Param</td>
<td>Camping Equipment</td>
<td>1</td>
</tr>
<tr>
<td>Product Type Param</td>
<td>Cooking Gear</td>
<td>1</td>
</tr>
<tr>
<td>Product Name Param</td>
<td>Trail Chef Water Bag</td>
<td>1</td>
</tr>
</tbody>
</table>

Having all three parameters mapped to the Products dimension is correct if the use values are not duplicated in the dimension. In the above table, you can see that members from all three levels have the same use value. In this case the drill-through operation cannot determine which level is the correct one because the scenario indicates that all levels are valid. In this situation, the first level encountered with a valid business key or use value is fulfilled by the drill-through definition. This can result in unexpected behavior.
This example shows why it is important to always ensure that your data warehouses and OLAP sources are designed with unique business keys or source values. To correct this situation, the drill-through definition should have each individual target parameter mapped to each associated level in the source metadata rather than in the dimension.

**Set Up Drill-through Access in a Report**

Use Report Studio to create a source drill-through report to link two reports containing related information. You can then access related or more detailed information in one report by selecting a value or multiple values in the source report. You can also drill through within the same report by creating bookmarks.

For more information, see the IBM® Cognos® Report Studio User Guide.

**Tip:** To use a Report Studio report as a source in a drill-through definition in IBM Cognos Connection, the option Allow package based drill-through must be selected (Data menu, Drill Behavior). This option is selected by default.

**Steps to Create a Parameter in the Target**

1. In Report Studio, open the target report.

2. Create a parameter that will serve as the drill-through column or that will filter the report.
   
   For example, to drill through or filter Product line, create the following parameter:
   
   `[Product line]=?prodline_p?
   
   **Tip:** Use the operators in or in_range to enable the target report to accept multiple values or a range of values.

3. In the Usage box, specify what to do when a value for the target parameter is not passed as part of a drill through:

   - To specify that users must select a value, click Required.
     
     If a value for the target parameter is not passed, users are prompted to choose a value.

   - To specify that users do not need to select a value, click Optional.
     
     Users are not prompted to choose a value and so the value is unfiltered.

   - To specify not to use the parameter, click Disabled.
     
     The parameter is not used during the drill-through. It will also not be used in the report for any other purposes.

     **Tip:** If the parameter is needed in the report for other reasons, then you can also specify not to use it in the drill-through definition (Parameters table, Method, Do not use parameter).

The drill-through text appears as a blue hyperlink in text items in the non-chart areas of the report. Report consumers can also start the drill-through action by clicking the Go To button or by right-clicking the item and clicking Go To, Related links. If you have the necessary permissions, you can
view which parameters were passed from the source and how they are mapped in the target object from the Go To page using the drill-through assistant.

**Example - Drill Through to a Hidden Report from a Report Studio Report**

You want to set up a drill-through link from an employee satisfaction report created in IBM® Cognos® Report Studio to a hidden list report about compensation, also created in Report Studio.

The source report (**Employee Satisfaction 2006**) is based on the package GO Data Warehouse (analysis) which is modeled on a DMR data source. The target report (**Compensation (hidden)**) is based on the package GO Data Warehouse (query). You set up this drill-through connection from within Report Studio (report-based, or authored drill through) because you do not want to make a report about compensation available for drill through from any source report in the package. The target report is already hidden in the portal, so that it is unlikely to be run by anyone who does not use the drill through link.

You must have the IBM Cognos Business Intelligence samples from the deployment zip file Cognos_DrillThroughSamples installed to follow this exercise, and you must have access to Report Studio.

The **Compensation** report is a hidden report. You may be able to set whether hidden reports are visible (**My Preferences, General** tab) and whether you can hide reports. This capability is set by your administrator.

**Steps to Check the Target Report**

1. Open the target report:
   - In IBM Cognos Connection, go to Public Folders, GO Data Warehouse (query), Report Studio Report Samples.
   - Locate the report **Compensation (hidden)** and open it in Report Studio.
     **Tip:** If you do not see the report, go to IBM Cognos Connection and confirm that you can view hidden reports (**My Preferences, General** tab).

2. In Report Studio, from the **Data** menu, click **Filters** and check what filter parameters are available.

   You want to filter from the source report on department, not time, so you will only use the **pPosition** parameter in the drill-through definition.

3. In the report body, select the list column body **Position-department (level 3)** and review the data item properties.

   Because the drill-through definition goes from DMR to relational, the data item values will need to match.

4. Close the **Compensation (hidden)** report.

**Steps to Create and Test the Drill-Through Definition**

1. Open the source report:
In IBM Cognos Connection, go to Public Folders, GO Data Warehouse (analysis), Report Studio Report Samples.

Locate the Employee Satisfaction 2006 report and open it in Report Studio.

2. Save the Employee Satisfaction 2006 report with a new name, such as Employee Satisfaction 2006 New. This is to keep the original report and drill-through definition intact for comparison.

3. In the table Employee rankings and terminations by department, select the column Position-department (level 3).

4. In the properties pane, review the data item properties, to confirm that the data item names match values in the target report.

5. In the properties pane, under Data, double-click Drill-through definitions.

6. Select the definition DrilltoHiddenRep and delete it.

Note: In the following steps, you recreate the drill-through definition. For comparison, use the original sample report.

7. In the Drill-through Definitions box, click the new drill-through definition button.

8. Click the rename button, and type a name for the drill-through definition.

Tip: This is the name that consumers see when they select from a list of possible drill-through definitions in the final report.

9. In the Target Report tab, select the target report:

   - Under Report, click the ellipsis button (...).
   - Navigate to GO Data Warehouse (query), Report Studio Report Samples, and select the Compensation (hidden) report.
     
     Tip: If you do not see the report, go to IBM Cognos Connection and confirm that you can see hidden reports (My Preferences, General tab).

10. Under Action, select Run the report.

11. Under Parameters, click the edit button.

A table of parameters available in the target report appears, showing the parameter pPosition.

12. Map the parameter from the Compensation (Hidden) report to the metadata in the Employee Satisfaction 2006 report:

   - In the Method column, select Pass data item value, because the target report is based on a relational data source.
   - In the Value column, select Position-department (level 3).

Tip: In this report, you pass values from the column where the drill-through is defined. In other cases, you might pass a related parameter. For example, you could drill through on employee name, but pass the employee number.
13. Save the report.

14. Run the report, and click a department to test the drill-through definition.

When you test the drill-through link, the Compensation (hidden) report appears, filtered by the department you selected. The report appears as a drill-through target whether or not it is hidden in IBM Cognos Connection.

If your administrator has given you the Drill Through Assistant capability, then you can see additional information you right-click on the link and select Go To to see a list of drill-through targets. From the Go To page, you can see what source values are passed, and what target parameters are mapped.

Specify the Drill-through Text

You can specify the drill-through text that appears when users can drill through to more than one target. For example, if users from different regions view the report, you can show text in a different language for each region.

Steps
1. Right-click the drill-through object and click Drill-Through Definitions.

2. If more than one drill-through definition exists for the object, in the Drill-Through Definitions box, click a drill-through definition.

3. Click the Label tab.

4. To link the label to a condition, in the Condition box, do the following:
   - Click Variable and click an existing variable or create a new one.
   - Click Value and click one of the possible values for the variable.

5. In the Source type box, click the source type to use.

6. If the source type is Text, click the ellipsis (...) button beside the Text box and type text.

7. If the source type is Data Item Value or Data Item Label, click Data Item and click a data item.

8. If the source type is Report Expression, click the ellipsis (...) button beside the Report Expression box and define the expression.

9. If the label is linked to a condition, repeat steps 5 to 8 for the remaining possible values.

When users run the source report and click a drill-through link, the Go to page appears. The drill-through text you specified appears for each target. If you did not specify the drill-through text for a target, the drill-through name is used.

Setting Up Drill-through Access from IBM Cognos Visualizer

Setting up drill-through access from IBM® Cognos® Visualizer to IBM Cognos Business Intelligence involves
specifying the IBM Cognos BI target and selecting the filters to add to the target report

You must configure drill through to IBM Cognos BI for individual IBM Cognos Visualizer reports. For more information, see the IBM Cognos Visualizer User Guide.

creating and testing the target report (p. 536)

Setting Up Drill-through Access from PowerPlay Web

Setting up drill-through access from PowerPlay® Web to IBM® Cognos® Business Intelligence involves

for PowerCube, specifying drill-through targets for IBM Cognos BI reports in the Transformer model

For more information, see the Transformer documentation.

for other cubes, specifying drill-through targets for IBM Cognos BI reports in PowerPlay Connect.

For more information, see the PowerPlay OLAP Server Connection Guide.

configuring drill-through access in PowerPlay Server Administration

In addition to enabling drill-through access to IBM Cognos BI, you must specify the location of the IBM Cognos BI server and the IBM Cognos BI folder that contains the target reports. For more information, see the PowerPlay Enterprise Server Guide.

selecting the filters to add to the target report

In PowerPlay Enterprise Server Administration, enable and use IBM Cognos BI Assistance to identify the filter expressions required in the target report. For more information, see the PowerPlay Enterprise Server Guide.

creating and testing the target report (p. 536)

Create and Test the Target for a Series 7 Report

The target report must be based on a published package that contains the metadata items that you want to filter on, or contains items that are mapped to those metadata items.

When you create the target report, ensure that the names of the parameters you add are identical to the parameter names listed in the Drill Through Assistant page in IBM® Cognos® Series 7. However, the metadata item that you use in the target report for that parameter name does not have to be the identical label. The data values between the target parameter and the source value shown in the drill assistant must match. You may also need to change the type of operator in the target parameter from what is recommended in the Drill Through Assistant. For example, if the assistant recommends an = operator but you want to pass a date range, you should change the parameter operator in the target to in_range.

Steps

2. Add the data items and other objects you want.
3. From the Data menu, click Filters.
4. In the Detail Filters tab, click the add button.
5. In the Expression Definition box, create the parameterized filter you want by typing the filter expression.
6. Click OK.
7. In the Usage box, click Optional.
   If you do not make the filter optional, a prompt page appears when you drill through to the report.
8. Repeat steps 4 to 7 for other parameterized filters you want to add.
9. Save the report.
   The report name must match what you specified as a target in the PowerCube, other cube, or IBM Cognos Visualizer report.
10. Test the drill through in the PowerPlay® report or IBM Cognos Visualizer report.
Chapter 32: Managing Portlets and Styles

Portal administration in IBM® Cognos® Business Intelligence includes managing portlets (p. 539) and styles (p. 550). Typically, these tasks are performed by portal administrators (p. 298).

To access the portal administration area in IBM Cognos Administration, you must have execute permissions for the Styles and portlets secured feature, and traverse permissions for the Administration secured function (p. 283).

For information about troubleshooting, see the Troubleshooting section in this guide.

For information about configuring portal services, see the Installation and Configuration Guide.

Portlets

A portlet is a mechanism for displaying Web content as part of a portal page.

The portlets supported by IBM® Cognos® Connection include Cognos portlets (p. 539) and other portlets (p. 544). The Cognos portlets are available to users by default. If you want to make other portlets available, you must import them.

Managing portlets involves the following tasks:

- Importing portlets (p. 544)
- Controlling access to portlets (p. 545)
- Configuring the portlet cache (p. 546)
- Modifying portlets (p. 548)

As an additional task, you may want to change the dispatcher settings to allow the HTML code to be executed in RSS Viewer and IBM Cognos Navigator (p. 549).

For information about using portlets in IBM Cognos Connection pages, see "Pages and Dashboards" (p. 331).

Cognos Portlets

Portal Services provides portlets that users can add to their personal pages in IBM® Cognos® Connection (p. 331), or in an existing enterprise portal (p. 555).

All Cognos portlets conform to the Web Services for Remote Portlets (WSRP) standard. Users can interact with the portlets without installing IBM Cognos products on their computers.

The content that appears in the portlets, such as reports, or metrics, and the ability to perform specific actions on that content depend on the users’ access permissions. Users must have the required access permissions for the individual entries and for the IBM Cognos secured functions and features. For more information, see "Secured Functions and Features" (p. 283).

The following portlets are available.
IBM Cognos Content Portlets

These portlets provide IBM Cognos content in IBM Cognos Connection or in your existing enterprise portal. By default, these portlets are available in IBM Cognos Administration. They can also be deployed to other portals.

The following portlets are available in this group:

<table>
<thead>
<tr>
<th>Portlet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Cognos Navigator (p. 883)</td>
<td>Shows the IBM Cognos Connection folder hierarchy. Users can browse the hierarchy and open IBM Cognos entries.</td>
</tr>
<tr>
<td>IBM Cognos Search (p. 885)</td>
<td>Provides a search tool to help users find published IBM Cognos reports and other entries, and open them.</td>
</tr>
<tr>
<td>IBM Cognos Viewer (p. 887)</td>
<td>Opens a default report or lists reports that users can open.</td>
</tr>
</tbody>
</table>

IBM Cognos Utility Portlets

The IBM Cognos Utility portlets provide additional functionality for pages in IBM Cognos Connection. By default, these portlets are available in IBM Cognos Administration. However, they cannot be deployed to other portals.

The following portlets are available in this group:

<table>
<thead>
<tr>
<th>Portlet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bookmarks Viewer (p. 902)</td>
<td>Registers and shows active Web links.</td>
</tr>
<tr>
<td>HTML Viewer (p. 903)</td>
<td>Inserts any Web page into an IBM Cognos Connection page.</td>
</tr>
<tr>
<td>Image Viewer (p. 904)</td>
<td>Inserts an image and shows it in a page.</td>
</tr>
<tr>
<td>RSS Viewer (p. 905)</td>
<td>Shows the content of a Real Simple Syndication (RSS) 1.0 or 2.0 news feed.</td>
</tr>
<tr>
<td></td>
<td>RSS is a format for syndicating news and is used by many Web sites. An RSS news feed is specified by a URL address.</td>
</tr>
<tr>
<td>HTML Source (p. 906)</td>
<td>Use to add custom text and images to a page.</td>
</tr>
</tbody>
</table>

The IBM Cognos Extended Applications Portlet

The IBM Cognos Extended Applications portlet (p. 892) provides access to custom applications created using the IBM Cognos Extended Applications toolkit and the IBM Cognos Software Development Kit.
If IBM Cognos Software Development Kit is installed, this portlet is automatically registered and available in IBM Cognos Administration. It can also be deployed to other portals.

For information about creating extended applications, see the Developer Guide.

**IBM Cognos Metric Studio Portlets**

IBM Cognos Metric Studio portlets provide the capability to view performance metrics in a page. The metrics are created using Metric Studio.

If Metric Studio is installed, these portlets are automatically registered and available in IBM Cognos Administration. They can also be deployed to other portals.

The following portlets are available in this group:

<table>
<thead>
<tr>
<th>Portlet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Cognos Metric List (p. 893)</td>
<td>Use to add performance metrics to a page. You can configure the portlet to show the following types of metric lists:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Watch list</strong></td>
</tr>
<tr>
<td></td>
<td>Contains the metrics that a user wants to monitor closely.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Accountability list</strong></td>
</tr>
<tr>
<td></td>
<td>Contains the metrics that a user owns.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Scorecard metric list</strong></td>
</tr>
<tr>
<td></td>
<td>Contains metrics associated with a scorecard.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Strategy metric list</strong></td>
</tr>
<tr>
<td></td>
<td>Contains metrics associated with a strategy. To show the metrics grouped by scorecards, select the <strong>Apply a scorecard filter</strong> check box.</td>
</tr>
<tr>
<td>IBM Cognos History Chart (p. 898)</td>
<td>Use to add a metric history chart to a page. The history chart is a graphical illustration of the historical performance of a metric.</td>
</tr>
<tr>
<td>IBM Cognos Impact Diagram (p. 899)</td>
<td>Use to display impact diagrams associated with a metric.</td>
</tr>
<tr>
<td>IBM Cognos Custom Diagram (p. 901)</td>
<td>Use to display custom diagrams associated with a scorecard.</td>
</tr>
</tbody>
</table>

For more information, see the Metric Studio User Guide.
Dashboard Portlets

The dashboard portlets provide the framework and content for the dashboard pages in IBM Cognos Connection.

<table>
<thead>
<tr>
<th>Portlet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-page (p. 908)</td>
<td>Use to create a dashboard with multiple pages.</td>
</tr>
</tbody>
</table>

Using TM1 Viewer Portlets in IBM Cognos 8

IBM® Cognos® Connection pages provide quick access to IBM® Cognos® TM1® information. You can create a page with TM1 information. The TM1 content for pages is provided by the following portlets:

- TM1 Cube Viewer
- TM1 Navigation Viewer
- TM1 Websheet Viewer

To access the portal administration area in IBM Cognos Administration, you must have execute permissions for the Styles and portlets secured feature, and traverse permissions for the Administration secured function. For more information, see Secured Functions and Features.

To set up TM1 pages in IBM Cognos Connection perform the following tasks:

- Install and activate TM1 Viewer Portlets in IBM Cognos Connection. For details on installing and configuring Viewer Portlets, see the IBM Cognos TM1 installation documentation.
- Configure TM1 to use IBM Cognos 8 security if you want to simplify the TM1 login process when using TM1 Viewer Portlets. Using TM1 with IBM Cognos 8 security can reduce the number of times that a user must log in to TM1 to access TM1 data from other IBM Cognos 8 applications. For more information, see the IBM Cognos 8 security section in the IBM Cognos TM1 installation documentation.
- Create a Page with TM1 Content
- Modify a TM1 Viewer Portlet

Create a Page with TM1 Content

You can create pages in IBM® Cognos® Connection and add the TM1® content to the pages. The pages are saved in Public Folders or My Folders. If you plan to share a page with other users, save it in Public Folders.

After you create the page, you can edit it to modify its contents, layout and style, and to set access permissions. You can delete pages in IBM Cognos Connection if you have the required access permissions for the pages. Deleting a page may affect your portal tabs.

Steps

1. In IBM Cognos Connection, click the new page button.
2. Specify a name and location for the page, and, if you want, a description and a screen tip.

3. Click Next.
   The Set columns and layout page appears.

4. Define the layout for your page by setting the number and width of columns.
   Tip: If you are using multiple columns and one of the columns includes a report that is shown in IBM Cognos Viewer, set the width to at least 50% to minimize scrolling.

5. In the column to which you want to add portlets, click Add.
   The Select portlets (Navigate) - New page wizard page appears.

6. Click the IBM Cognos TM1 Viewer portlet group that contains the TM1 Navigation Viewer, TM1 Cube Viewer, and TM1 Websheet Viewer portlets.

7. Select the required portlets, and click the add button to move them to the Selected entries box. If you want to remove a portlet from the Selected entries box, click Remove.

8. Click OK, and then click Next.
   The Set page style page appears.

9. Customize the appearance of your page.
   • You can add a title and instructions for the page in the language of the product. To hide the title or instructions, select the associated check box.
     Tip: To change the formatting of the text, click Custom. To go back to the default formatting, click Return to default.
   • If you want, hide the portlet borders, title bars, or the edit button in the title bar. This helps to avoid clutter and gives the page a uniform look and feel.

10. Click Next.

11. If you want to add the page to the portal tab bar, select the Add this page to the portal tabs check box. To view the page, select the View the page check box.

12. Click Finish.

Modify a TM1 Viewer Portlet

You can define the default content and appearance of TM1® Viewer portlets. The settings become the default for all users who use the portlet. You can lock the portlet for editing if you want to prevent other users from changing the settings.

If the portlet is not locked for editing, users can change their instance of the portlet. They retain their custom settings even if you reset the portlet. Users inherit the settings you configure when they
use the portlet instance you configured, or when they reset their portlet instance using the reset button in the portlet edit mode.

**Steps**

1. In IBM® Cognos® Connection, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Portlets.
3. Click IBM Cognos TM1 Viewers.
4. Next to one of the following TM1 Viewer portlets, click the More link:
   - TM1 Navigation Viewer
   - TM1 Cube Viewer
   - TM1 Websheet Viewer
5. Click View and customize this portlet. The TM1 Viewer portlet appears.
6. In the portlet toolbar, click the edit button. The portlet properties page appears.
   
   **Tip:** To exit the properties page without saving the changes, click the return button in the title bar or click Cancel.

7. Change the portlet properties as required. For more information about the portlet properties see **TM1 Cube Viewer, TM1 Navigation Viewer, and TM1 Websheet Viewer** property descriptions.
   
   **Tip:** To restore the default settings, click the reset to default values button .
8. Click OK.

**Other Portlets**

The other portlets include non-Cognos® portlets that conform to the Web Services for Remote Portlets (WSRP) standard, such as Oracle portlets, or Sun portlets. Verification and support for these remote portlets may be incomplete because WSRP is a new standard for remote portlets that is still in the process of implementation by many vendors.

The single signon for other portlets may not be available because this functionality is outside the scope of the WSRP standard.

Other portlets must be imported into IBM® Cognos Connection (p. 544).

**Import Portlets**

You can import non-Cognos’s portlets (p. 544) into IBM® Cognos Connection if the portlets conform to the WSRP standard.
This procedure is not necessary for Cognos portlets because they are automatically registered and available in IBM Cognos Connection if the applicable IBM Cognos component, such as Metric Studio or Software Development Kit, is installed. The use of WAR files to import non-Cognos portlets is not supported.

**Steps**

1. In IBM Cognos Connection, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Portlets.
3. Click the import portlets button. The Specify a producer page appears.
4. Choose the producer Web service.
   - If a Web Services Description Language (WSDL) definition file exists, in the Web Service Description box, type its URL address. Here is an example:
     http://wsrp.netunitysoftware.com/WSRPTestService/WSRPTestService.asmx?Operation=WSDL
   - If a WSDL definition file does not exist, click Web Services for Remote Portlet (WSRP) interfaces, and type the URL required by the portlet producer.

   **Tip:** To import the Cognos portlets, click IBM Cognos producer, and choose the available group.
5. Click Next.
6. If the Specify the registration properties page appears, provide the registration information as required, and click Next again.
7. In the Specify a name and description page appears, do the following:
   - Type a name and, if you want, a description and a screen tip for the portlet group.
   - Choose the portlets to import by selecting or clearing the check boxes next to the portlets.
   - Click Finish.

The portlet group appears on the Portlets tab.

**Control Access to Portlets**

You can control access to portlets by setting access permissions to specify which portlets are available to which users and what kind of actions the users can perform on a specific portlet. You can set access permissions individually for each portlet, or at the group level.

To add a portlet to a page and access its content, end users need read, execute, and traverse permissions for the portlet.
You can restrict access to portlets temporarily by disabling them. This may be required when you want to update the portlet producer or modify the portlet settings. When users try to access a disabled portlet from their page, they see a message.

You can also lock the portlet if you do not want users to see the edit button in the portlet. As a result, users cannot see the portlet properties and cannot modify them.

### Steps to Set up Access Permissions

1. In IBM® Cognos® Connection, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Portlets.
3. Decide whether to set access permissions at the group level, or for each portlet individually.
   - To set permissions for a portlet group, click its properties button in the Actions column and, on the Permissions tab, specify the permissions as required.
   - To set permissions for a specific portlet, click the associated portlet group and, for the portlet you want, click its properties button in the Actions column and specify the permissions as required.

   For more information, see "Access Permissions and Credentials" (p. 275)
4. Click OK.

### Steps to Lock a Portlet

1. In IBM Cognos Connection, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Portlets.
3. Click the appropriate portlet group.
4. In the Actions column, click the lock icon associated with the portlet you want to lock. Alternatively, click the More link, and then click Lock portlet settings.

   The icon changes to locked.

### Configure the Portlet Cache

Portal Services can cache the portlet markup fragments that are used to quickly regenerate recent views of the portlets in pages. These markup fragments are compressed and stored on the server computer as part of the session object.

The basic cache unit represents markup fragments created per page, per one user session. The portlet markup is not always cached. Disabling markup caching saves memory usage, but has a negative impact on performance.

Use the following parameters to control the use of the portlet cache at run-time:

- CPSMaxCacheSizePerPortlet
Specifies the number of markup fragments cached for each portlet, per page, per user. For example, a value of 5 with 1000 users, 10 pages, and 4 portlets per page can generate a maximum of 200000 entries in the cache (1000 x 10 x 4 x 5).

This parameter can have the following values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1 (default)</td>
<td>Saves unlimited number of portlet markups</td>
</tr>
<tr>
<td>0</td>
<td>Disables markup caching</td>
</tr>
<tr>
<td>1 or an integer greater than 1</td>
<td>Limits the number of markups to a specified number</td>
</tr>
</tbody>
</table>

You must provide run-time values for this parameter for every application server that runs the presentation service.

- properties.config.cps.cache.timeToIdleSeconds
  Specifies the length of time, in seconds, to keep the page markup fragments in the cache during a period of inactivity. If the page is not accessed during that time, its cache contents are deleted.
  The default value is 1800 (30 minutes).

- properties.config.cps.cache.timeToLiveSeconds
  Specifies the length of time, in seconds, to keep the page markup fragments in the cache. After this time, the markup is deleted even if the cache is still active.
  The default value is 86400 (24 hours).

- properties.config.cps.cache.checkExpiryIntervalSeconds
  Specifies the length of time, in seconds, that represents the frequency with which the system checks for expired markup fragments in the cache.
  The default value is 300 (5 minutes).

To enable or disable encryption of the portlet markup fragments, use the parameter encryptTemporaryFiles of the Environment category in IBM Cognos Configuration. For more information, see the IBM® Cognos® Configuration User Guide.

**Steps**

1. In IBM Cognos Connection, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Dispatchers and Services.
3. Click the dispatcher you want.
4. For PresentationService, click the set properties button.
5. Click the Settings tab.
6. For the Environment category, next to Advanced settings, click the Edit link.

7. If it appears, select the Override the settings acquired from the parent entry check box. Otherwise, proceed to the next step.

8. In the Parameter column, type the required parameter specified in this section. For example, type CPSMaxCacheSizePerPortlet.

9. In the Value column, type the required value for the parameter.

10. Click OK.

11. Click OK again.

12. Click the Configuration link in the path at the top of the page.

You return to the list of dispatchers.

13. If you have more than one dispatcher configured, perform steps 3 to 12 for each remaining dispatcher.

14. Restart the IBM Cognos service.

Modify a Portlet

You can define the default content and appearance of portlets. The settings become the default for all users who use the portlet. You can lock the portlet for editing if you want to prevent other users from changing the settings.

If the portlet is not locked for editing, users can change their instance of the portlet. They retain their custom settings even if you reset the portlet. Users inherit the settings you configure when they use the portlet instance you configured, or when they reset their portlet instance using the reset button in the portlet edit mode.

Applications that appear in the IBM® Cognos® Extended Applications portlet may include editable application parameters with default values defined by the developer. To change the parameter values that users see as defaults, you must edit the applications.xml file. For information about modifying application parameters, see the Developer Guide.

The configurable properties for the Cognos portlets vary. For more information, see "User Reference Help for Portal Services" (p. 883).

Steps
1. In IBM Cognos Connection, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Portlets.

3. Click the portlet group you want.

4. Next to the portlet you want to modify, click the More link.

5. Click View and customize this portlet.

The Cognos portlet appears.
6. In the portlet toolbar, click the edit button.

When you modify the IBM Cognos Content portlets, you can use the configure button, which gives you access to additional functionality.

The portlet properties page appears.

**Tip:** To exit the properties page without saving the changes, click the return button in the title bar or click Cancel.

7. Change the portlet properties as required.

**Tip:** To restore the default settings, click the reset button.

8. Click OK.

### Display the HTML Code From the Source RSS Feed in RSS Viewer and IBM Cognos Navigator

Some RSS channels contain HTML code sequences as part of their title and description fields. For security reasons, the HTML code, if present in the source RSS feed, is disabled in the news list view in the portlets RSS Viewer and IBM Cognos Navigator. Instead, a series of HTML control characters is displayed in the title and description fields of both portlets.

You can override this setting and allow the HTML code to be executed in RSS Viewer and IBM Cognos Navigator to display the code as intended by the publisher of the RSS feed. To do that, specify the CPSRssAllowUnsafeCharacters run-time parameter with a value of "true" for the dispatcher presentation service. The default value for this parameter is "false".

**Warning:** Allowing execution of the HTML code from external sources represents a security threat.

**Steps**

1. In IBM Cognos Connection, click Launch, IBM Cognos Administration.
2. On the Configuration tab, click Dispatchers and Services.
3. Click the dispatcher you want.
4. For the PresentationService, in the Actions column, click the set properties button.
5. Click the Settings tab.
6. For the Environment category, next to Advanced settings, click the Edit link.
7. If it appears, select the Override the settings acquired from the parent entry check box.
8. In the Parameter column, type the parameter CPSRssAllowUnsafeCharacters
9. In the Value column, as a value for this parameter, type true
10. Click OK.
11. Click OK again.
12. Click the **Configuration** link in the path at the top of the page.

   You return to the list of dispatchers.

13. If you have more than one dispatcher configured, perform steps 3 to 12 for each remaining dispatcher.

## Styles

A style is a defined set of resources, such as images and cascading style sheets, that controls the appearance of the IBM® Cognos® Web interface. The branding images and fonts are also part of the style.

The resources for the styles are located in the `c10_location/webcontent/skins` directory.

The following predefined styles are available in IBM Cognos Business Intelligence:

<table>
<thead>
<tr>
<th>Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>business</td>
<td>Uses soft colors. Creates clean and simple, professional look.</td>
</tr>
<tr>
<td>classic</td>
<td>Matches the style used by Metric Studio.</td>
</tr>
<tr>
<td>contemporary</td>
<td>Uses bolder, more vivid colors.</td>
</tr>
<tr>
<td>corporate</td>
<td>Matches the IBM Cognos corporate branding. This is the default style in IBM Cognos BI.</td>
</tr>
<tr>
<td>modern</td>
<td>Matches the style used by IBM Cognos ReportNet.</td>
</tr>
<tr>
<td>presentation</td>
<td>A variation of the corporate style intended for projections. Uses larger fonts and increased contrast.</td>
</tr>
</tbody>
</table>

If the predefined styles do not meet your requirements, you can create your own style and make it available in IBM Cognos BI (p. 603).

At run time, individual users can choose any of the available styles to use in their Web interface (p. 325). Ensure that all users have access to at least one style.

The initial style settings for new users are determined by the default user profiles. For information about changing the user profiles, see “Managing User Profiles” (p. 409).

Managing styles involves:

- Adding new styles (p. 551)
- Controlling access to styles (p. 551)
- Modifying styles (p. 552)
Add a New Style

You add a new style to create the style object in Content Manager and to associate it with the style resources in the product directory.

Use this functionality to add a custom style or to create different styles based on the existing style resources. For example, you can add a new style named blue and associate it with the corporate style resources in the c10_location/webcontent/skins/corporate directory.

Before you can add a custom style, the style resources must exist in the c10_location/webcontent/skins directory. For more information about customizing styles, see "Creating a Custom Style" (p. 603).

Steps

1. In IBM® Cognos® Connection, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Styles.

   The new style wizard appears.

3. Click the new style button.

4. Type a name for the style and, if you want, a screen tip and description.

   The style name can be any word or phrase you want. It does not need to match the name of the product directory where the style resources are located.

   Tip: You can specify the style name, description, and screen tip only in the product language you currently use. To specify these values for different languages, you can later modify the style (p. 552).

5. Click Next.

6. Specify the location of the style resources:

   - In the Style resources location box, type the name of the style directory in the c10_location/webcontent/skins directory where the style resources are located.

     You can specify one of the predefined style directories, such as corporate, classic or modern, or a custom directory, if one exists. For more information about using custom styles, see "Creating a Custom Style" (p. 603).

   - In the Preview resource box, type the location of the preview resource for the style.

     An example of a preview resource can be a Web server page, a video, or an image.

     Specify only a file name when the preview resource is located in the default location, which is the c10_location/webcontent/skins/style_name directory. If the location is different, specify a relative path including a file name.

7. Click Finish.

Control Access to Styles

Users may need to use different styles in their Web interface depending on the company branding requirements, locale, or product implementation. For example, the styles for Asian users may have
specific characteristics that do not apply to users in other geographical locations. Therefore, these styles can be hidden from non-Asian users.

You can control access to styles by setting access permissions on them. To make a style available to end users, you grant execute permissions for the required users, groups, or roles. No other permissions are needed. As a result, the style appears in the users’ preferences in IBM® Cognos® Connection (p. 325). Users can use the style, but they cannot modify it.

Read, write, or set policy permissions can be granted for administrator users. Traverse permissions are irrelevant in relation to styles.

For more information about security, see "Access Permissions and Credentials" (p. 275).

**Steps**

1. In IBM Cognos Connection, click **Launch, IBM Cognos Administration**.
2. On the **Configuration** tab, click **Styles**.
3. Click the arrow next to a style name, and click **Set properties**.
4. Click the **Permissions** tab.
5. Select the **Override the access permissions acquired from the parent entry** check box.
6. Grant the required type of access permissions.
   - For end users, grant execute permissions for the users, groups, or roles that you want to have access to this style.
   - For administrators, grant read, write, or set policy permissions.

   For more information, see "Set Access Permissions for an Entry" (p. 278).

**Modify a Style**

You can modify an existing style to

- change the style name, description, and screen tip
  
  You can rename any of the predefined or custom styles to use style names that are more appropriate for your Web interface.

- add, change, or remove the style name, description, and screen tip for different language versions of the product
  
  You may want the style name, description, and screen tip match the users’ product language.

- change the style directory
  
  You can associate an existing style with a different style directory in c10_location/webcontent/skins. You may need to do this when, for example, the names of the style directories change as a result of the product translation into different languages.
For more information about the style general properties, see "Entry Properties" (p. 307)

**Steps**

1. In IBM® Cognos® Connection, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Styles.

3. Click the arrow next to the style that you want to modify, and click Set properties.
   
   **Tip:** To see a preview of the style, click More, and then click Preview this style.

4. Modify the style properties in the following way:
   
   - Click the General tab to rename the style and specify its screen tip and description.
   - Click the Style tab to change the style directory in the Style resources location box, and to specify the location of the style preview resource in the Preview resource box.

   The style directory that you want to specify must exist in the c10_location/webcontent/skins directory, and a corresponding .xml file must exist in the c10_location/webapps/p2pd/WEB-INF/fragments/styles/skins directory. For more information about using custom styles, see "Creating a Custom Style" (p. 603).

5. Click OK.
Chapter 32: Managing Portlets and Styles
You can deploy Cognos® portlets to your existing enterprise portal so that you can present the Cognos content in your portal instead of IBM® Cognos Connection.

You can deploy the Cognos portlets to the following portals:

- IBM WebSphere® 5.0, 5.1, 6.0, and 6.1 (p. 555)
- SAP Enterprise Portal 6.0, 6.4, 7.0 and 7.1 (p. 560)
- Oracle WebCenter Interaction Portal Server 10.3 (p. 564)
- Microsoft® SharePoint Portal Server 2003 (p. 569)
- Microsoft SharePoint Portal Server 2007 and 2010 (p. 578)

If you want to use the ReportNet® 1.1 portlets in IBM Cognos Business Intelligence, you may need to upgrade them (p. 585).

By default, the root name of file paths in the portlets is Cognos. You can change the root name (p. 585).

As an additional security measure, you can disable the mechanism to transfer the IBM Cognos passport ID as a URL parameter between users’ browsers and the IBM Cognos gateway (p. 586).

After you deploy the portlets, you can enable single signon between the portlets and your portal (p. 588).

Notes

- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.
- In Microsoft SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

Deploying Cognos Portlets to WebSphere Portal 5.0, 5.1, 6.0, and 6.1

Before users can add Cognos® portlets to their portal pages, you must deploy the portlets to the portal server.

You can deploy the following portlets:

- IBM® Cognos Content
  
  This group includes IBM Cognos Navigator, IBM Cognos Search, IBM Cognos Viewer.
IBM Cognos Extended Applications
This group includes the IBM Cognos Extended Applications portlet.

IBM Cognos Metric Studio
This group includes IBM Cognos Metric List, IBM Cognos History Chart, IBM Cognos Impact Diagram, and IBM Cognos Custom Diagram.

Before you start deploying the portlets, ensure that IBM Cognos Business Intelligence, including IBM Cognos Connection and Portal Services, is installed and configured.

For the IBM Cognos Extended Applications portlet, IBM Cognos Software Development Kit must also be installed. If IBM Cognos Software Development Kit is not installed or not available, the portal administrator should disable the IBM Cognos Extended Applications portlet after the portlet applications file is installed (p. 556).

For the IBM Cognos Metric Studio portlets, Metric Studio must also be installed. If Metric Studio is not installed or not available, the portal administrator should disable the IBM Cognos Metric Studio portlets after the portlet applications file is installed (p. 556).

You must first log on to the portal with administrator privileges.

The deployment process consists of the following tasks:

- Installing the portlet applications file
- Configuring the portlet applications
- Configuring the portlet cache
- Customizing the content of Cognos portlets

After you deploy the portlets, you can configure security for your WebSphere® Portal environment (p. 588).

For more information, see the Installation and Configuration Guide.

Note: The tasks documented in this section may vary slightly for the different versions of WebSphere Portal.

Install the Portlet Applications File

Before Cognos® content can appear in any WebSphere® page, you must install the portlet applications file CognosBIPortlets.war located in the c10_location\cps\ibm\portlets directory. This file contains the applications for the Cognos portlets, one for IBM® Cognos Navigator, IBM Cognos Search, and IBM Cognos Viewer, one for IBM Cognos Extended Applications, and one for IBM Cognos Metric List, IBM Cognos History Chart, IBM Cognos Impact Diagram, and IBM Cognos Custom Diagram.

To install the portlet applications file, you must be logged on to the portal with administrator privileges, and be able to access the CognosBIPortlets.war file from your file system or network file system. If the Portal Services installation is not within your network access, you must manually move the CognosBIPortlets.war file to an accessible location.
The portlet applications file can be installed only once. However, it can be updated when required.

**Steps**

1. At the top of the portal page, click the **Administration** tab.

2. From the menu on the left, click **Portlet Management**, **Web Modules**, and then click **Install**.
   
   Tip: To update the CognosBIPortlets.war file, click **Web Modules**, select the file name, and click the update web module button.

3. Click the **Browse** button, and, in the `c10_location\cps\ibm\portlets` directory, select the CognosBIPortlets.war file.

4. Click **Next**.

5. Click **Finish**.

A message confirms that the portlets were successfully installed.

**Configure the Portlet Applications**

Configure the portlet application to specify the signon mechanism and the address of the server component for Portal Services. This must be done for all sets of Cognos® portlets: the IBM® Cognos Content portlets, the IBM Cognos Extended Applications portlets, and the IBM Cognos Metric Studio portlets.

**Steps**

1. On the **Administration** tab, click **Portlet Management**, **Web Modules**.

2. Click the CognosBIPortlets.war file.

   A list of the Cognos portlet applications appears.

3. For the application you want, click the **edit portlet application** button.

   The edit page appears.

4. For the **Active Credential Type** property, enter one of the following values to specify the single signon mechanism used in your installation.

   - LtpaToken
   - HttpBasicAuth
   - SiteMinderToken
   - WebSealToken

   For more information about configuring single signon for Portal Services, see "Configuring Security for Portal Services" (p. 588).

5. For the **IBM Cognos WSRP WSDL Location** property, modify the URL as required to connect to the CPS server. The URL must contain the correct protocol, server name, port number, and server path.
By default, the protocol is http. If IBM Cognos Business Intelligence is configured to be accessed through Secure Sockets Layer (SSL) connections, change the protocol to https.

The server path must point to an IBM Cognos gateway.

- For the IBM Cognos Navigator, IBM Cognos Search, and IBM Cognos Viewer portlets, the path is `c10_gateway/wsrp/cps4/portlets/nav?wsdl&b_action=cps.wsdl`.
- For the IBM Cognos Extended Applications portlet, the path is `c10_gateway/wsrp/cps4/portlets/sdk?wsdl&b_action=cps.wsdl`.
- For the IBM Cognos Metric Studio portlets, the path is `c10_gateway/wsrp/cps4/portlets/cmm?wsdl&b_action=cps.wsdl`.

6. Click OK.

   The Cognos portlets are now available to be added to pages by users. You can configure Cognos portlets so that their default settings are the same for all users.

7. Repeat steps 3 to 6 for the IBM Cognos Extended Applications Portlets and the IBM Cognos Metric Studio portlets.

   Note: You can create the IBM Cognos Extended Applications portlets only if IBM Cognos Software Development Kit is installed. For information about creating extended applications for Portal Services, see the Developer Guide.

**Configure the Portlet Cache**

Portal Services caches HTML markup fragments that are used to quickly regenerate recent views of portlet pages. These markup fragments are compressed and stored in the user’s session object. You can configure the number of pages stored for each user’s portlet.

The size of the markup fragment for each page depends on the complexity of the portlet, but they are typically about 5KB. By default, the cache stores ten pages for each user’s portlet.

**Steps**

2. Click the portlet applications file CognosBIPortlets.war.
3. In the portlet applications list, click the application you want.
4. For the portlet you want to set the cache size, click the configure portlet button.
5. For the Maximum Cached Pages property, enter the maximum number of pages you want to cache.
6. Click OK.
7. Repeat steps 4 to 6 for each portlet.
8. Restart the IBM® Cognos® service.
Customize the Content of Cognos Portlets

As an administrator, you can define the default content and appearance of portlets. When you customize a portlet instance using the configure button, the settings become the default for all users who view this instance.

If the portlet is not locked for editing and the users have Privileged user access for the page where the portlet exists, the users can customize the content for their instance of the portlet. Users retain their custom settings even if you reset the portlet. Users inherit the settings you configure only when they view the instance you configured, or when they reset the portlet using the reset button in the edit page of the portlet.

Applications that appear in the IBM® Cognos® Extended Applications portlet may include editable application parameters with default values defined by the developer. To change the parameter values that users see as defaults, you must edit the applications.xml file. For information about modifying application parameters, see the Developer Guide.

The configurable properties for the Cognos portlets vary. For more information, see "User Reference Help for Portal Services" (p. 883).

Special Considerations for WebSphere Portal 6.0 and 6.1

In WebSphere® version 6.0 and 6.1, administrators have two types of configuration levels for defining the appearance of portlets: Administrator and Shared.

- When using Administrator configuration that gives you access to the Configure mode of the portlet, your changes affect all instances of the portlet on all pages for all users.

- When using Shared configuration that gives you access to the Edit shared settings mode of the portlet, your changes affect a particular instance of a portlet in a page and apply to all users.

- A third type of configuration level named Personal that gives you access to the Personalize mode of the portlet is not available to administrators with the Shared configuration permissions. This is because IBM Cognos portlets support the IBM Portlet API. The changes made to a portlet using Personal configuration affect only the user's view of the portlet.

Steps

1. Go to the page where you added the Cognos portlets.

2. Click the configure button for the portlet that you want to configure.

3. Edit the settings as required.

These become the default settings for user instances of this portlet.

4. Click OK.
Deploying Cognos Portlets to SAP Enterprise Portal 6.0, 6.4, 7.0 and 7.1

Before users can add Cognos® portlets to their portal pages, you must deploy the portlets to the portal server.

You can deploy the following portlets:

- IBM® Cognos Content
  This group includes IBM Cognos Navigator, IBM Cognos Search, IBM Cognos Viewer
- IBM Cognos Extended Applications
  This group includes the IBM Cognos Extended Applications portlet.
- IBM Cognos Metric Studio
  This group includes IBM Cognos Metric List, IBM Cognos History Chart, IBM Cognos Impact Diagram, and IBM Cognos Custom Diagram.

Before you start deploying the Cognos portlets, ensure that IBM Cognos Business Intelligence, including IBM Cognos Connection and Portal Services, is installed and configured.

For the IBM Cognos Extended Applications portlet, IBM Cognos Software Development Kit must also be installed. If IBM Cognos Software Development Kit is not installed or not available, the portal administrator should disable the IBM Cognos Extended Applications portlet after the IBM Cognos business package is installed (p. 561).

For the IBM Cognos Metric Studio portlets, Metric Studio must also be installed. If Metric Studio is not installed or not available, the portal administrator should disable the IBM Cognos Metric Studio portlets after the IBM Cognos business package is installed (p. 561).

In SAP Enterprise Portal, portlets are named iViews. Portions of this document refer to iViews as portlets.

You must first log on to the portal with administrator privileges.

The deployment process consists of the following tasks:

- Installing the IBM Cognos business package. There are different procedures for SAP Enterprise Portal versions 6.0, 6.4 and 7.0 and version 7.1.
- Editing properties for the iViews
- Setting the default iViews content and appearance

After you deploy the portlets, you must configure security for your SAP Enterprise Portal environment.

For more information, see the Proven Practices on the IBM Cognos Software Services Web site.

Note: Portal Services in IBM Cognos BI supports SAP portals 6.0, 6.4, 7.0 and 7.1. This document describes administrative tasks for version 6.0-7.0 and 7.1 separately.
Install the IBM Cognos Business Package for Versions 6.0, 6.4 and 7.0

The IBM® Cognos® business package is an Enterprise Portal Archive (.epa) file located at installation_location\cps\sap\sap70\com.cognos.epa. This package contains IBM Cognos Navigator, IBM Cognos Search, IBM Cognos Viewer, IBM Cognos Extended Applications, IBM Cognos Metric List, IBM Cognos History Chart, IBM Cognos Impact Diagram, IBM Cognos Custom Diagram iViews, and the com.cognos.pct.cognos.ivew.par file.

You must be logged on to the portal with administrator privileges and be able to access the com.cognos.epa file from your file system or from the network file system. If the IBM Cognos installation is not within your network access, you must manually move the com.cognos.epa file to an accessible location.

Steps
1. In the portal, click the System Administration tab.
2. On the Transport tab, click Import.
3. Next to Source for Package Files, click Client.
   
   If Client is not functional, click Server.
4. Click Browse to locate the SAP_installation\usr\sap\env\SYS\global\pcd\Import directory, where env is your environment, and click Open. Copy the com.cognos.epa file to this directory.
   
   If you clicked Server in the previous step, browse for the com.cognos.epa file in the SAP_installation\usr\sap\env\SYS\global\pcd\Import directory, where env represents a directory that is different for different environments. The com.cognos.epa file must first be copied to this directory.
5. Click Upload.

Install the IBM Cognos Business Package for Version 7.1

The IBM® Cognos® business package is a Software Component Archive (.sca) file named com.ibm.cognos.sca. This package contains IBM Cognos Navigator, IBM Cognos Search, IBM Cognos Viewer, IBM Cognos Extended Applications, IBM Cognos Metric List, IBM Cognos History Chart, IBM Cognos Impact Diagram, IBM Cognos Custom Diagram iViews, and the installation_location\cps\sap\package\com.cognos.war file.

You must be logged on to the portal with administrator privileges and be able to access the com.ibm.cognos.sca file from your file system or from the network file system. If the IBM Cognos installation is not within your network access, you must manually move the com.cognos.war file to an accessible location.

Tip: If you are running SAP version 7.1 with IBM Cognos Business Intelligence, Version 8.4 or earlier, and you deploy IBM Cognos BI Version 10.1.0, you might get a deployment error saying that com.cognos.pct.iview already exists (or that a similar file owned by sap.com already exists). If this happens, undeploy both com.cognos.epa and com.cognos.pct.iview and redeploy the com.ibm.cognos.sca file.
Use the SAP Netweaver Developer Studio software to add and deploy the Software Component Archive. Typically, the Software Component Archive is added to the `Install_Dev_Studio\SAP\IDE\CE` folder.

For more information, see the documentation for SAP Netweaver Developer Studio.

**Edit Properties for the iViews**

The business package includes the Cognos® iViews (p. 560). Edit the properties for each iView so that they work with your IBM® Cognos Business Intelligence installation.

The following table shows some of the properties you may want to modify.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| CPS: Connection Server                | Represents the URL required to connect to the Portal Services server. The URL must contain the correct protocol, server name, port number, and server path. By default, the protocol is http. If IBM Cognos BI is configured to be accessed through Secure Sockets Layer (SSL) connections, change the protocol to https. The server path must point to an IBM Cognos gateway.  
  - For the IBM Cognos Navigator, IBM Cognos Search, and IBM Cognos Viewer iView, the path is `c10_gateway/wsrp/cps4/portlets/nav?wsdl&cb_action=cps.wsd`  
  - For the IBM Cognos Extended Applications iView, the path is `c10_gateway/wsrp/cps4/portlets/sdk?wsdl&cb_action=cps.wsd`  
  - For the IBM Cognos Metric List and IBM Cognos History Chart iView, the path is `c10_gateway/wsrp/cps4/portlets/cmm?wsdl&cb_action=cps.wsd` |
| CPS: Configuration Mode Role          | Specifies the SAP role whose members, typically administrators, can modify the default iView properties (p. 563). These users can see the link Edit the properties for all users at the bottom of the iView properties page, and use it to modify the default iView properties. Only one SAP role can be specified to modify the default iView properties. Default: content_admin_role |

**Steps**

1. Log on to the portal with administrator permissions.
2. Click the **Content Administration** tab.

3. In the window on the left, on the **Browse** tab, expand the **Portal Content** folder.

4. Continue expanding the folders until you see Cognos iViews.

   By default, Cognos iViews are imported into one of these locations:
   - For IBM Cognos 8.4 and earlier: Portal Content, Content Provided by Other Vendors, End User Content, com.cognos.pct, iviews folder
   - For IBM Cognos BI 10.1, Portal Content, Content Provided by Other Vendors, End User Content, IBM Cognos Software, iviews folder

5. Double-click the iView you want to modify.

   The **Property Editor** appears in the main window.

6. In the **Property Category** drop-down list, click **Show All**.

7. Edit the properties as required.

8. Click **Save**.

9. Repeat steps 5 to 8 for each Cognos iView.

10. If you want to test the connection between IBM Cognos BI and Portal Services, click the **Preview** button.

### Set the Default iView Content and Appearance for All Users

An administrator can define the default content and appearance for Cognos®'s iViews. When end users add the iViews to their pages, the default properties are enabled. For example, in the IBM® Cognos Navigator iView, the administrator can define the default display folder or package. When users add this iView to their pages, they see the folder or package that was specified by the administrator.

End users can change the Cognos iView properties to personalize their pages. Their changes do not affect iViews of other users or other pages. The personalized settings are not affected if the administrator changes the default properties for the iView. Users can click the **Reset** button to revert to the current administrative defaults.

To change the iView properties for all users, you must be a member of the SAP role that has the required access permissions. This role is specified by the **CPS: Configuration Mode Role** property. For more information, see "Edit Properties for the iViews" (p. 562).

### Steps

1. Log on to the portal with administrator permissions.

2. Browse to the page that contains Cognos iViews.

3. For the iView you want to modify, click the option menu button in the upper-right corner of the iView, and select **Personalize**.
4. At the bottom of the page, click the link **Edit the properties for all users**.

5. Change the properties as required.
   These settings become the default settings for user instances of this portlet.

6. Click **Save**.

7. Repeat steps 3 to 6 for other Cognos iViews.

**Deploying Cognos Portlets to Oracle WebCenter Interaction Portal 10.3**

You can deploy Cognos portlets to the Oracle WebCenter Interaction portal server so that end users can add the portlets to their pages. You must have already installed the Oracle WebCenter Interaction Development Kit for Java. For more information on download instructions, refer to your Oracle documentation.

You can deploy the following portlets:

- **Cognos® Content portlets**
  This group includes IBM® Cognos Navigator, IBM Cognos Search, IBM Cognos Viewer

- **IBM Cognos Extended Applications portlets**
  This group includes the IBM Cognos Extended Applications portlet.

- **IBM Cognos Metric Studio**
  This group includes the IBM Cognos Metric List, IBM Cognos History Chart, IBM Cognos Impact Diagram, and IBM Cognos Custom Diagram portlets.

Before you start deploying the Cognos portlets, ensure that IBM Cognos Business Intelligence, including IBM Cognos Connection and Portal Services, is installed and configured.

For the IBM Cognos Extended Applications portlet, IBM Cognos Software Development Kit must also be installed. If IBM Cognos Software Development Kit is not installed or not available, the portal administrator should disable the IBM Cognos Extended Applications portlet after the Cognos portlet package file is imported (p. 567).

For the IBM Cognos Metric Studio portlets, Metric Studio must also be installed. If Metric Studio is not installed or not available, the portal administrator should disable the IBM Cognos Metric Studio portlets after the Cognos portlet package file is imported (p. 567).

You must first log on to the portal with administrator privileges.

The deployment process consists of the following tasks:

- **starting the remote server**

- **importing the portlet package file**

- **connecting to the remote server**
customizing the content of Cognos portlets

After you deploy the portlets, you can configure security for your WebCenter Interaction environment (p. 588).

For more information, see the Installation and Configuration Guide.

Start the Remote Server

The remote server is an IBM® Cognos® Web application that serves as an interface between the core IBM Cognos components and the WebCenter Interaction portal. The remote server application is the cps-wci.war file installed with IBM Cognos Business Intelligence in the c10_location\cps\oracle\gadgets directory.

By default, after IBM Cognos BI is installed, the remote server is not started. It must be started if you want to use Cognos portlets in a WebCenter Interaction portal.

You can deploy the remote server to another server. Ensure that the settings are configured properly so that the remote server can access an IBM Cognos gateway.

You can start the remote server in its default configuration state. However, the default remote server works only if the following conditions are met:

- IBM Cognos BI is configured with a CGI gateway.
- The remote server runs on the same server as the IBM Cognos gateway, which can be accessed using http://localhost/ibmcognos.

If these conditions do not apply to your installation, you must change the configuration settings for the remote server before you start it.

To start the remote server, you must deploy the remote server into an active webapps folder:

- For Tomcat, copy the cps-wci.war file from the c10_location\cps\oracle\gadgets directory into the c10_location\webapps folder.
  Tomcat automatically updates all affected directories and starts the remote server. The process may take a few minutes.
- For other application servers, follow the instructions in their administration guides.
- If you use the default settings, then copy all the WebCenter Interaction Development Kit (IDK) jar files from the devkit folder to c10_location\webapps\cps-wci\WEB-INF\lib after it is created.

You can now import the Cognos Portlet Package File (p. 567).

Reconfigure the Remote Server

If the default remote server configuration does not apply to your installation, or you want to change the configuration, you can change the configuration settings by modifying the cpsalui.properties file. Then, you must rebuild the remote server (cps-wci.war), and start it by deploying it to an active webapps folder for your Web application server.

The following remote server parameters can be changed.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cps_endpoint</td>
<td>Specifies the URL to connect to the IBM Cognos server and extract the WSDL information.</td>
</tr>
<tr>
<td></td>
<td>The default value of <code>http://localhost/ibmcognos/cgi-bin/cognos.cgi/wsrp/cps4/portlets/[package]?wsdl&amp;cb_action=xts.run</code> specifies that the IBM Cognos gateway is configured on the same server as the remote server that it is running. In this situation, IBM Cognos Business Intelligence can be accessed through a CGI gateway. If not, this parameter must be modified accordingly.</td>
</tr>
<tr>
<td></td>
<td>Here are a few more examples of values for this parameter:</td>
</tr>
<tr>
<td></td>
<td>Specifies an IBM Cognos servlet gateway installation on the server named myserver.</td>
</tr>
<tr>
<td></td>
<td>Specifies an IBM Cognos ISAPI gateway installation on the server named myserver.</td>
</tr>
<tr>
<td>forward_cookies</td>
<td>Specifies the names of cookies that must be forwarded to the IBM Cognos server for single signon purposes.</td>
</tr>
<tr>
<td></td>
<td>If the single signon mechanism for the installation depends on a specific active credential cookie, it is necessary to pass this cookie from the WebCenter Interaction server to the IBM Cognos server.</td>
</tr>
<tr>
<td></td>
<td>Default: null</td>
</tr>
<tr>
<td>cps_auth_secret</td>
<td>Specifies the value of the shared secret key.</td>
</tr>
<tr>
<td></td>
<td>This parameter is optional. Use it only when your environment is configured to use the shared secret single signon mechanism. When this parameter is specified, the user’s identity is sent to the IBM Cognos server through an HTTP header variable that is encrypted using the value of the shared secret.</td>
</tr>
<tr>
<td></td>
<td>The value of this parameter must be identical to the one specified in IBM Cognos Configuration. For more information, see &quot;Configuring Security for Portal Services&quot; (p. 588).</td>
</tr>
<tr>
<td>cps_auth_namespace</td>
<td>The namespace ID for the Custom Java™ Provider.</td>
</tr>
</tbody>
</table>

**Steps**

1. Stop your application server, such as Tomcat, or stop the remote server application.
2. Remove the existing remote server by doing one of the following:
   - For Tomcat, delete the cps-wci folder and the cps-wci war file from the *c10_location*/webapps directory.
   - For other application servers, follow the instructions in their administration guides.

3. Open the cpsalui.properties file.
   The file is located in the *c10_location*/cps/oracle/webapps/gadgets/WEB-INF/classes directory.

4. Change the settings as required and save the file.

5. Copy all the WebCenter Interaction Development Kit (IDK) jar files from the devkit folder to *c10_location*/cps/oracle/webapps/gadgets/WEB-INF/lib.

6. Rebuild the remote server by running the following batch file:
   - for Microsoft® Windows® operating system, *c10_location*/cps/oracle/build.bat
   - for UNIX® or Linux® operating systems, *c10_location*/cps/oracle/build.sh
   The configuration settings for the remote server (cps-wci.war) are changed.

7. Start the remote server (p. 565).
You can now import the Cognos portlet package file (p. 567).

**Import the Cognos Portlet Package File**

During the IBM® Cognos® Business Intelligence installation, the Cognos portlet package file CognosOracleWCIPortletPackage.pte is installed as one of the WebCenter Interaction components. This file contains Web services, the remote server, and the definitions of the Cognos portlets (p. 564).

When you import the Cognos portlet package file, you create one instance of a Cognos portlet server, and one instance of each portlet. The Cognos portlet server acts as a binding layer for the portlets. You can also supply your portal users with default portlets where the users can choose the content and layout.

Each portlet appears in a default state. The portlets do not contain any Cognos content, and the default access permissions are read and write for portal administrators, and read-only for portal users.

**Steps for WebCenter Interaction**

1. At the top of your portal page, click **Administration**.

2. Click **Select Utility** and click **Migration - Import**.

3. Select **Folder Information**, click **Browse**.

4. Select the folder you created to store the new resources, and click **OK**.

5. Under **General Info**, click **Browse** to locate the CognosOracleWCIPortletPackage.pte. This file is located in the *c10_location*/cps/oracle/gadgets directory.
6. Click Open, and then click Load Package.

7. Click Finish, and click OK.

The Cognos portlets appear in the Portal Services folder. You can now connect to the remote server (p. 568).

**Connect to the Remote Server**

The remote server must be configured and started (p. 565) before you can connect to it.

**Steps**

1. Click the folder that contains the Cognos® portlets.

2. Expand the Remote Server folder, and click IBM Cognos Portal Services.

3. In the Edit Remote Server page, in the Remote Server Properties box, change the Base URL from http://localhost:9300/ to the following, where gadget server is the name or IP address of the server that hosts the IBM® Cognos remote server, and port is the port number used by the remote server.

   \[
   http://gadget_server:port
   \]

   The default port number is 9300.

   Here is an example: http://myserver:9300/

4. Click Finish.

**Customize the Content of Cognos Portlets**

You can define the default content and appearance of portlets. When you customize a portlet instance, the settings become the default for all users who view this instance.

If the portlet is not locked for editing, users can customize the content for their instance of the portlet. Users retain their custom settings even if you reset the portlet. Users inherit the settings you configure only when they view the instance you configured, or when they reset the portlet using the reset button in the edit page of the portlet.

Applications that appear in the IBM® Cognos® Extended Applications portlet may include editable application parameters with default values defined by the developer. To change the parameter values that users see as defaults, you must edit the applications.xml file. For information about changing application parameters, see the Developer Guide.

The configurable properties for the Cognos portlets vary. For more information, see "User Reference Help for Portal Services" (p. 883).

**Steps**

1. Go to the page where you added the Cognos portlets.

2. Click the configure button for the portlet you want to configure.

3. Edit the settings as required.

   These become the default settings for user instances of this portlet.
4. Click Done.

Deploying Cognos Portlets to Microsoft SharePoint Portal Server 2003

You deploy Cognos® portlets to the portal server so that users can add the portlets to their pages. In Microsoft® SharePoint Portal Server, portlets are named Web Parts. Portions of this document refer to Web Parts as portlets.

You can deploy the following portlets:

- **IBM® Cognos Content**
  This group includes IBM Cognos Navigator, IBM Cognos Search, IBM Cognos Viewer

- **IBM Cognos Extended Applications**
  This group includes the IBM Cognos Extended Applications portlet.
  To deploy this portlet, IBM Cognos Software Development Kit must also be installed.

- **IBM Cognos Metric Studio**
  This group includes IBM Cognos Metric List, IBM Cognos History Chart, IBM Cognos Impact Diagram, and IBM Cognos Custom Diagram.
  To deploy these portlets, IBM Cognos Metrics Manager Server must also be installed.

Before deploying the Cognos portlets, ensure that IBM Cognos Business Intelligence, including IBM Cognos Connection and Portal Services, is installed and configured. Also ensure that the following conditions are met:

- You have administration access to the IIS server computer that hosts SharePoint.

- You have administration access to the IBM Cognos BI installation directory c10_location/cps/sharepoint.

- WSS Language Template Pack required for other supported languages is installed, one for each language.

For information about recommended operating system and SharePoint-related updates, and about the required OS patches, see the conformance information on the IBM Cognos Resource Center Web site (http://www.ibm.com/software/data/cognos/customercenter/).

To deploy Cognos portlets to a SharePoint Portal Server, perform the following tasks:

- Set up virtual directories and change the gateway URIs (p. 570)
  This step applies if Microsoft Internet Information Services (IIS) is your Web server.

- Copy the Cognos Web Parts resources to the IIS HTTP root directory (p. 571)

- Set up the IBM Cognos security trust file (p. 572)

- Modify the .NET Framework web.config file (p. 572)
Modify the Cognos Web Parts catalog files (p. 575)

Restart IIS (p. 576)

Add Cognos Web Parts to a SharePoint page (p. 576)

Customize the content of Cognos Web Parts (p. 577)

After you deploy the portlets, you can configure security for your SharePoint Portal Server environment (p. 588). For more information, see the *Installation and Configuration Guide*.

**Set up Virtual Directories and Change the Gateway URIs**

If you use Microsoft® Internet Information Services (IIS) and plan to enable single signon between the Microsoft SharePoint portal and IBM® Cognos® Web Parts, for the IBM Cognos server, you must

- create the *cps* and *cps/cgi-bin* virtual directories and enable anonymous access for them in Microsoft Internet Information Services (IIS) (p. 570).
- point the gateway URI to the Cognos Portal Services gateway in IBM Cognos Configuration (p. 570).

For more information, see the Proven Practices on the Cognos Software Services Web site.

**Steps to Set up the Virtual Directories**

1. In Microsoft Internet Information Services (IIS), create the *cps* virtual directory and assign the following properties for this directory:
   - Specify the path to *c10_location/webcontent*.
   - Grant read permissions to this directory.
   - Enable anonymous access.
   - Ensure that Integrated Windows authentication is not selected.

2. Under the *cps* virtual directory, create another directory named *cgi-bin*, and assign the following properties for this directory:
   - Specify the path to *c10_location/cgi-bin*.
   - Grant execute permissions to this directory.
   - Enable anonymous access.
   - Ensure that Integrated Windows authentication is not selected.

**Steps to Change the Gateway URIs**

1. Start IBM Cognos Configuration.

2. For the Environment category, change the Gateway URI to point to the Cognos Portal Services gateway.
When properly set up, the Cognos Portal Services gateway URI should look like this: http://webserver/cps/cgi-bin/cognosisapi.dll/wrsp/cps4/portlets/nav?b_action=cps.wsdl&wsdl.

3. Ensure that the remaining Environment properties point to the same URI.

4. Restart the IBM Cognos service.

**Copy the Cognos Web Parts Resources to the IIS HTTP Root Directory**

IBM® Cognos® software provides the resources required for the integration of Microsoft® SharePoint Portal Server with IBM Cognos Business Intelligence. These include the Web Part DLLs for different languages, and catalog files for each Cognos Web Part. You must copy these resources to the IIS HTTP root directory to make them available to SharePoint.

**Steps**

1. Go to the c10-location/cps/sharepoint directory.

2. Copy all files from this directory to the IIS HTTP root directory, as specified in the following table.

   An example of the IIS HTTP root directory can be C:/Inetpub/wwwroot for SharePoint Portal Server 2003.

<table>
<thead>
<tr>
<th>File</th>
<th>IBM Cognos Directory</th>
<th>IIS HTTP Root Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognos.BI.WebPart.dll</td>
<td>/bin</td>
<td>/bin</td>
</tr>
<tr>
<td>Cognos.BI.WebPart.resources.dll</td>
<td>/bin/de</td>
<td>/bin/de</td>
</tr>
<tr>
<td>Cognos.BI.WebPart.resources.dll</td>
<td>/bin/en</td>
<td>/bin/en</td>
</tr>
<tr>
<td>Cognos.BI.WebPart.resources.dll</td>
<td>/bin/fr</td>
<td>/bin/fr</td>
</tr>
<tr>
<td>Cognos.BI.WebPart.resources.dll</td>
<td>/bin/ja</td>
<td>/bin/ja</td>
</tr>
<tr>
<td>CognosNavigator.dwp</td>
<td>/wpcatalog</td>
<td>/wpcatalog</td>
</tr>
<tr>
<td>CognosSearch.dwp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CognosViewer.dwp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CognosSDK.dwp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CognosWatchList.dwp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CognosHistoryChart.dwp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CognosImpactDiagram.dwp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CognosCustomDiagram.dwp</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Set Up the IBM Cognos Security Trust File

The Cognos® Web Parts use the .NET Web Services Stack and they require a higher security trust level than the default minimum security. A sample of a security trust file named wss_cognostrust.config.sample is provided. This file specifies the required security trust, named WSS_Cognos, for the Cognos Web Parts.

Use the wss_cognostrust.config.sample file provided for your version of Microsoft® SharePoint to set up the security trust for the Cognos Web Parts. For a simple SharePoint Portal Server installation the file can be used without any changes. For more complex installations, you may need to edit this file.

**Note:** If you already have a trust file used by other Web Parts in your SharePoint Portal Server, you can add the Cognos-specific information from the sample to the existing file so that it can also be used by the Cognos Web Parts.

**Steps**

1. Go to the `c10_location/cps/sharepoint/config` directory.
2. Copy the wss_cognostrust.config.sample file:
   - For SharePoint Portal Server 2003, copy the wss_cognostrust.config.sample file from the `c10_location/cps/sharepoint/config/wss.2003` directory to the C:/Program Files/Common Files/Microsoft Shared/web server extensions/60/CONFIG directory.
3. Rename the copied file to wss_cognostrust.config.

Modify the .NET Framework web.config File

Microsoft® .NET Framework provides a configuration file named web.config. This file, located in the IIS HTTP root directory, is used to configure the Microsoft SharePoint services at the application level. To configure the Cognos® Web Parts, you must add configuration information to this file.

IBM® Cognos Business Intelligence provides a sample configuration file named web.config.sample that shows a typical, fully functional configuration of the Cognos Web Parts with a SharePoint portal. You can use this sample to copy snippets of code and paste them into the web.config file. However, do not copy the entire sample file directly to your IIS environment.
To configure the Cognos Web Parts with your SharePoint Portal Server, edit the web.config file by adding the IBM Cognos configuration information (p. 573).

**Steps**
1. Go to the IIS HTTP root directory, for example, C:/Inetpub/wwwroot for SharePoint 2003.
2. Open the web.config file in an XML editor, such as XML Spy.
3. Edit the web.config file as required (p. 573), and save the file.

**Changes in the web.config File**

The web.config file is the central configuration point for all .NET Framework applications.

Add the following information to the `configuration` element in this file.

**Add the IBM Cognos Configuration Section**

In the `configSections` section, add the following `sectionGroup` element:

```xml
<sectionGroup name="Cognos">
  <section name="Log" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
  <section name="SoapLog" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
  <section name="SSO" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
  <section name="PortalContext" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
  <section name="Fault" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
  <section name="HttpClient" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
</sectionGroup>
```

**Register the Cognos Web Part Assembly as a Safe Control**

In the `SharePoint` section, add the following `SafeControl` element to the `SafeControls` element.

```xml
<SafeControl Assembly="Cognos.BI.WebPart, Version=1.0.0.0, Culture=neutral, PublicKeyToken=cb3c72729d0875cd" Namespace="Cognos.Portal.Services" TypeName="*" Safe="True"/>
```

**Register the IBM Cognos Security Trust File**

Cognos® Web Parts require the security trust named WSS_Cognos that is defined in the `wss_cognosTrust.config` file (p. 572).

In the `system.web` section, add the following `trustLevel` element to the `securityPolicy` element.

- SharePoint Portal Server 2003
Change the Trust Level to WSS_Cognos

WSS_Cognos is the security trust required by the Cognos Web Parts (p. 572).

In the system.web section, change the trust level from

```xml
<trust level="WSS_Minimal"
originUrl="" />
```

to

```xml
<trust level="WSS_Cognos"
originUrl="" />
```

Enable the Session Object

- In the system.web section, add the following element to the httpModules element if the element does not already exist:

```xml
<add name="Session"
type="System.Web.SessionState.SessionStateModule"/>
```

If the element is commented out, remove the comments.

- In the system.web section, add the following pages element.

```xml
<pages enableSessionState="true" enableViewState="true"
enableViewStateMac="true" validateRequest="false" />
```

If this element already exists, change the value of its enableSessionState attribute to true.

- In the system.web section, add the following element to the httpHandlers element:

```xml
<add verb="*" path="CognosResources/*.axd" type="Cognos.Portal.Services.HttpResourceHandler,
Cognos.BI.WebPart, Version=1.0.0.0, Culture=neutral, PublicKeyToken=cb3c72729d0875cd"
validate="false"/>
```

Register Cognos Portal Services as a SOAP Extension

In the system.web section, add the following webServices element:

```xml
<webServices>
<soapExtensionTypes>
<add type="Cognos.Portal.Services.SoapPatchExtension, Cognos.BI.WebPart,
Version=1.0.0.0, Culture=neutral, PublicKeyToken=cb3c72729d0875cd"
priority="1" group="0" />
</soapExtensionTypes>
</webServices>
```

The soapExtensionTypes element represents all SOAP extensions that are available to your Web service at run time. If the webServices and soapExtensionTypes elements are already defined, add only the add element.
Specify the IBM Cognos Configuration Parameters

Use the Cognos element to specify the IBM® Cognos configuration parameters as defined in IBM Cognos Configuration.

Insert the following Cognos element between the closing tags </system.web> and </configuration>:

```xml
<Cognos>
  <SoapLog filename="c:\Cognos.BI.WebPart.Soap.log" />
  <Log filename="c:\Cognos.BI.WebPart.log" error="true" warn="false" info="false" debug="false" performance="false" />
  <SSO cps_auth_namespace="blank or as defined in IBM Cognos Configuration"
      cps_auth_secret="blank or as defined in IBM Cognos Configuration" />
  <PortalContext gatewayURL="blank or as defined in IBM Cognos Configuration"
      webContentURL="blank or as defined in IBM Cognos Configuration" />
  <Fault stacktrace="false" />
</Cognos>
```

The elements in the Cognos element represent the different configuration settings.

- Use the SoapLog element to specify the location for the Web Services log files.
- Use the Log element to specify a different location for the log file, and to enable the different logging features by changing the attribute values from false to true.
- Use the SSO element to specify the IBM Cognos Security Namespace ID of the CPS trusted namespace named cps_auth_namespace, and the shared secret password named cps_auth_secret.

This parameter is optional.

- Use the PortalContext element to specify the URL attributes for IBM Cognos gateway and IBM Cognos Web content, as shown in the following example:
  - PortalContext gatewayURL="http://localhost/cps/cgi-bin/cognosisapi.dll"
  - webContentURL="http://c10_host_computer/cps"

This parameter is optional.

- Use the Fault element to display the call stacks in the error page when a fault is caught by a Web Part.

Edit the Cognos Web Parts Catalog Files

The catalog files contain the definitions of the Cognos® Web Parts to use in Microsoft® SharePoint Portal Server.
For each Cognos Web Part catalog file, change the WSDL URL to point to your IBM® Cognos gateway.

**Steps**

1. Go to the IIS directory where the catalog files were copied.
   For example, for SharePoint Portal Server 2003, go to C:/Inetpub/wwwroot.

2. In each Cognos Web Part catalog file, Cognos*.dwp, change the URL in the WSDL element to point to your IBM Cognos gateway.
   
   Here is an example:
   ```xml
   <WSDL xmlns="http://developer.cognos.com/webpart/v1">
   http://localhost/cps/cgi-bin/cognosisapi.dll/wsrp/cps4/portlets/nav?b_action=cps.wsdl&amp;wsdl</WSDL>
   ```
   
   Tip: The ampersand characters (&) in the URL must be XML-encoded as `&amp;`.

3. Save the file.

**Restart IIS**

You must restart Internet Information Services (IIS) for the configuration changes to take effect.

**Step**

- Restart IIS using its management console, or the iisreset.exe command line tool.

The Cognos Web Parts are now available in Microsoft® SharePoint Portal Server, and can be added to the portal pages (p. 576).

### Add Cognos Web Parts to a SharePoint Page

You can use the Cognos® Web Parts to add the Cognos content to your pages in Microsoft® SharePoint Portal Server.

You can add or remove the Web Parts from the shared view, or from the personal view of the page.

Ensure that you are in edit mode before you make changes to the page.

The following steps provide only basic instructions for adding the Cognos Web Parts to SharePoint pages. For more information, see the SharePoint Portal Server help.

**Steps for SharePoint Portal Server 2003**

1. Log on to your SharePoint Portal Server with administrative permissions.

2. Go to the page where you want to add the Cognos Web Parts.

3. From the Actions list on the left side, click Edit Page.

4. In the upper-right corner of the page, click Modify Shared Page, Add Web Parts.

5. Click Browse to add a Web Part from an existing Cognos Web Part library.
The page opens in design mode, and the Add Web Parts pane appears on the right side of the page.

Tip: You can use the Search option to find the Web Parts in the Web Part library. If the Web Part is not in the library, you can use the Import option. In this situation, type the path or browse to the location of the Cognos®.dwp file that you want to import, and then click Upload.

6. In the Add Web Parts pane, click Virtual Server Gallery.
   The Cognos Web Parts appear in the Web Part List.

7. Click the Cognos Web Part you want, and then click the Add button at the bottom of the pane.
   The Web Part appears at the top of the page.
   Tip: You can also drag the Web Parts to different drop zones in the page.

8. In the Web Part, click the down arrow in the upper-right corner, and click Modify Shared Web Part.

9. In the pane on the right side of the page, specify the URL of the WSDL file under Connection Settings, WSDL.
   The URL must point to a functional IBM® Cognos Business Intelligence installation.

10. Click Discover Portlets.

11. Specify the Portlet handle property.

12. Click Apply to make changes without closing the pane, or click OK when you are done.

13. Repeat steps 4 to 12 for each Cognos Web Part you want to add to the page.

You can now customize the content of the Cognos Web Parts (p. 577).

**Customize the Content of Cognos Web Parts**

An administrator can define the default content and appearance for Cognos® Web Parts. When users add the Web Part to their pages, the default properties are enabled. For example, in the IBM® Cognos Navigator Web Part, the administrator can define the default display folder or package. When users add this Web Part to their pages, they see the folder or package that was specified by the administrator.

Users can change the Cognos Web Part properties to personalize their pages. The changes made by each individual user do not affect other users or other pages. The personalized settings are not affected if the administrator changes the default properties for the Web Part. Users can click the Reset button to revert to the current administrative defaults.

The configurable properties for each Cognos Web Part are different. For more information, see "User Reference Help for Portal Services" (p. 883).

**Steps for SharePoint Portal Server 2003**

1. Go to the page in your Microsoft® SharePoint Portal Server that contains the Cognos Web Part you want to edit.
2. From the list of **Actions** on the left side, click **Edit Page**.

3. In the Web Part, click the down arrow in the upper-right corner, and click **Edit Preferences**. The Web Part properties page appears.

4. Specify the settings as required.
   For more information, click the help button in the upper-right corner of the properties page.

5. Click **OK**.

---

**Deploying Cognos Portlets to Microsoft SharePoint Portal Server 2007 and 2010**

You deploy Cognos® portlets to the portal server so that users can add the portlets to their pages. In Microsoft® SharePoint Portal Server, portlets are called Web Parts.

You can deploy from the following portlet groups:

- **IBM® Cognos Content**
  This group includes IBM Cognos Navigator, IBM Cognos Search, and IBM Cognos Viewer

- **IBM Cognos Extended Applications**
  This group includes the IBM Cognos Extended Applications portlet.
  To deploy this portlet, IBM Cognos Software Development Kit must also be installed.

- **IBM Cognos Metric Studio**
  This group includes IBM Cognos Metric List, IBM Cognos History Chart, IBM Cognos Impact Diagram, and IBM Cognos Custom Diagram.
  To deploy these portlets, IBM Cognos Metrics Manager Server must also be installed.

Before deploying the Cognos portlets, ensure that IBM Cognos Business Intelligence, including IBM Cognos Connection and Portal Services, is installed and configured. Also ensure that the following conditions are met:

- You have administration access to the IIS server computer that hosts SharePoint.

- You have administration access to the IBM Cognos BI installation directory `c10_location/cps/sharepoint`.

- WSS Language Template Pack, required for other supported languages is installed, one for each language.

For information about operating system and SharePoint-related updates, see the conformance information on the IBM Cognos Resource Center Web site (http://www.ibm.com/software/data/cognos/customercenter/).
For SharePoint Portal Server 2007 and 2010, contact Microsoft® for information about required OS patches.

To deploy Cognos portlets to a SharePoint Portal Server, perform the following tasks:

- For 2010: Configure Microsoft Internet Information Services (IIS) (p. 579)
- Deploy IBM Cognos Web Parts (p. 580)
- Configure IBM Cognos Web Parts (p. 572)
- Restart IIS (p. 576)
- Add Cognos Web Parts to a SharePoint page (p. 576)
- Customize the content of Cognos Web Parts (p. 577)

After you deploy the portlets, you can configure security for your SharePoint Portal Server environment (p. 588). For more information, see the Installation and Configuration Guide.

**Configure Microsoft Internet Information Services (IIS) Manager**

After you install Microsoft® SharePoint Portal Server 2010, you must configure the Internet Information Services software to set up the session modules for use with Web Parts. To do this, you must perform the following tasks:

- select a managed module, and
- add a handler mapping.

The following instructions apply to Windows Server 2008 and Microsoft SharePoint Portal Server 2010 bundled with IIS7.

**Steps for selecting the managed module**

1. On your SharePoint server, start Microsoft® Internet Information Services Manager.
2. Select your SharePoint virtual directory.
3. From the IIS section, select Modules.
4. At the top right of the screen, under Actions, click Add Managed Module.
5. In the Add Managed Module dialog box, enter a Name and in the Type drop-down box, select the following value: System.Web.SessionState.SessionStateModule,System.Web,Version=2.0.0.0.,Cultural=neutral,Public KeystoneToken=b03f5f7f11d50a3a, and click OK.

**Steps for adding a handler mapping**

1. On your SharePoint server, start Microsoft® Internet Information Services Manager.
2. Select your SharePoint virtual directory.
3. From the IIS section, select Handler Mappings.
4. At the top right of the screen, under Actions, click Add Managed Handler.
5. In the Add Managed Handler dialog box, type the following.
   - **Request Path** = CognosResources/*.axd
   - **Name** = CognosPortletResource

6. In the Type drop-down box, type the following: Cognos.Portal.Services.HttpResourceHandler,Cognos.BI.WebPart,Version=1.0.0.0,Culture=neutral,PublicKeyToken=cb3c72729d0875cd and click OK.

## Deploy IBM Cognos Web Parts

You deploy the Cognos® Web Parts to the Microsoft® Sharepoint portal server 2007 by building and importing the sharepoint solution file. When installed, the sharepoint solution file is located at `c10-location\cps\sharepoint\solution\package\ibmcognos_webparts.wsp`.

The solution file is pre-configured to point to the IBM® Cognos server using "localhost". It is best to rebuild the solution file using the IBM Cognos server host before importing it. If not, the IBM Cognos server must be updated in the Web Part catalog files that are imported (i.e. "Cognos*.dwp"). The Web Part catalog files are typically located at C:\inetpub\wwwroot\wss\VirtualDirectories\80.

### Steps to Rebuild the Solution File

1. Open the `build.properties` file. The file is located at `c10-location\cps\sharepoint\solution`.
2. Update the property for the gateway.wsdl.url to point to the IBM Cognos server.
3. Run the `build.bat` file to rebuild the solution file. The file is located at `c10-location\cps\sharepoint\solution`.

The updated sharepoint solution file is created at `c10-location\cps\sharepoint\solution\package`.

### Steps to Import the Solution File

1. Copy the solution file at `c10-location\cps\sharepoint\solution\package\ibmcognos_webparts.wsp` to the Sharepoint server.
2. On the Sharepoint server, open a command prompt.
   - To add a new solution file, type: `stsadm -o addsolution -filename ibmcognos_webparts.wsp`
   - To update an existing solution file, type: `stsadm -o upgradesolution -name ibmcognos_webparts.wsp -filename ibmcognos_webparts.wsp -local -allowCasPolicies`
3. Open a browser to the Sharepoint Administration page.
4. **For 2007**: Under Central Administration, select the Operations tab and click Solution Management to see the solution file.
5. **For 2010**: Under System Settings, select Farm Management, select Manage farm solutions, to see the solution file.
6. Click the solution file, eg ibmcognos_webparts.wsp, and from the Solution Properties window, click the Deploy Solution button.

**Configure IBM Cognos Web Parts**

**Modify the .NET Framework web.config File**

Microsoft® .NET Framework provides a configuration file named web.config. This file, located in the IIS HTTP root directory, is used to configure the Microsoft SharePoint services at the application level. To configure the Cognos® Web Parts, you must add Cognos-specific configuration to this file.

IBM® Cognos Business Intelligence provides a sample configuration file named web.config.sample that shows a typical, fully functional configuration of the Cognos Web Parts with a SharePoint portal. You can use this sample when editing the web.conf file. However, do not copy this file directly to your IIS environment.

To configure the Cognos Web Parts with your SharePoint Portal Server, edit the web.config file by adding the IBM Cognos configuration information.

**Steps**

1. Go to the IIS HTTP root directory, for example, C:\inetpub\wwwroot\wss\VirtualDirectories\80.
2. Open the web.config file in an XML editor, such as XML Spy.
3. Edit the web.config file as required, and save the file.

**Changes in the web.config File**

The web.config file is the central configuration point for all .NET Framework applications. Add the following information to the `configuration` element in this file.

**Add the IBM Cognos Configuration Section**

In the `configSections` section, add the following `sectionGroup` element:

```xml
<sectionGroup name="Cognos">
    <section name="Log" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
    <section name="SoapLog" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
    <section name="SSO" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
    <section name="PortalContext" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
    <section name="Fault" type="System.Configuration.SingleTagSectionHandler, System,Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b77a5c561934e089"/>
</sectionGroup>
```
Enable the Session Object

- In the `system.web` section, add the following element to the `httpModules` element if the element does not already exist:

```xml
<add name="Session" type="System.Web.SessionState.SessionStateModule"/>
```

If the element is commented out, remove the comments.

- In the `system.web` section, add the following `pages` element.

```xml
<pages enableSessionState="true" enableViewState="true" enableViewStateMac="true" validateRequest="false"/>
```

If this element already exists, change the value of its `enableSessionState` attribute to `true`.

- In the `system.web` section, add the following element to the `httpHandlers` element:

```xml
<add verb="*" path="CognosResources/*.axd" type="Cognos.Portal.Services.HttpResourceHandler, Cognos.BI.WebPart, Version=1.0.0.0, Culture=neutral, PublicKeyToken=cb3c72729d0875cd" validate="false"/>
```

Register Cognos Portal Services as a SOAP Extension

In the `system.web` section, add the following `webServices` element:

```xml
<webServices>
  <soapExtensionTypes>
    <add type="Cognos.Portal.Services.SoapPatchExtension, Cognos.BI.WebPart, Version=1.0.0.0, Culture=neutral, PublicKeyToken=cb3c72729d0875cd" priority="1" group="0"/>
  </soapExtensionTypes>
</webServices>
```

The `soapExtensionTypes` element represents all SOAP extensions that are available to your Web service at run time. If the `webServices` and `soapExtensionTypes` elements are already defined, add only the `add` element.

Specify the IBM Cognos Configuration Parameters

Use the `Cognos` element to specify the IBM Cognos configuration parameters as defined in IBM Cognos Configuration.

Insert the following `Cognos` element between the closing tags `</system.web>` and `</configuration>`:

```xml
<Cognos>
  <SoapLog filename="c:\Cognos.BI.WebPart.Soap.log"/>
  <Log filename="c:\Cognos.BI.WebPart.log" error="true" warn="false" info="false" debug="false" performance="false"/>
  <SSO cps_auth_namespace="blank or as defined in IBM Cognos Configuration" cps_auth_secret="blank or as defined in IBM Cognos Configuration"/>
</Cognos>
```
The elements in the Cognos element represent the different configuration settings.

- Use the SoapLog element to specify the location for the Web Services log files.
- Use the Log element to specify a different location for the log file, and to enable the different logging features by changing the attribute values from false to true.
- Use the SSO element to specify the IBM Cognos Security Namespace ID of the CPS trusted namespace named cps_auth_namespace, and the shared secret password named cps_auth_secret.
  
  This parameter is optional.
- Use the PortalContext element to specify the URL attributes for IBM Cognos gateway and IBM Cognos Web content, as shown in the following example:
  - gatewayURL="http://c10_host_computer/ibmcognos/cgi-bin/cognosisapi.dll"
  - webContentURL="http://c10_host_computer/ibmcognos"
  
  This parameter is optional.
- Use the Fault element to display the call stacks in the error page when a fault is caught by a Web Part.

**Restart IIS**

You must restart Internet Information Services (IIS) for the configuration changes to take effect.

**Step**

- Restart IIS using its management console, or the iisreset.exe command line tool.

The Cognos® Web Parts are now available in Microsoft® SharePoint Portal Server, and can be added to the portal pages (p. 576).

**Add Cognos Web Parts to a SharePoint Page**

You can use the Cognos® Web Parts to add the Cognos content to your pages in Microsoft® SharePoint Portal Server.

You can add or remove the Web Parts from the shared view, or from the personal view of the page. Ensure that you are in edit mode before you make changes to the page.
The following steps provide only basic instructions for adding the Cognos Web Parts to SharePoint pages. For more information, see the SharePoint Portal Server help.

**Steps for SharePoint Portal Server 2007**
1. Log on to your SharePoint Portal Server with administrative permissions.
2. Go to the page where you want to add the Cognos Web Parts.
3. From the **Site Actions** menu in the upper-right corner, click **Edit Page**.
4. In the Web Part zone where you want to add the Cognos Web Part, click **Add a Web Part**.
5. In the **Add Web Parts** dialog box, click **All Web Parts, Miscellaneous**.
6. In the **Add Web Parts** tool pane on the right side of the page, click **Server Gallery**.
7. From the list of available Cognos Web Parts, click the Web Part you want.
8. At the bottom of the tool pane, from the **Add to** menu, select the location on the page where you want the Web Part to appear, and click the **Add** button.
   
   **Tip:** You can also drag the Web Part to different drop zones in the page.
9. Repeat steps 4 to 8 for each Cognos Web Part you want to add to the page.
10. Click **Exit Edit Mode**.

You can now customize the content of the Cognos Web Parts (p. 577).

**For 2010:** For SharePoint Portal Server 2010, refer to the Microsoft® documentation.

### Customize the Content of Cognos Web Parts

An administrator can define the default content and appearance for Cognos® Web Parts. When users add the Web Part to their pages, the default properties are enabled. For example, in the IBM® Cognos Navigator Web Part, the administrator can define the default display folder or package. When users add this Web Part to their pages, they see the folder or package that was specified by the administrator.

Users can change the Cognos Web Part properties to personalize their pages. The changes made by each individual user do not affect other users or other pages. The personalized settings are not affected if the administrator changes the default properties for the Web Part. Users can click the **Reset** button to revert to the current administrative defaults.

The configurable properties for each Cognos Web Part are different. For more information, see "User Reference Help for Portal Services" (p. 883).

**Steps for SharePoint Portal Server 2007 and 2010**
1. **For 2007:** Go to the page in your Microsoft® SharePoint Portal Server that contains the Cognos Web Part you want to edit.
2. From the **Site Actions** menu in the upper-right corner, click **Edit Page**.
3. **For 2010:** In the Web Part that you want to change, click the **edit** button.
4. Click **Edit preferences**.
   The Web Part properties page appears.

5. Specify the settings as required.
   For more information, click the help button in the upper-right corner of the properties page.

6. Click **OK**.

**Migrating Cognos Portlets from IBM Cognos ReportNet 1.1 to IBM Cognos BI**

When you upgrade ReportNet® 1.1 to IBM® Cognos® Business Intelligence, you must update the portlets using the latest portlet package file installed with IBM Cognos BI.

For a WebSphere® portal, use the CognosBIPortlets.war file located in the `c10_location\cps\ibm\portlet` directory (p. 555).

For SAP Enterprise Portal 6.0, use the `com.cognos.epa` file located in the `c10_location\cps\sap\package` directory (p. 560).

Importing the new package into the portal creates a new and distinct set of Cognos portlets and resources. The upgraded portlets are not compatible with ReportNet 1.1, and the personalized settings are lost. You must configure and test the new portlets as required for IBM Cognos BI.

**Change the Root Name of File Paths in Cognos Portlets**

By default, the root name shown for all file paths in Cognos® portlets is Cognos. You can change the root name to another name, such as your company name, by modifying the `cpsinavcrnmsgs_custom.properties` file in the `c10_location\webapps\p2pd\WEB-INF\classes` directory. This changes the root name for the currently used content locale.

If you want to specify root names for different locales, you must create new properties files for the required locales in the `c10_location\webapps\p2pd\WEB-INF\classes` directory. For example, to specify root names for English, French, German, and Japanese locales, create the following properties files, and provide the root name value in each of them:

- `cpsinavcrnmsgs_custom_en.properties`
- `cpsinavcrnmsgs_custom_fr.properties`
- `cpsinavcrnmsgs_custom_de.properties`
- `cpsinavcrnmsgs_custom_ja.properties`

**Steps**

1. Open the `cpsinavcrnmsgs_custom.properties` file in a text editor that supports UTF-8 encoding format.
   The file is located in the `c10_location\webapps\p2pd\WEB-INF\classes` directory.
2. Change the value of the property `nav.root.name` as follows, where `root_name` represents the value you change:

```
nav.root.name=root_name
```

The default is:

```
nav.root.name=Cognos
```

3. Save the `cpsinavcrmsmsgs_custom.properties` file.

4. If you want to specify root names for different locales, create the required properties files now.

5. Restart the IBM Cognos server.

**Disable the Transfer of the IBM Cognos Passport ID as a URL Parameter**

To ensure a higher degree of security, you can disable the mechanism that transfers the IBM® Cognos® passport ID as a URL parameter between users' browsers and the IBM Cognos gateway. You can do this only when single signon is implemented between the users' browsers and IBM Cognos Business Intelligence, and, if applicable, IBM Cognos Series 7, independently of Portal Services.

By default, Portal Services re-creates the active credential cookie in the user's browser by passing the passport ID as a URL parameter. If single signon is not implemented, then when portal users interact with Cognos portlets, they are authenticated both in the portal and in IBM Cognos BI. The portal, not the user’s browser, maintains the active credential token generated by IBM Cognos BI. In some situations, for example when you want to see a report in a Cognos portlet, a direct connection between the user’s browser and the IBM Cognos gateway must be established. This may become a security risk because a valid IBM Cognos passport ID appears in some log files. The same applies when IBM Cognos BI is integrated with IBM Cognos Series 7 and the active credential is passed as a URL parameter.

**Steps**

1. In IBM Cognos Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.

2. On the **Configuration** tab, click **Dispatchers and Services**.

3. Click the dispatcher you want.

4. For the **PresentationService**, in the **Actions** column, click the set properties button.

5. Click the **Settings** tab.

6. For the **Environment** category, next to **Advanced settings**, click the **Edit** link.

7. Select the **Override the settings acquired from the parent entry** check box.

8. In the **Parameter** column, type the parameter names:

   - **CPSPropagatePassport**
This parameter controls the transfer of the IBM Cognos passport ID as a URL parameter. When set to 0, it stops the transfer.

- **CPSPropagateTicket**
  Controls the transfer of the IBM Cognos Series 7 ticket ID as a URL parameter. When set to 0, it stops the transfer.

  The parameters are case sensitive.

9. In the Value column, type 0 for each parameter.

10. Click OK.

11. Click OK again.

12. Click the Configuration link next to the path at the top of the page.
    You return to the list of dispatchers.

13. If you have more than one dispatcher configured, perform steps 3 to 12 for each remaining dispatcher.

### Set Portal Services Protocol Scheme

For WebSphere® portals, if you are using multiple gateways that may not use the same HTTP or HTTPS protocol as specified for the default gateway, you can set the CSPProtocolScheme parameter to override all other protocol settings.

**Steps**

1. In IBM® Cognos® Connection, in the upper-right corner, click Launch, IBM Cognos Administration.

2. On the Configuration tab, click Dispatchers and Services.

3. Click the dispatcher you want.

4. For PresentationService, in the Actions column, click the set properties button.

5. Click the Settings tab.

6. For the Environment category, next to Advanced settings, click the Edit link.

7. If it appears, select the Override the settings acquired from the parent entry check box. Otherwise, proceed to the next step.

8. In the Parameter column, type CPSProtocolScheme.

9. In the Value column, type http or https.

10. Click OK twice.

11. Click the Configuration link in the path at the top of the page.
    You return to the list of dispatchers.
12. If you have more than one dispatcher configured, perform steps 3 to 11 for each remaining dispatcher.

**Configuring Security for Portal Services**

When using Portal Services in another portal, you must enable single signon to provide seamless integration between the other portal and IBM® Cognos® components.

Portal Services uses single signon to authenticate users. This means that users do not have to log on to other applications separately through the portal.

You must configure a URI into IBM Cognos components for each portlet in Portal Services.

To enable security between IBM Cognos components and the other portal, do the following:

- Disable anonymous access to IBM Cognos components.

  If your security infrastructure requires you to use another method for single signon, use one of the following methods:

- Enable single signon for the other portal using shared secret.

  If your security infrastructure requires you to use another method for single signon, use one of the following methods:

  - "Enable Single Signon for WebSphere Portal Using the Application Server" (p. 596)
  - "Enable Single Signon for Oracle WebCenter Interaction Portal Using Basic Authentication" (p. 596)
  - "Enable Single Signon for Oracle WebCenter Interaction Portal Using SiteMinder" (p. 597)

- Configure IBM Cognos components for SSL access, if required.

  For instructions, see the *Installation and Configuration Guide*.

**Disable Anonymous Access to IBM Cognos Components**

Portal Services uses single signon for authentication. If anonymous logon is enabled in IBM® Cognos® components, Portal Services logs all portal users as anonymous. You must ensure that anonymous access is disabled in IBM Cognos components for single signon in Portal Services to be successful.

However, you can test the Portal Services connections using anonymous logon to ensure that the portlets are working in the other portal.

If Portal Services fails to authenticate a user, the user receives an error message at the other portal.

**Steps**

1. Start IBM Cognos Configuration.

2. In the **Explorer** window, under **Security > Authentication**, click **Cognos**.

3. In the **Properties** window, ensure that **Allow anonymous access** is set to **False**.

4. From the **File** menu, click **Save**.
5. Repeat steps 1 to 4 on all servers where you installed IBM Cognos components.

**Enable Single Signon Using Shared Secret**

You can use shared secret for single signon between IBM® Cognos® portlets and IBM® Cognos components. The Cognos portlets send a message that contains an encrypted version of the portal user ID. The encryption key is determined by the value of a secret character string shared between the portlets and the custom Java™ security provider on the IBM Cognos server.

You can use shared secret for the other portal only if portal user IDs can be looked up in an NTLM, LDAP, or IBM Cognos Series 7 authentication namespace that is shared by IBM Cognos components. IBM Cognos components must have access to a directory server that contains user IDs for all your portal users. Using IBM Cognos Configuration, you must configure an authentication namespace so that the portal and IBM Cognos components share the same authentication source.

You must also create a Custom Java Provider namespace to register the shared secret Java provider that is provided with IBM Cognos components. Within the portlets or iViews, you must link the portlets or iViews to the Custom Java Provider namespace within your respective portal:

- Cognos iViews (SAP EP)
- Cognos Portlet Application (WebSphere® Portal)
- remote server (Oracle WebCenter Interaction Portal)
- Cognos WebPart (SharePoint Portal)

You are not required to configure access to the Portal Services Web content. However, if you deploy the portlets to another portal, you can configure access to an alternate URI for Portal Services images and Web content.

**Steps to Configure the Required Namespaces**

1. In IBM Cognos Configuration, configure a namespace to authenticate portal users.
   
   For instructions, see the topic about configuring LDAP, NTLM, or IBM Cognos Series 7 authentication providers in the *Installation and Configuration Guide*.

2. For an LDAP namespace, configure the following properties:
   
   - For the Use external identity property, change the setting to True.
   - For the External identity mapping property, set it to
     
     \( uid=${\text{environment}}("\text{REMOTE\_USER}\") } \)
     
     For SharePoint Portal, if SharePoint is on a different machine from the LDAP server, set
     
     External identity mapping to
     
     \( uid=${\text{replace}}(${\text{environment}}("\text{REMOTE\_USER}\"),"SharePoint\_Server\",\"\") } \)
     
     Other properties may be required. For more information, see the topic about configuring IBM Cognos components to use LDAP in the *Installation and Configuration Guide*. 
3. For an IBM Cognos Series 7 namespace, map the portal user IDs to IBM Cognos Series 7 user IDs using OS signons.
   For more information, see the IBM Cognos Series 7 documentation.

4. In IBM Cognos Configuration, create and configure a Custom Java Provider namespace.
   For instructions, see the topic about configuring a custom authentication namespace in the Installations and Configuration Guide.
   - For the Namespace ID property, specify any new ID.
     For example, cpstrusted
     This new ID must be used in the portlet configuration settings.
   - For the Java class name property, type
     com.cognos.cps.auth.CPSTrustedSignon
     Java class names are case-sensitive.

5. In IBM Cognos Configuration, under Environment > Portal Services, configure the following properties:
   - For Trusted Signon Namespace ID, type the namespace ID of the LDAP, NTLM, or IBM Cognos Series 7 namespace that you configured in step 1.
     Tip: The trusted signon namespace acts as an intermediary and must be attached to a real directory-based namespace of type LDAP, NTLM, or IBM Cognos Series 7.
   - For Shared Secret, type the key to be used for single signon.
     This parameter represents the authorization secret that must be shared between the Cognos portlets and the IBM Cognos server. Consider this as a secret password. You must use the same character string when you configure the portlet application. You must use a single word as the key.
     For security reasons, specify a non-null value.

6. Under Environment, for Gateway Settings, set the Allow Namespace Override property to true.

7. From the File menu, click Save.

8. Restart the IBM Cognos service.

**Steps to Configure Access to the Portal Services Web Content**

1. On the computer where you installed the Application Tier Components, start IBM Cognos Configuration.

2. In the Explorer window, under Environment, click Portal Services.

3. In the Properties window, click the Value box next to Web Content URI.

4. Specify the host name or IP address of the gateway and a port number using the format

   host_or_IP_address:port

590 IBM Cognos Administration
5. From the File menu, click Save.

**Steps to Configure the Cognos iViews for SAP EP**

1. Open the iView editor for each Cognos iView.

2. In the Property Category box, select Show All.

3. For the `cpsauthsecret`: CPS Authorization Secret property, enter the secret character string that you used for the Shared Secret property when you configured the Custom Java Provider namespace.

4. For the `cps: authentication namespace ID` property, enter the Custom Java Provider namespace ID.

5. For the `cpsserver`: CPS Connection Server property, enter the URL path to access Portal Services components through the gateway.

   The format of the URL is as follows:

   - For Cognos content portlets
     
     $\text{Gateway URI}/\text{wsrp}/\text{cps4}/\text{portlets}/\text{nav}\text{?wsdl}&\text{b_action=cps.wsdl}$

     Example for a CGI gateway:
     
     http://myserver/ibmcognos/cgi-bin/cognos.cgi/\text{wsrp}/\text{cps4}/\text{portlets}/\text{nav}\text{?wsdl}&\text{b_action=cps.wsdl}$

     Example for a servlet gateway:
     
     http://172.0.16.1:9500/\text{wsrp}/\text{cps4}/\text{portlets}/\text{nav}\text{?wsdl}&\text{b_action=cps.wsdl}$

   - For Cognos Extended Applications
     
     $\text{Gateway URI}/\text{wsrp}/\text{cps4}/\text{portlets}/\text{sdk}\text{?wsdl}&\text{b_action=cps.wsdl}$

     Example for a CGI gateway:
     
     http://myserver/ibmcognos/cgi-bin/cognos.cgi/\text{wsrp}/\text{cps4}/\text{portlets}/\text{sdk}\text{?wsdl}&\text{b_action=cps.wsdl}$

     Example for a servlet gateway:
     
     http://172.0.16.1:9500/\text{wsrp}/\text{cps4}/\text{portlets}/\text{sdk}\text{?wsdl}&\text{b_action=cps.wsdl}$

   - For Metrics Manager Watchlist portlets
     
     $\text{Gateway URI}/\text{wsrp}/\text{cps4}/\text{portlets}/\text{cmm}\text{?wsdl}&\text{b_action=cps.wsdl}$

     Example for a CGI gateway:
     
     http://myserver/ibmcognos/cgi-bin/cognos.cgi/\text{wsrp}/\text{cps4}/\text{portlets}/\text{cmm}\text{?wsdl}&\text{b_action=cps.wsdl}$

     Example for a servlet gateway:
Steps to Configure the Cognos Portlets for WebSphere Portal

1. For each Cognos portlet application, click Modify Parameters.

2. For the cps_auth_secret property, enter the secret character string that you used for the Shared Secret property when you configured the Custom Java Provider namespace.

3. For the cps_auth_namespace property, enter the Custom Java Provider namespace ID.

4. For the CPS Endpoint property, enter the URL path to access Portal Services components through the gateway.

The format of the URL is as follows:

- For Cognos content portlets

  
  Gateway_URI/wsrp/cps4/portlets/nav?wsdl&cb_action=cps.wsd

  Example for a CGI gateway:

  http://myserver/ibmcognos/cgi-bin/cognos.cgi/wsrp/cps4/portlets/nav?wsdl&cb_action=cps.wsd

  Example for a servlet gateway:


- For Cognos Extended Applications

  Gateway_URI/wsrp/cps4/portlets/sdk?wsdl&cb_action=cps.wsd

  Example for a CGI gateway:

  http://myserver/ibmcognos/cgi-bin/cognos.cgi/wsrp/cps4/portlets/sdk?wsdl&cb_action=cps.wsd

  Example for a servlet gateway:


- For Metrics Manager Watchlist portlets

  Gateway_URI/wsrp/cps4/portlets/cmm?wsdl&cb_action=cps.wsd

  Example for a CGI gateway:

  http://myserver/ibmcognos/cgi-bin/cognos.cgi/wsrp/cps4/portlets/cmm?wsdl&cb_action=cps.wsd

  Example for a servlet gateway:


Steps to Configure the Remote Server for Oracle WebCenter Interaction Portal

1. Using a plain ASCII editor, such as Notepad, edit the cpsalui.properties file in the e10_location/cps/oracle/webapps/gadgets/WEB-INF/classes directory.
2. Configure the settings shown in the following table.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>cps_endpoint</td>
<td>The URL to connect to the Application Tier Components and extract the WSDL information. Specify the URI to the gateway. For a servlet or ISAPI gateway, replace the localhost/ibmcognos/cgi-bin/cognos.cgi portion with the values to target the gateway. For example, http://host_name/ibmcognos/cgi-bin/cognosisapi.dll?wsdl&amp;b_action=cps.wsd For instructions, see the topic about changing the gateway in the Installation and Configuration Guide.</td>
</tr>
<tr>
<td>forward_cookies</td>
<td>The names of the cookie that should be sent to the Application Tier Components for single signon. Leave blank.</td>
</tr>
<tr>
<td>cps_auth_secret</td>
<td>The shared secret code IBM Cognos uses to encrypt an HTTP header variable that carries the user identity. This parameter represents the authorization secret that must be shared between the Cognos portlets and the IBM Cognos server. Consider this as a secret password. Use the same value that you used for Shared Secret in IBM Cognos Configuration. For security reasons, specify a non-null value.</td>
</tr>
<tr>
<td>cps_auth_namespace</td>
<td>The namespace ID for the Custom Java Provider.</td>
</tr>
</tbody>
</table>

3. Go to the c10_location/cps/oracle directory and run the following build file:
   - On UNIX® or Linux® operating systems, `build.sh`
   - On Microsoft® Windows® operating system, `build.bat`

   This creates a cps-wci.war file in the c10_location/cps/oracle/gadgets directory.

4. If IBM Cognos BI components are using Tomcat,
   - Stop IBM Cognos BI.
   - Copy the cps-wci.war file to the c10_location/webapps directory.
     Tomcat automatically expands the WAR file and starts the remote server.
   - Start IBM Cognos BI.
5. If IBM Cognos BI components are running under another type of application server, copy the cps-wci.war file to the application server. For instructions, see the administration guide for your application server.

Single signon is configured.

**Steps to Configure Properties for the Cognos WebPart for SharePoint Portal**

1. Using a plain ASCII editor, such as Notepad, edit the web.config file in the drive\Program Files\Common Files\Microsoft Shared\web server extensions\12\CONFIG directory.

2. Find the following string:

   ```xml
   <SSO cps_auth_namespace="" cps_auth_secret="" />
   ```

3. Set cps_auth_namespace to the namespace ID for the Custom Java Provider namespace.

4. Set cps_auth_secret to the value that you used for Shared Secret in IBM Cognos Configuration.

**Enable Single Signon for SAP EP with the SAP Logon Ticket**

If you enable single signon with the SAP Logon Ticket, you must configure IBM® Cognos® components with an SAP namespace that links to an SAP BW server.

Then you must copy the certificate that was generated during SAP EP installation to the SAP BW personal security environment.

Users must have the same user ID in all SAP systems that are accessed through single signon.

Before you start, ensure that you have

- configured IBM Cognos components to use an SAP authentication source
  
  For more information, see the *Installation and Configuration Guide*.

- enabled single signon between IBM Cognos components and SAP BW
  
  For more information, see the *Installation and Configuration Guide*.

- installed the latest service packs on the SAP BW server
  
  Service packs can be downloaded from SAPNET.

- installed the latest hot patches for the SAP portal

- installed the Enterprise Portal plug-in that corresponds to the SAP EP release or SAP BW server
  
  For SAP releases earlier than 6.2, on SAPNET, download EP50_PLUG-IN for Basis 620 (SAPKINE32A). Using transaction SAINT, install SAPKINE32A.

- installed the SAP Security Library on the SAP BW servers
  
  From sapserFX, under /general/misc/security/SAPSECU/platform, download sapsecin and sepsecu.dll and place both files in the /run directory of the SAP BW server.

To enable SSO for SAP EP, complete the procedures for single signon with SAP logon tickets in the SAP Enterprise Portal *Security Guide*.
Enable Single Signon for SAP EP with User Mapping

If you enable single signon with user mapping, you define an IBM® Cognos® data source in SAP EP. Individual users or an administrator can enter the user IDs and passwords for IBM Cognos components in the data source. You must map the users logon credentials in the data source to an LDAP or IBM Cognos Series 7 or NTLM namespace. Portal Services iViews transmit the logon credentials to IBM Cognos components using HTTP Basic Authentication.

Steps to Prepare the Environment

1. Configure the gateway URI that will be used by Portal Services to require authentication using HTTP Basic Authentication.

   For information about configuring a URL to use HTTP Basic Authentication, see the documentation for the gateway or for your Web server.

2. Adjust the iView configuration to access the secure URL.

   For information, see the documentation for your Web server.

3. In IBM Cognos Configuration, configure a namespace to authenticate portal users.

   For instructions, see the topic about configuring LDAP, NTLM, or IBM Cognos Series 7 authentication providers in the Installation and Configuration Guide.

4. If you use an LDAP namespace, configure the following properties:
   - For the Use external identity property, change the setting to True.
   - For the External identity mapping property, set it to
     \( \text{uid}=${\text{environment}}\left(\text{"REMOTE\_USER"}\right) \)

   Other properties may be required. For more information, see the topic about configuring IBM Cognos components to use LDAP in the Installation and Configuration Guide.

Steps to Create the Data Source and Map the Users

1. In the SAP portal, ensure that the following properties are configured for the data source in the /PortalContent/other_vendors/every_user/com.cognos.pct.c8/systems/Cognos directory:
   - Logon Method = UIDPW
   - server name = the name of the IBM Cognos server
   - port number = port number of the gateway
   - Protocol of Target system = HTTP
   - User Mapping Type = admin,user
   - system alias (Create a system alias)

   For more information, see the SAP Enterprise Portal Administration Guide.

2. For each Cognos iView, enable user mapping for the data source by entering the name of the system alias at the iView level, in an attribute called CPS: User Mapping Datasource.
For more information, see the SAP Enterprise Portal Administration Guide.

3. For each Cognos iView, set the **CPS: Authentication Namespace ID** property to the namespace that you want to use for authentication.

4. Register the IBM Cognos credentials for the portal users.
   Users can enter their own user IDs and passwords.
   For more information, see the SAP Enterprise Portal Administration Guide.

Enable secure communication between SAP EP and IBM Cognos.

**Enable Secure Communication Between SAP EP and IBM Cognos Components**

A secure connection, using SSL, is not required between SAP EP and IBM Cognos® components. It is more important if you enabled single signon with user mapping.

To enable SSL between SAP EP and IBM Cognos components, see your SAP EP security documentation.

For more information about configuring SSL in IBM Cognos components, see the topic about configuring the SSL protocol in the *Installation and Configuration Guide*.

After SSL is enabled, edit properties for the all iViews so that the **cpsserver: CPS Connection Server** property uses https instead of http.

**Enable Single Signon for WebSphere Portal Using the Application Server**

The Portal Services portlets can use the Active Credentials objects provided by WebSphere® Portal to connect to IBM Cognos® components. Portal Services supports the following Active Credentials objects: HttpBasicAuth, LtpaToken, SiteMinderToken, and WebSealToken.

Credentials for the portal user are passed to the gateway using this object. For more information about Active Credential objects, see the documentation for IBM WebSphere Portal.

To use application server single signon, see the documentation for IBM WebSphere Application Server.

For information about SSL for IBM Cognos components on a WebSphere Application Server, see the topic about enabling SSL in the application server chapter of the *Installation and Configuration Guide*.

**Enable Single Signon for Oracle WebCenter Interaction Portal Using Basic Authentication**

You can configure a portlet in WebCenter Interaction Portal to send the username and password as an HTTP Basic authentication header. The header can be used with an NTLM, LDAP, or IBM Cognos® Series 7 authentication namespace to provide single signon.

**Steps**

1. In IBM Cognos Configuration, configure a namespace to authenticate portal users.
For instructions, see the topic about configuring LDAP, NTLM, or IBM Cognos Series 7 authentication providers in the *Installation and Configuration Guide*.

2. Install an alternate CGI or ISAPI or servlet gateway in IBM Cognos.
   For instructions, see the topic about installing IBM Cognos BI in the *Installation and Configuration Guide*.

3. Configure the gateway.
   For instructions, see the *Installation and Configuration Guide*.

4. In the administration console of the Web server, configure the virtual directories to access the gateway.
   For more information, see the documentation for your Web server.

5. Configure the WebCenter Interaction remote server to access IBM Cognos BI:
   - Edit the cpsalui.properties file in the `c10_location/cps/oracle/webapps/gadgets/WEB-INF/classes` directory.
   - Change the `cps_endpoint` property to indicate the URL of the gateway.
     For a CGI gateway, you can use the default setting if the gateway and the remote server are on the same computer. Otherwise, replace the localhost portion with `host_name:port`.
     For a servlet or ISAPI gateway, replace the `localhost/ibmcognos/cgi-bin/cognos.cgi` portion with the values to target the gateway.
     For example,
     ```
     http://host_name:port/ibmcognos/cgi-bin/cognosisapi.dll/wsrp/cps4/portlets/[package]?wsdl&b_action=cps.wsdl
     ```
   - Set the `cps_auth_namespace` property to the namespace that you want to use for authentication.

---

**Enable Single Signon for Oracle WebCenter Interaction Portal Using SiteMinder**

If you use eTrust SiteMinder to provide single signon in your security infrastructure, you can also use it for single signon with WebCenter Interaction Portal.

You must configure a SiteMinder authentication namespace in IBM® Cognos® BI. WebCenter Interaction Portal sends the SiteMinder active authentication token to the remote server, which sends the token to the IBM Cognos gateway.

**Steps**

1. In IBM Cognos Configuration, configure a SiteMinder authentication namespace.
   For instructions, see the topic about configuring SiteMinder authentication namespaces in the *Installation and Configuration Guide*.

2. Configure the remote server to forward the authentication token:
Edit the cpsalui.properties file in the c10_location/cps/oracle/webapps/gadgets/WEB-INF/classes directory.

Change the forward_cookies property to include the name of the active authentication token that SiteMinder provides.

Change the cps_endpoint property to indicate the URL of the gateway.
For a CGI gateway, you can use the default setting if the gateway and the remote server are on the same computer. Otherwise, replace the localhost portion with host_name:port.
For a servlet or ISAPI gateway, replace the localhost/ibmcognos/cgi-bin/cognos.cgi portion with the values to target the gateway.
For example,
http://host_name:port/ibmcognos/cgi-bin/cognosisapi.dll/wsrp/cps4/portlets/[package]?wsdl&b_action=cps.wsdl

Change the cps_auth_namespace property to the namespace that you want to use for authentication.
You can customize the IBM® Cognos® Business Intelligence interface to suit the needs of an international customer or a particular reseller. IBM Cognos BI includes a selection of predefined styles that you can use to globally change the look of the graphical user interface without affecting product functionality. Alternatively, you can create a custom style based on one of the predefined styles. You can make changes to the colors, fonts, images, and overall appearance of one or more IBM Cognos components.

Styles can be customized by

- using the style management utility (p. 600)
  The style management utility automates the creation of custom styles. This is the preferred method for customizing the appearance of IBM Cognos components.

- manually creating a custom style (p. 606) and changing the associated style sheets (.css files).
  Using this method, you can customize style sheets for Cognos Connection (p. 609), Report Studio (p. 613), Query Studio (p. 615), IBM Cognos Viewer (p. 620), and prompt pages (p. 622).

For more information about IBM Cognos customizations, see "Customizing the Functionality of IBM Cognos Software" (p. 631).

**Predefined Styles**

IBM Cognos software provides several predefined styles to control the appearance of the IBM Cognos Web interface. The following predefined styles are available:

- business
- classic
- contemporary
- corporate (product default)
- modern
- presentation
- windows

**Note:** The windows style is used only with Report Studio. It adopts the display scheme specified by the Microsoft® Windows® operating system settings. This style must not be modified, and the customization techniques described in this document do not apply to it.

For more information about the predefined styles, see "Styles" (p. 550).
IBM Cognos Components Affected by Styles
The following components are affected by styles:

- IBM Cognos Connection (including job scheduling and query setting defaults)
- IBM Cognos Administration
- Report Studio (toolbox and preview window)
- Query Studio (filter dialogs and prompt pages)
- IBM Cognos Viewer (reports and prompt pages)
- Analysis Studio
- Event Studio
- IBM Cognos Search

Using the Style Management Utility
The style management utility is a command line utility located on each IBM® Cognos® gateway. With this utility, you can create custom styles based on the predefined styles that can be used to change the appearance of IBM Cognos components. Custom styles that you create and publish using the style management utility can be used as the basis for creating other custom styles.

For information about creating and deploying custom styles for IBM Cognos Connection and IBM Cognos Administration, see "IBM Cognos Connection and IBM Cognos Administration" (p. 600). For information about creating and deploying custom styles for other components, see "Report Studio, IBM Cognos Viewer, Query Studio, and Prompt Pages" (p. 601).

To run the style management utility, you must have a gateway installed and a dispatcher with a Presentation Service. Also, you must have permissions for the Style and portlets capability.

XML Style Files
After creating a custom style using the style management utility, XML style files are then used to make global changes to the appearance of Cognos Connection and Cognos Administration. The utility also validates XML style files, saves the XML files to Content Manager, and publishes new styles making them visible to users. The utility can also delete custom styles.

Since the XML style files created using the style management utility are stored in Content Manager, they can be upgraded.

IBM Cognos Connection and IBM Cognos Administration
This section describes the process for creating and deploying a custom style for Cognos Connection and Cognos Administration using the style management utility.

- Create a custom style.

  You create a custom style based on one of the predefined styles provided with IBM Cognos. For more information, see "Predefined Styles" (p. 599).
Modify the *style*.xml file.

Changes you make to *style*.xml affect the appearance of Cognos Connection and Cognos Administration only. They do not apply to other IBM Cognos components.

*Style*.xml is created in the `c10_location\temp` directory when you create a new style. You can edit `style`.xml in an XML or text editor to use custom colors and images. For more information, see "Steps" (p. 605).

Generate the custom style.

The style management utility creates a folder for the new style on the local machine in the `c10_location\temp` folder. The folder contains all the files needed for the new style, including the cascading style sheets and images. For step-by-step information about how to create a custom style, see "Creating a Custom Style" (p. 603).

For IBM Cognos Connection and IBM Cognos Administration, you are not required to make manual changes to the .css files for changes related to colors and certain graphics. These style changes are updated dynamically by the style management utility and are upgradeable. Style changes to fonts and layout properties do require manual changes to the .css files. For more information, see "Modifying the Appearance of IBM Cognos Connection" (p. 609).

Deploy the style.

To deploy a style, first you zip the folder that contains the new style and the associated .css and image files. Then, you extract the zip file to the `c10_location\webcontent\skins` directory on all gateway locations.

Publish the custom style.

Publishing a custom style makes it available to your users. When you publish a style, it appears in the list of styles in IBM Cognos Connection.

**Report Studio, IBM Cognos Viewer, Query Studio, and Prompt Pages**

This section describes the process for creating and deploying a custom style for Report Studio, IBM Cognos Viewer, Query Studio and prompt pages.

Create a custom style.

You create a custom style based on one of the predefined styles (p. 599) provided with IBM Cognos. For more information, see "Creating a Custom Style" (p. 603).

Generate the custom style.

The style management utility creates a folder for the new style on the local machine in the `c10_location\temp` folder. The folder contains all the files needed for the new style, including the cascading style sheets and images.

For IBM Cognos Report Studio, IBM Cognos Viewer, IBM Cognos Query Studio, and prompt pages, you must manually edit the associated cascading style sheets before you deploy the new style. For more information, see

- "Modifying the Report Studio Style Sheets" (p. 613)
- "Modifying the IBM Cognos Viewer Style Sheets" (p. 620)
Deploy the style.

To deploy a style, first you zip the folder that contains the new style and the associated .css and image files. Then, you extract the zip file to the `c10_location\webcontent\skins` directory on all gateway locations.

Publish the custom style.

Publishing a custom style makes it available to your users. When you publish a style, it appears in the list of styles in IBM Cognos Connection.

**Style Management Utility Commands**

The following commands are supported.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Delete</strong></td>
<td>Removes an existing style from Content Manager. The directory containing the style is not deleted.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>The delete command cannot be used to delete any of the predefined styles: Business, Classic, Contemporary, Corporate, Modern, and Presentation.</td>
</tr>
<tr>
<td>delete style_name</td>
<td></td>
</tr>
<tr>
<td><strong>Download</strong></td>
<td>Downloads an existing style from Content Manager for updating.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>download style_name</td>
</tr>
<tr>
<td><strong>Help</strong></td>
<td>Retrieves a list of valid commands. The help command followed by a command name retrieves detailed information about that command.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>help</td>
</tr>
<tr>
<td>help command_name</td>
<td></td>
</tr>
<tr>
<td><strong>Generate</strong></td>
<td>Creates a folder for a new style on all the IBM Cognos Business Intelligence gateways in the <code>c10_location\temp</code> directory. The folder contains all the files needed for the new style, including the cascading style sheets and images.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>generate style_name</td>
</tr>
<tr>
<td>generate style_name</td>
<td></td>
</tr>
</tbody>
</table>

The generate command prompts you to save before proceeding. If you respond No to the prompt, the generate command does not execute.
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>List</td>
<td>Retrieves the current list of styles available. The same list appears in the Styles section on the Configuration tab in IBM Cognos Administration.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>list</td>
</tr>
<tr>
<td>Logoff</td>
<td>Exits the style management utility.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>logoff or exit</td>
</tr>
<tr>
<td>New</td>
<td>Creates a new style based on an existing style. An XML file is created in the c10_location\temp directory. You can customize style.xml by editing the colors and images in a text or XML editor.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>new style_name_existing style_name_new</td>
</tr>
<tr>
<td>Publish</td>
<td>After deploying a new style to all gateways, the publish command makes the style available to end users.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>publish style_name</td>
</tr>
<tr>
<td>Save</td>
<td>Saves the custom style to Content Manager for later retrieval.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>save style_name</td>
</tr>
<tr>
<td>Validate</td>
<td>Validates the custom style file, style.xml.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>validate style_name</td>
</tr>
<tr>
<td>Zip</td>
<td>Packages the output of the generate command into a zip file named style.zip in the c10_location\temp folder. The zip file must be extracted to the c10\webcontent\skins directory on all the gateways.</td>
</tr>
<tr>
<td>Syntax:</td>
<td>zip style_name</td>
</tr>
</tbody>
</table>

**Creating a Custom Style**

Use the style management utility to create custom styles that you can use to affect the appearance of IBM® Cognos® components.

For IBM Cognos Connection and IBM Cognos Administration, after creating a custom style, you make changes to the style.xml file to use custom colors and images. You are not required to edit the associated cascading style sheets.
For IBM Cognos Report Studio, IBM Cognos Viewer, IBM Cognos Query Studio, and prompt pages, instead of editing the style.xml file after you create a custom style, you must manually edit the associated cascading style sheets.

For information about creating and deploying a custom style for IBM Cognos components using the style management utility, see one of the following:

- "IBM Cognos Connection and IBM Cognos Administration" (p. 600)
- "Report Studio, IBM Cognos Viewer, Query Studio, and Prompt Pages" (p. 601)

**Steps**

1. Launch the style management utility.
   - On Microsoft® Windows® operating system, run the batch file stylemgr.bat located in the `c10_location\bin\utilities\StyleManager` directory.
   - On UNIX® and Linux® operating systems, run the shell script `stylemgr.sh` located in the `c10_location/bin/utilities/StyleManager` directory.

2. At the prompt, type your user name, password, and namespace.
   - Use the namespace user id for the user name.

3. At the prompt, type
   ```
   new style_name_existing style_name_new
   ```
   **Example:** `new business standard`
   
   The new style, `standard`, is created in the `c10_location\temp` directory.

   If you intend to use the new style to customize the appearance of IBM Cognos Connection or IBM Cognos Administration, open `<style>.xml` in an XML or text editor, modify the colors and images, and save your changes. For more information, see "Modifying the XML Style File" (p. 605).

   If you intend to use the new style to customize the appearance of IBM Cognos Report Studio, IBM Cognos Viewer, IBM Cognos Query Studio, and prompt pages, proceed to step 5.

4. After the changes to the new style are completed, return to the style management utility, and validate the style file. At the prompt type
   ```
   validate style_name
   ```

5. To create the additional files associated with a style, at the prompt type
   ```
   generate style_name
   ```
   Respond yes when prompted to save the style.

   The `generate` command creates a folder for the new style in the `c10_location\temp` directory on all IBM Cognos Business Intelligence gateways. The folder contains all the files needed for the new style, including the `.css` and image files.

6. Zip the folder created by the `generate` command. At the prompt, type
   ```
   zip style_name
   ```
7. Extract the files from the .zip file created in step 7 to the `c10_location\webcontent\skins` folder on all gateway locations.
   After the files are extracted, you need to publish the style.

8. Launch the style management utility. At the prompt type
   
   `publish style_name`

   Publishing a style makes it available to your end users.
   After publishing a user-defined style, you can create other custom styles based on the user-defined style.

9. Exit the style management utility. At the prompt type
   
   `logoff`

**Modifying the XML Style File**

To add custom colors and images to a style, you edit the `style.xml` file. The changes you make in `style.xml` only affect the appearance of IBM® Cognos® Connection and Cognos Administration.

**Steps**

1. In an XML or text editor, open the `style.xml` file located in the `c10_location\temp` directory.

2. Customize the style by modifying the following sections. For example, to define a custom color palette, modify the values in the palette section.

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;palette&gt;&lt;/palette&gt;</code></td>
<td>Defines the color palette. The <code>palette</code> element in this file controls color settings at a global level. If you want to make changes at a more granular level, modify each specific class of objects without modifying this element.</td>
</tr>
<tr>
<td><code>&lt;colors&gt;&lt;/colors&gt;</code></td>
<td>Maps a style element, such as table text, to a color defined in the color palette, such as black.</td>
</tr>
<tr>
<td><code>&lt;images&gt;&lt;/images&gt;</code></td>
<td>Specifies the name and location of image files.</td>
</tr>
<tr>
<td><code>&lt;values&gt;&lt;/values&gt;</code></td>
<td>Defines other style values that are likely to change.</td>
</tr>
</tbody>
</table>

3. Save your changes.
   After saving your changes, use the style management utility to generate files for the style and publish it to your users.

**Example - Change the Background Color in Style.xml**

Suppose you want to change the background color in the `style.xml` file.
In the `c10_location\temp` directory, open the `style.xml` file in an XML or standard text editor. Find the section specified below, and change the value shown in bold font as required. Note that custom colors that you specify must be defined in the palette section of the `style.xml` file.

```xml
<color name="text" paletteColor="black" />
<color name="textDisabled" paletteColor="gray.dark" />
<color name="textError" paletteColor="black" />
<color name="background" paletteColor="white" />
<color name="anchor" paletteColor="hyperlink" />
<color name="selection" paletteColor="special1" />
<color name="tooltip" paletteColor="tooltip" />
```

### Create a Custom Style Manually

You can manually create a custom style by modifying an existing style, including the predefined styles, so that it matches your organization’s user interface.

You can also use the style management utility to create custom styles. For more information, see "Using the Style Management Utility" (p. 600).

When creating a custom style manually, you can do the following:

- Change colors, fonts, images, and some layout properties.
  
  Modify the associated style sheets in the `c10_location\webcontent\skins\style` directory.

- Rename the styles using IBM Cognos Administration so that the names are more appropriate for your environment (p. 552). Note that renamed styles cannot be used to create other new styles using the style management utility.

- Rename the style directories in the `c10_location\webcontent\skins` directory.

  Do not rename the corporate directory (p. 606).

  When making your changes, you must ensure that the structure of the custom style directory matches the structure of the predefined styles directories.

### Steps

1. In the `c10_location\webcontent\skins` directory, make a copy of an existing style directory and rename it.

   For example, make a copy of the corporate directory and rename it to standard.

2. In the new directory, modify the style sheets, graphics, or fonts as required.

3. In IBM Cognos Administration, add a new style object (p. 551) and associate it with the style directory created in step 1.

   The new style is now available in My Preferences (p. 325).

### Customized Environment and the Corporate Style

Corporate is the default style in the IBM® Cognos® environment. It is used when no other suitable style can be found, for example, at logon time when the user identity is unknown. A reference to
Making Other Style Changes to all Components

You can make the following global changes to the appearance of all IBM® Cognos® components:

- rebrand the IBM Cognos interface
- change IBM Cognos fonts
- change the global IBM Cognos style sheet
- migrate changes to future releases

Rebranding the IBM Cognos Interface

You can rebrand the product by globally replacing all instances of the company name and logo with new text and appropriate brand images. Resellers and partners may use a brand-neutral version of the IBM® Cognos® splash screen image.

Graphics for IBM Cognos software are created using a Web-safe color palette. They are saved as non-interlaced GIF files. All interface icons are created with a transparent background, shown as the color Magenta.

Changing Brand-related Graphic

The brand-related graphics are grouped together in a directory named `c10_location/webcontent/skins/style/branding` where `style` represents each style directory. Depending on the style you use (p. 599), you change the graphics in the associated style directories.

You can replace individual IBM Cognos images, which are generally GIF files, with alternatives of a more suitable size or design.

To help you locate the correct graphics, note that those used with the product components typically have file names beginning with the prefix `tools_`. This differentiates them from object or action-related graphics, which typically have file names beginning with the prefix `icon_`.

Tip: To change the text in a graphic, such as the acronym Business Intelligence, open the relevant file in a graphics editor, replace the text, and resave the graphic in .GIF format.

Adding Custom Messages

You can add your own custom messages, such as reseller copyright information, to the existing text in the About box. However, note that you are legally required to maintain the existing IBM Cognos copyright notice.
Checking Global Text Changes

When you are finished making global text changes, we recommend that you check them in all the interfaces exposed to your users. Pay particular attention to browser page captions and generic dialog boxes, which are easy to miss.

Changing IBM Cognos Fonts

IBM® Cognos® style sheets specify text fonts that are suitable for UTF-8-encoded text. Relative font sizes are specified for interface text elements. Point sizes are specified for report text elements and form controls (input fields).

All text strings except the banner, company, and portal strings are language-sensitive. However, no banner string is used in IBM Cognos Connection.

You can change the fonts used in IBM Cognos software by modifying the font-family list in the file c10_location/webcontent/skins/style/fonts.css where style represents the style directory (p. 599). Modify the fonts.css file associated with the style you want.

For example, you can change the default font used on all HTML interfaces, except Report Studio, to one more suited to rendering special Asian characters. Open the file fonts.css in a text editor, comment out the section that shows Tahoma as the first item in the font-family list, and then remove the comment from an entry that better meets your Unicode requirements.

Note: Font changes do not apply to Report Studio, which has a separate font-setting style sheet (p. 613).

Changing the Global IBM Cognos Style Sheet

To globally change the default styles used for IBM® Cognos® reports, you can modify styles in the GlobalReportStyles.css file located in the following directories:

- c10_location/bin
  The file in this location is used by Report Server for PDF and Microsoft® Excel spreadsheet software outputs.

- c10_location/webcontent/schemas
  The file in this location is used by IBM Cognos Viewer for HTML output.

- c10_location/reportstyles
  The file in this location is not currently used.

- c10_location/webcontent/reportstyles
  The file in this location is used by Report Studio.

The files in all directories must be modified to ensure that reports are rendered properly on both the server and the client systems. In a multiple server configuration, the style sheets on all systems must be modified. On the IBM Cognos server system, this is the file in the c10_location/bin directory. On the Web server systems, this is the file in the c10_location/webcontent/schemas directory. For example, if you have 2 IBM Cognos servers and 3 Web servers, you must update 5 copies of the GlobalReportStyles.css file.
You can also add styles to this style sheet; however, a simpler alternative is to add a style to a template in Report Studio.

Any changes you make to this style sheet are lost if you reinstall or upgrade IBM Cognos software. If this happens, you must reapply your changes. For more information, see "Migrating Changes to Future Releases" (p. 609).

Both Report Studio and Query Studio use the GlobalReportStyles.css file to assign classes to report objects. Query Studio does not expose these classes. However, you can use Report Studio or the Software Development Kit to modify the class property of any report object. For example, if you create a default report and then click the title, the class property appears as Report Title Text. You can change this property as required.

If you decide to modify the GlobalReportStyles.css file, you must be aware that the class names that appear in Report Studio are multilingual and defined in the Report Studio resource files. Instead of modifying this style sheet, it may be simpler to add a new style into your report.

For more information about creating or modifying class styles, see the IBM Cognos Report Studio User Guide.

When you work directly with an XML report specification, you can manually set the style of the object. For example, you can edit the report title, which may appear as follows:

```xml
<textItem class="reportTitleText">
  <text>
    My report title
  </text>
</textItem>
```

For more information about modifying styles in a report specification, see the Developer Guide.

**Migrating Changes to Future Releases**

IBM® Cognos® software does not automatically preserve changes made to style sheets and other customization-related files. We recommend that you keep a careful record of your changes. Otherwise, you may inadvertently lose them during migration to a newer version of the product.

**Modifying the Appearance of IBM Cognos Connection**

The style sheet default.css in the `c10_location/webcontent/skins/style/portal` directory defines the overall appearance of the IBM Cognos Connection interface for each style (p. 599). Portal-specific graphics, if present, are located in the images subdirectory.

You make changes to the appearance of IBM® Cognos® Connection by modifying the default.css file for the styles you want. Before you begin, we recommend that you back up the original default.css file.

Other changes to the appearance of IBM Cognos Connection are made in the `c10_location/templates/ps/portal/system.xml` file.

Tip: Remember to restart IBM Cognos software after completing your modifications, so that the changes take effect.

This documentation provides the following examples of customizations in IBM Cognos Connection:
Customizing the default Welcome page (p. 610)

Changing the background color in the IBM Cognos Connection main header (p. 611)

Changing the branding details in the IBM Cognos Connection main header (p. 610)

Changing the portal graphics (p. 611)

Changing the fonts for page titles and instructions (p. 613)

**Example - Customizing the Default Welcome Page**

You can customize the default Welcome page to apply your organization look and feel to it. You can change the colors, fonts, graphics, and some layout properties.

To customize the Welcome page for the style you want, in the `c10_location/webcontent/skins/style/portal/default.css` file, search for the classes that start with `welcome` and modify the values as required.

**Example - Change the Branding Details in the IBM Cognos Connection Main Header**

You can customize the IBM® Cognos® Connection main header by changing the branding details on the left-hand side. You can change the graphic, the title, and the background color. This change also affects IBM Cognos Viewer, but not IBM Cognos Administration.

The branding details are defined by the `OEM` parameter in the portal `system.xml` file. You must modify this file.

Copy the image files that you want to use to the `c10_location/webcontent/skins/skin_name/branding` directory.

**Steps**

1. Open the `system.xml` file in an XML editor.

   This file is located in the `c10_location/templates/ps/portal` directory.

2. Locate the `OEM` parameter and add the custom branding details as specified in the following code.

   The sequence in bold font must be repeated for each style in which you want this change to appear.

   ```xml
   <param name="OEM">
   <customHeader showContext="true" contextDelimiter="-">
   <style styleFolderName="corporate"> <!--Insert well-formedHTMLhere--></style>
   <style styleFolderName="classic">
   </style>
   ...
   </customHeader>
   </param>
   
   Setting the `showContext` attribute to true adds a report or a page name to the title. The `contextDelimiter` attribute, which can be represented by any character or sequence of characters, separates the title from the report or page name.
Here is a code example for this change:

```xml
<customHeader showContext="true" contextDelimiter="-">
  <style styleFolderName="corporate">
    <table style="background-color:#ffffff">
      <tr>
        <td><img src="../skins/corporate/branding/my_logo.gif"/></td>
        <td class="headerTitle" style="padding-right:2px;white-space:nowrap">Mycompany</td>
      </tr>
    </table>
  </style>
  <style styleFolderName="classic">
    <table style="background-color:#cccccc">
      <tr>
        <td><img src="../skins/corporate/branding/my_logo.gif"/></td>
        <td class="headerTitle" style="padding-right:2px;white-space:nowrap">Mycompany</td>
      </tr>
    </table>
  </style>
</customHeader>
```

3. Restart the IBM Cognos service.

**Example - Change the Background Color in the IBM Cognos Connection Main Header**

Suppose you want to change the background color used in the IBM® Cognos® Connection header.

Open the `c10_location/webcontent/skins/style/shared/banner.css` file in a text editor and, in the code specified below, change the value shown in bold font as required.

```css
mainHeader1 {
  border-right: #000000 1px solid;
  border-left: #000000 1px solid;
  border-bottom: #000000 1px solid;
  background-color: #669966;
  height: 25px;
  background-image: url(Images/title_bar_grapic.gif);
  background-repeat: repeat-x;
  background-position: top;
}
```

**Example - Change the Portal Graphics**

Suppose you want to remove or replace some of the Web portal graphics for a specific style (p. 599). When replacing the images, we recommend that you retain the same file name.

The following table shows the files located in the directory `c10_location/webcontent/skins/style/branding` that supply the currently used images. For information about how to replace ibm-logo-white.gif with a custom logo, see "Replace the IBM Logo with a Custom Logo" (p. 612).
Replace the IBM Logo with a Custom Logo

In IBM® Cognos® Connection, you can add custom logos on the right side and the left side of the portal banner. When you add a custom logo to the right side of the banner, the logo replaces the IBM logo that is visible by default. When you add a custom logo on the left side of the banner, the logo replaces the IBM logo that is hidden by default.

**Tip:** When adding a custom logo, you can adjust the height and width of the image. However, to ensure that the image displays correctly, size the graphic so that it is no greater than 35 pixels in height.

### Steps to add a custom logo on the right side of the portal banner

1. Name your logo image ibm-logo-white.gif.
2. Copy ibm-logo-white.gif to `c10_installation\webcontent\skins\<skin>\branding` and overwrite the existing ibm-logo-white.gif.
3. Refresh the Cognos Connection portal page.
   
   **Tip:** You may need to delete your browser cache before the custom logo can display.

### Steps to add a custom logo on the left side of the portal banner

1. Name your logo image file to your_logo_here.gif.
2. Copy the image file to `c10_installation\webcontent\skins\<skin>\branding` and overwrite the existing your_logo_here.gif file.
3. Modify the file banner.css located in the `c10_installation\webcontent\skins\<skin>\shared` folder location as follows:

---

<table>
<thead>
<tr>
<th>File</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>branding/portal_splash.gif</td>
<td>The splash screen image for IBM Cognos Connection</td>
</tr>
<tr>
<td>branding/cc_about.gif</td>
<td>The About box image for IBM Cognos Connection</td>
</tr>
<tr>
<td>branding/cognosadmin_about.gif</td>
<td>The About box image for IBM Cognos Administration</td>
</tr>
<tr>
<td>branding/progress.gif</td>
<td>The animated progress image</td>
</tr>
<tr>
<td>branding/ibm-logo-white.gif</td>
<td>The IBM logo</td>
</tr>
<tr>
<td>shared/images/banner-swoosh.png</td>
<td>The middle banner section image</td>
</tr>
<tr>
<td>shared/images/banner-background.png</td>
<td>The banner background image</td>
</tr>
</tbody>
</table>
Example - Change the Default Fonts for Page Titles and Instructions

Suppose you want to change the initial font settings for the page title and instructions. Depending on the product locale or other circumstances, you can specify a different font style and size.

In the \textit{c10\_location/templates/ps/portal/system.xml} file, find the section specified below, and change the values shown in bold font as required.

\begin{verbatim}
<param name="myPages">
  <param name="fontUnit">pt</param>
  <!-- pt or px or % -->
  <param name="defaultTitleFontFace">Tahoma</param>
  <param name="defaultTitleFontSize">12</param>
  <param name="defaultInstructionsFontFace">Tahoma</param>
  <param name="defaultInstructionsFontSize">11</param>
</param>
\end{verbatim}

Modifying the Report Studio Style Sheets

The two predefined Report Studio styles are CRN (the current default) and windows. The windows folder contains styles that apply uniquely to Report Studio.

The customizable Report Studio style sheets are located in the directory \textit{c10\_location/webcontent/skins/style/pat}, or \textit{c10\_location/webcontent/skins/style/hal}, where style represents a specific style directory (p. 599). The style sheets in \textit{c10\_location/webcontent/skins/windows/pat} and \textit{c10\_location/webcontent/skins/windows/hal} must not be changed. Component-specific graphics are located in the images subdirectories of these directories.

The following table describes the contents for the Report Studio style sheets.

<table>
<thead>
<tr>
<th>File</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{style/pat/skin.css}</td>
<td>Defines the default interface style for Report Studio, including a section that globally sets the font</td>
</tr>
<tr>
<td>\textit{style/hal/hal_style_skin.css}</td>
<td>Defines the default interface styles for menus and toolbars</td>
</tr>
<tr>
<td>\textit{windows/pat/skin.css}</td>
<td>Defines a style that applies the user’s chosen Microsoft® Windows® operating system display settings to the Report Studio interface</td>
</tr>
</tbody>
</table>
Example - Change the Fonts Used in Report Studio

Suppose you want to change the default font used in the HTML interface to one that properly renders special Asian characters. Open the `style/pat/skin.css` file in a text editor and comment out the section that shows Tahoma as the first item in the font-family list. Select or create an entry that better meets your Unicode requirements.

```css
@charset "UTF-8";
DIV.clsToolbar,
... 
DIV.clsTabPanels
{
    font-family: Tahoma, Arial, 'MS UI Gothic', Gulim, SimSun, PMingLiU, Raghu8, 'Arial Unicode MS', 'Andale WT', sans-serif;
    font-size: 8pt;
}
```

Example - Change the Colors Used in Report Studio Menus

Suppose you want to change the colors used in the Report Studio menus. Open `c10_location/webcontent/skins/style/hal/hal_style.css` style sheet in a text editor and change the code shown in bold font to your preferred colors.

```css
DIV.clsMenubar,
DIV.clsToolbar
{
    background-color: black;
    border-top: solid white 1px;
    border-bottom: solid #999999 1px;
    color: white;
}
TD.clsMenubarItem,
TD.clsToolbarButton
{
    background-color: white;
    color: black;
}
TD.clsMenubarItem,
TD.clsToolbarButton
{
    background-color: white;
    color: black;
}
```

Example - Change the Report Studio Graphics

Suppose you want to remove or replace some of the graphics used in Report Studio. When replacing images, we recommend that you retain the same directory structure and file name.

The following table shows which files supply the currently used images.

<table>
<thead>
<tr>
<th>File</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>webcontent/pat/images/ICRS.png</td>
<td>The About box graphic. This graphic changes based on the user profile. The graphic file, ICRS.png, is used for Report Studio professional profile.</td>
</tr>
<tr>
<td>webcontent/hal/images/progress.gif</td>
<td>The animated progress image</td>
</tr>
</tbody>
</table>
Modifying the Query Studio Style Sheets

The Query Studio style sheets are located in the directory `c10_location/webcontent/skins/style/qs`. Graphics specific to a particular component style, such as banner.gif, are located in the images subdirectory.

The following table describes the contents for the Query Studio style sheets.

<table>
<thead>
<tr>
<th>File</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>QSReport.css</td>
<td>Defines context menu styles for Query Studio. Uses points to reference font sizes.</td>
</tr>
<tr>
<td>QSSelection.css</td>
<td>Defines report styles for Query Studio, such as the appearances of selected columns, columns that are cut, or columns that have the pointer paused over them.</td>
</tr>
<tr>
<td>QSRVCommonUI.css</td>
<td>Defines styles for the Query Studio and IBM Cognos® Viewer interfaces, including the application title area, left pane menu, toolbar, metadata tree, preview pane, and navigation links.</td>
</tr>
<tr>
<td>QSRVDialog.css</td>
<td>Defines styles for the Query Studio and IBM Cognos Viewer dialog boxes. This file is used only to avoid having to include large .css files for every dialog box.</td>
</tr>
</tbody>
</table>

Example - Change the Colors Used in Query Studio Menus

Suppose you want to change the colors used in Query Studio menus. Open the QSRVCommonUI.css style sheet in a text editor and change the code shown in bold font to your preferred colors.

```css
.menuHeader
{
  font-size: 70%;
  color: #336699;
  border-collapse: collapse;
  font-weight: bold;
  ...
}
.menuItem,
.menuItemSpacer,
.menuItemSpacerTop
{
  background-color: #E3E9F3;
  border: solid #336699;
  border-width: 0px 1px;
  border-collapse: collapse;
}
.menuItem
{
  font-size: 70%;
  color: #336699;
  padding: 3px 5px;
  text-decoration: underline;
  cursor: pointer;
}```
Example - Change the Query Studio Graphics

Suppose you want to remove or replace some of the graphics used in Query Studio. The branding-related graphics are grouped together in the `c10_location/webcontent/skins/style/branding` directory. Graphics specific to the Query Studio component, such as `banner.gif`, are located in the images subdirectory of the directory `c10_location/webcontent/skins/style/qs`.

When replacing images, we recommend that you retain the same directory structure and file names, as shown in the following table.

<table>
<thead>
<tr>
<th>File</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>branding/about.gif</td>
<td>The About box graphic</td>
</tr>
<tr>
<td>branding/progress.gif</td>
<td>The animated progress image</td>
</tr>
</tbody>
</table>

Note: Query Studio has no splash screen or Welcome banner.

Customize the Query Studio Toolbar and Menus

You can customize the Query Studio toolbar and menus by adding or removing buttons and menu items.

Steps to Add a Menu Item

1. Stop the IBM® Cognos® service.

2. Open the file `c10_location/templates/ps/qs/ui.xml` in an XML editor.

3. Locate the content between the `<menuContent>...</menuContent>` tags.

4. For the menu to which you want to add a new item, add the menu item ID under the `<menu>` element.

   The following example shows how to do this for a menu item named Test when adding it to the `edit` menu.

   ```xml
   <menu alias="edit">
   <name>
     <xts:string id="MENU_EDIT_COLUMN"/>
   </name>
   ...
   ```
5. Locate the content between the `<contextMenu>`...`</contextMenu>` tags.
   Each `menuItem` element in this section represents different menu context, such as the `report` or chart context.

6. For the context in which you want the menu item to appear, add a new `<menuItem>` element.
   The following example shows how to add the Test menu item for the `report` context:
   
   ```xml
   <menu alias="report">
     <menuItem id="Test">
       <label>"Test..."</label>
       <link>goApplicationManager.getFeatureManager().launchFeature("Test")</link>
       <icon useWebRoot="true">qs/images/toolbar/test.gif</icon>
     </menuItem>
   </menu>
   ```
   
   The `link` element in this example specifies the JavaScript function defined in steps 11 and 12.
   The `test.gif` graphic file referenced by the `icon` element must exist in the `c10_location/webcontent/qs/images/toolbar` directory.

7. Save and close the ui.xml file.

8. Open the file `c10_location/templates/ps/qs/features.xml` in an XML editor.

9. Under the `<included>`...`</included>` tag of root element, add a new `feature` element corresponding to the menu item defined in the ui.xml file.
   For example, for the Test menu item, add the following:
   
   ```xml
   <feature name="Test">
     <menuItem type="menuItem">
       <label>"Test..."</label>
       <tooltip>"Test"</tooltip>
       <icon>
         <active useWebRoot="true">qs/images/toolbar/test.gif</active>
       </icon>
       <action>
         <parameters>
           <parameter type="string">Test</parameter>
         </parameters>
       </action>
     </menuItem>
   </feature>
   ```
   
   Note: If you are adding a corresponding button for the same functionality, add the menu item under the same `feature` element as the button, as shown in the following example:
   
   ```xml
   <feature name="Test">
     <menuItem type="menuItem">
       ...
     </menuItem>
     <toolbar buttonType="button">
       ...
     </toolbar>
   </feature>
   ```

10. Save and close the features.xml file.
11. In the c10_location\webcontent\qs\classes directory, create a new JavaScript file named CFeatureID.js.
   
   For example, for the Test menu item, the file name would be CTest.js.
   
   Note: If you are adding a corresponding toolbar button for the same functionality, this file is 
   used both by the menu item and the button.

12. In the JavaScript™ file, define a class named CFeatureID, for example CTest, and the supporting 
    functions, as shown in the following example:

    ```javascript
    function CTest() {
      //Initialize
    }
    CTest.prototype = new AFeatureObject();
    CTest.prototype.setup = function (aFeatureParams) {
      //setup feature parameter
    };
    CTest.prototype.processErrorState = function () {
      //Handle error and return error state
    };
    CTest.prototype.proceedWithoutDialog = function () {
      return this.execute();
    };
    CTest.prototype.execute = function (aParameters) {
      //Execute Feature
    };
    ```


14. Start the IBM Cognos service.

The new menu item appears under the menu for which it was added when the specified context is 
viewed.

To remove a menu item, delete the sections of code associated with the item from ui.xml and fea-
tures.xml.

**Steps to Add a Toolbar Button**

1. Stop the IBM Cognos service.

2. Open the file c10_location/templates/ps/qs/ui.xml in an XML or text editor.

3. Under the toolbarContent element, add an ID for the new button.

   The following example shows how to do this for a button named Test.

   ```xml
   <button id="Test" />
   ```

4. Save and close the ui.xml file.

5. Open the file c10_location/templates/ps/qs/features.xml in an XML editor.

6. Under the root element, add a new feature element corresponding to the toolbar button 
   defined in the ui.xml file.
For example, for the Test button, add the following:

```xml
<feature name="Test" >
  <toolbar buttonType="button">
    <tooltip>"Test"</tooltip>
    <icon>
      <active useWebRoot="true">qs/images/toolbar/test_button.gif</active>
    </icon>
    <action>
      <parameters>
        <parameter type="string">Test</parameter>
      </parameters>
    </action>
  </toolbar>
</feature>
```

The test.gif file referenced by the `icon` element must exist in the `c10_location/webcontent/qs/images/toolbar` directory.

**Note:** If you are adding a corresponding menu item for the same functionality, add the button under the same `feature` element as the menu item, as shown in the following example:

```xml
<feature name="Test" >
  <menuItem type="menuItem">
    ...
  </menuItem>
  <toolbar buttonType="button">
    ...
  </toolbar>
</feature>
```

7. Save and close the features.xml file.

8. In the `c10_location/webcontent/qs/classes` directory, create a new JavaScript file named `CFeatureID.js`. For example, for the Test button, the file name would be `CTest.js`.

   **Note:** If you are adding a corresponding menu item for the same functionality, this file is used both by the menu item and the button.

9. In the JavaScript file, define a class named `CFeatureID`, for example `CTest`, and the supporting functions, as shown in the following example:

   ```javascript
   function CTest()
   {
      //Initialize
   }
   CTest.prototype = new AFeatureObject();
   CTest.prototype.setup = function (aFeatureParams)
   {
      //setup feature parameter
   };
   CTest.prototype.processErrorState = function()
   {
      //Handle error and return error state
   };
   CTest.prototype.proceedWithoutDialog = function()
   {
      return this.execute();
   };
   CTest.prototype.execute = function (aParameters)
   {
   }
   ```
Chapter 34: Customizing the Appearance of IBM Cognos BI

```javascript
//Execute Feature
```

10. Save the JavaScript file.

11. Start the IBM Cognos service.

The new button appears in the Cognos Query toolbar.

To remove a toolbar button, delete the sections of code associated with the button from ui.xml and features.xml.

### Modifying the Appearance of IBM Cognos Viewer

You can make the following changes to the appearance of all IBM® Cognos® Viewer:

- modify the IBM Cognos Viewer style sheets
- change the language of the user interface

### Modifying the IBM Cognos Viewer Style Sheets

You can modify the IBM® Cognos® Viewer style sheets at the same time as you customize the Query Studio interface, or as a separate exercise.

The relevant style sheets are located in the directory `c10_location/webcontent/skins/style/viewer`. Graphics specific to a particular component style, such as `banner.gif`, are located in the images subdirectory.

The following table describes the IBM Cognos Viewer style sheets.

<table>
<thead>
<tr>
<th>File</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>RVReport.css</td>
<td>Defines report styles for IBM Cognos Viewer.</td>
</tr>
<tr>
<td>QSRVCommonUI.css</td>
<td>Defines styles for the Query Studio and IBM Cognos Viewer interfaces, including the application title area and navigation links.</td>
</tr>
</tbody>
</table>

### Example - Change the Language of the IBM Cognos Viewer User Interface

When you view content, such as reports, in IBM® Cognos® Viewer in a language other than English, French, German, or Japanese, you may want to see the IBM Cognos Viewer user interface in the same language. This requires changing the product language in IBM Cognos Viewer using IBM Cognos Configuration, and later selecting this language in IBM Cognos Connection. Ensure that IBM Cognos Viewer is translated into the language you want to use.

Suppose you want to change the IBM Cognos Viewer user interface to Greek for users of reports in Greek. At the same time, you want the user interface of other IBM Cognos components, such as...
IBM Cognos Connection and the studios, appear in French. To make these changes, perform the following steps.

**Steps to Add a New Product Language**

1. Start IBM Cognos Configuration.
2. From the Actions menu, click Edit Global Configuration.
3. Click the Product Locales tab.
4. Click the Add button.
5. Type the locale code for Greek, which is el
   Greek will appear in the list of available product languages in IBM Cognos Connection, in My Preferences.
   Tip: You can see the locale codes for other languages on the Content Locales tab.
6. Click OK.
7. Save the configuration.
8. Go to IBM Cognos Connection.
9. Click My Area Options, My Preferences.
10. On the General tab, in the Product Language drop-down list, click Greek.
11. Click OK.

The IBM Cognos Viewer user interface appears in Greek. However, other components, such as IBM Cognos Connection and the studios, continue using the default product language, which is English. To specify French as the default product language if Greek is used by the IBM Cognos Viewer user interface, add a new product locale mapping using IBM Cognos Configuration.

**Note:** Only languages for which a full translation of the IBM Cognos user interface exists can be specified as the default product languages.

**Steps to Add a New Product Locale Mapping**

1. Start IBM Cognos Configuration.
2. From the Actions menu, click Edit Global Configuration.
3. Click the Product Locale Mappings tab.
4. Click the Add button.
5. Map the product languages in the following way:
   - In the Key column, type the code for Greek, which is el-
   - In the Locale Mapping column, type the code for French, which is fr
6. Click OK.
7. Save the configuration.

When a user opens a report in IBM Cognos Viewer in Greek, the IBM Cognos Viewer user interface also appears in Greek. The user interface of other components, such as IBM Cognos Connection and the studios, appears in French.

### Modifying the Prompt Page Style Sheets

You can change the style definitions for the prompt pages and related controls used with all IBM Cognos components by modifying the shared promptCommon.css style sheet.

This style sheet is located in the directory `c10_location/webcontent/prompting/reportskin/prompting`. Prompting graphics specific to a style, if present, are located in the images subdirectory.

You can modify this prompt page style sheet in much the same way as you customize any of the component style sheets.

### Adding Custom Report Templates for Report Studio

Report Studio has predefined report templates that you select from when you create a new report. You can create your own custom report templates and make them available too.

To add a custom report template, you must

- create a report specification for the template (p. 622)
- add a custom report template to the templates.xml file (p. 624)
- provide an icon for the template (p. 624)
- add the custom template information to the Resources.xml file (p. 624)

Note: When you reinstall or upgrade IBM Cognos software, the changes associated with the custom report templates are not migrated. You may need to redo the above steps (p. 609).

### Create a Report Specification for a Custom Report Template

There is no template object in IBM Cognos software. Instead, you can use any report specification as a report template. You can create the report specification for your custom report template by using Report Studio, an XML editor, or a text editor.

### Steps for Report Studio

2. Create a new report.
   
   For more information, see the IBM Cognos Report Studio User Guide.
3. From the File menu, click Convert to Template.
4. From the Tools menu, click Copy Report to Clipboard to save the report specification XML.
5. Paste the report specification into an XML editor or text editor.
6. Delete the following information, which Report Studio adds to the XML file and which is not necessary for the template:

- The xmlns attribute of the report element.
- The template attribute of the report element.
- The value of the name attribute of the query element. Delete the value, but leave the double quotation marks.
- The value of the name attribute of the page element. Delete the value, but leave the double quotation marks.
- The value of the refQuery attribute of the list element.

7. Add a new template element as a parent of the report element.

8. Add a name attribute for the template element.

The name you enter appears as the name of the template in the Report Studio new report dialog box.

9. Save the report specification.

Here is an example of the initial part of a report specification created in Report Studio. The portions to delete appear in bold.

```xml
<template name="List - corporate">
...
<report xmlns="http://developer.cognos.com/schemas/report/4.0/
expressionLocale="en" template="true">
<queries>
  <query name="Query1">
    <source>
      <model/>
    </source>
    <selection/>
  </query>
</queries>
<layouts>
<layout>
<reportPages>
  <page class="pg" name="Page1">
    <pageBody class="pb">
      <contents>
        <list class="ls" refQuery="Query1">
          <style>
            <CSS value="border-collapse:collapse"/>
          </style>
        </list>
      </contents>
      ..................
    </pageBody>
  </page>
</reportPages>
</layout>
</layouts>
</report>
</template>
```

**Steps for an XML Editor or Text Editor**

1. Open the report specification in an XML editor or text editor.

2. Add the elements you want to appear in your template.

   For more information, see the *Developer Guide*. 

Administration and Security Guide 623
3. Add a new template element as a parent of the report element.  
The name you enter appears as the name of the template in the new report dialog box.

4. Add a name attribute to the template element.  
The name you enter appears as the name of the template in the new report dialog box.

5. Add a <modelPath/> element for the report element.  
Here is a partial example of the XML for the template created in "Steps for Report Studio" (p. 622).

<xmlFragment>  
<template name="List - corporate">  
<report>  
<modelPath/>  
...  
</report>  
</template>  
</xmlFragment>

6. Save the report specification.

Add a Custom Report Template to the templates.xml File

The templates.xml file contains the templates that you select from when you create a new report in Report Studio. You must add your custom report template to this file.

Steps
1. Open the templates.xml file.  
   This file is located in the c10_location/webcontent/res directory.

2. Copy the XML code for the custom report template into the file.  
   The template element must be a child element of the xmlFragment element.

3. Save and close the file.

Provide an Icon for the Custom Report Template

You can create an icon that you want to represent the custom report template. The icons in the new report dialog box are 32 x 32 pixels .gif images.

You can use any graphic editor to create the icon.

Steps
1. Create the icon you want.

2. Copy the image file into the c10_location/webcontent/images directory.

Add the Custom Template Information to the Resources.xml File

The Resources.xml file defines the content of the new report dialog box in Report Studio. You must modify this file by adding the information that refers to the custom report template.

For the listItems element, you add a new listItem element that represents the new template.  
The listItem element must have the following attributes.
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>idsLabel</td>
<td>Specifies an ID that refers to a Report Studio string resource file, such as reportstudio_en.xml or reportstudio_fr.xml, located in the c10_location/webcontent/pat/res directory, and a label for the template that appears in the new report dialog box. Use this attribute when you want to translate the label into other languages. If you do not want to translate the label, use the label attribute instead.</td>
</tr>
<tr>
<td>label</td>
<td>Specifies a label for the template that appears in the new report dialog box. Use this attribute instead of the idsLabel attribute for the custom template when you do not want to translate the label into other languages, which eliminates the need to use the string resource files, such as reportstudio_en.xml or reportstudio_fr.xml, in the c10_location/webcontent/pat/res directory.</td>
</tr>
<tr>
<td>icon</td>
<td>Specifies an image file located in the c10_location/webcontent/pat/images directory that is associated with the template. The image appears as an icon in the new report dialog box. Use a previously created image file for the custom report template.</td>
</tr>
<tr>
<td>templateName</td>
<td>Specifies the name of the custom report template.</td>
</tr>
</tbody>
</table>

**Steps**

1. Open the Resources.xml.
   
   This file is located in the c10_location/webcontent/pat/res.

2. Add a new ListItem element using one of the following attributes for the custom report template:
   
   - label, if you do not want to translate the label into other languages
   - idsLabel, if you want to translate the label into other languages

   Ensure that the templateName attribute is the same as specified when creating the report specification for the custom report template.

Here is an example of the edited Resources.xml file:

```xml
<listView id="New" view="icon" clipLabels="false">
   <listItems>
      <!-- Start custom templates-->
      <listItem label="List - Corporate" icon="icon_list_corp.gif" templateName="List - corporate"/>
      <listItem label="Crosstab - Corporate" icon="icon_crosstab_corp.gif"/>
   </listItems>
</listView>
```
3. Save and close the file.

You must now restart Report Studio and clear the cache of your Web browser for the custom report template to appear in the new report dialog box.

## Changing the Style of Report Objects in Dashboards

When you drag a report object onto a dashboard in IBM® Cognos® Business Insight, it appears in the silver and blue gradient style of your IBM Cognos BI server product. You can make the report object appear in the original authored style by changing a global property in the IBM Cognos Viewer configuration file.

Report objects that are affected by the global setting include queries, analyses, reports, and report parts that were authored using IBM Cognos Version 1.x style, Version 8.x style, and financial (balance sheet) style. These objects pick up the global setting even if you saved them before changing the global setting. Dashboard thumbnails are affected by the global setting only if you rerun the thumbnail.

Some report objects are not affected by the global setting and will always render in the authored style, such as PowerPlay reports and report object thumbnails.

### Steps

1. On the computers where Content Manager and Application Tier Components are installed, go to `<c10_location>\webapps\p2pd\WEB-INF\classes`.
2. Open the `viewerconfig.properties` in a text editor.
3. To make report objects appear in the original authored style, change the value for `useAuthoredReportStyles` to `true`.

---

626 IBM Cognos Administration
Save the file and then restart the services.

Show Headers and Footers in Expanded Report Parts in the IBM Cognos Business Insight Content Pane

By default, the headers and footers in expanded report parts in the IBM® Cognos® Business Insight content pane are hidden. You can choose to show the headers and footers if they contain important information in your environment. This is a global setting that applies to all IBM Cognos Business Insight content pane headers and footers.

For information about IBM Cognos Business Insight, see "IBM Cognos Business Insight" (p. 34).

Steps
1. Stop the IBM Cognos service.
2. Open the file \c10_location\dropins\com.ibm.cognos.bux.service.atom_1.0.0\com\ibm\cognos\bux\service\atom\config.properties in any text editor.
3. Change the following properties to "true":
   atom.filters.entry.showReportPartsHeaders = false
   atom.filters.entry.showReportPartsFooters = false
4. Save and close the config.properties file.
5. Using IBM Cognos Configuration, restart IBM Cognos software.
   For more information about restarting IBM Cognos Business Intelligence, see the Installation and Configuration Guide.

When IBM Cognos Business Insight users expand report parts in the content pane, the headers and footers are shown.

Enter Advanced Configuration Settings in Analysis Studio

Advanced configuration settings provide additional functionality. For example, you can set the maximum number of active areas in a chart.

Steps
1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Dispatchers and Services.
4. In the Configuration pane under Name, click the server link to configure.
5. Under Name locate ReportService, and in the Actions column, click the Properties button.
6. Click the Settings tab.
7. For the Environment category, next to Advanced Settings click the Edit link.

8. Select the Override the settings acquired from the parent entry check box.

9. In the Parameter column, type the parameter name. For example, ANS.PageSize.

10. In the Value column, type the associated value. For example, 200.

11. After you are finished specifying parameters, restart the server.

The following table lists the advanced configuration settings for Analysis Studio with their associated Parameter and Value entries.

<table>
<thead>
<tr>
<th>Advanced Setting</th>
<th>Parameter</th>
<th>Recommended Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit the size of pages displayed at one time on the crosstab rows</td>
<td>ANS.PageSize</td>
<td>200</td>
</tr>
<tr>
<td>Limit the size of pages displayed at one time on the crosstab columns</td>
<td>ANS.ColumnPageSize</td>
<td>50</td>
</tr>
<tr>
<td>Viewing user interface with missing or inaccessible member</td>
<td>ANS.showMissingMemberUI</td>
<td>1</td>
</tr>
<tr>
<td>Maximum number of active areas in a chart</td>
<td>ANS.MaxChartHotAreas</td>
<td>600</td>
</tr>
<tr>
<td>Enable selection based suppression</td>
<td>ANS.EnableSelectionBasedSuppression</td>
<td>1</td>
</tr>
<tr>
<td>Enable automatic position calculations feature</td>
<td>ANS.EnabledPositionedCalcs</td>
<td>1</td>
</tr>
<tr>
<td>Optimise queries based on previous gestures</td>
<td>ANS.AdaptiveQueryOptimisationEnabled</td>
<td>1</td>
</tr>
<tr>
<td>Allow default visible item count per set to be changed</td>
<td>ANS.DefaultVisibleItemCount</td>
<td>12</td>
</tr>
<tr>
<td>Default value for output purpose drill</td>
<td>ANS.DefaultOutputPurpose</td>
<td>drill</td>
</tr>
<tr>
<td>Disable the ability for the product to save a user changed column width with an analysis</td>
<td>ANS.EnableColumnWidthPersist</td>
<td>1</td>
</tr>
<tr>
<td>With column width enabled, this parameter controls the maximum number of resized columns stored in the most recently used list</td>
<td>ANS.PersistColumnWidthMRU</td>
<td>100</td>
</tr>
</tbody>
</table>
Note: Adjusting advanced configuration settings from recommended values can improve or degrade server performance.
You can customize how IBM® Cognos® software works to suit your particular needs.

Presentation services in IBM Cognos software maintain XML-based system configuration files named system.xml that are used to customize the product user interface and functionality. Before you start customizing IBM Cognos version 10.1, you may want to migrate the customization changes made in the system.xml files in previous IBM Cognos versions (p. 632).

You can implement the following customizations:

- Customize IBM Cognos Connection (p. 632)
- Customize the IBM Cognos Connection Login Page (p. 652)
- Customizing Server-side Printing for UNIX® and Linux® Platforms (p. 658)
- Start Query Studio in Preview Mode (p. 660)
- Customize Query Studio Data Formats (p. 660)
- Change the Default Template for Query Studio (p. 665)
- Modify Properties for the CSV Output Format (p. 666)
- Auto-Size Select and Search Prompts (p. 670)
- Using in_range Filters with Character Data (p. 670)
- Modify Properties for the Batch Report Service and Report Service (p. 671)
- Customize Error-Handling on the SMTP Mail Server (p. 672)
- Disable Report Attachments in Email Messages (p. 676)
- Show attachments in IBM Lotus® Notes (p. 676)
- Disable support for trigger-based scheduling (p. 677)
- Set up trigger occurrences on a server (p. 677)
- Change the Default File Extension for Excel 2002 Spreadsheets (p. 679)
- Control Don’t Print Style Behavior in Reports Rendered in Excel 2007 Format (p. 680)

For more information about IBM Cognos customizations, see "Customizing the Appearance of IBM Cognos BI" (p. 599).
Upgrade the system.xml Files to IBM Cognos Version 10.1

The IBM® Cognos® presentation service supports automatic upgrade of the system.xml files. You can use this approach if many custom changes were made in a previous version of IBM Cognos and implementing these changes manually in IBM Cognos version 10.1 would be time-consuming.

The system.xml files are upgraded to an IBM Cognos compatible version. All existing system.xml parameters can be upgraded to IBM Cognos version 10.1.

If the automatic upgrade is not successful, the system.xml file is not upgraded successfully and a message is generated in the server log. If this occurs, you can perform the upgrade manually using one of the following files in the installation_location/templates/ps directory:

- for UNIX® operating system, system_upgrade.sh
- for Microsoft® Windows® operating system, system_upgrade.bat

Note: As a general approach, we recommend that you edit the system.xml files manually using a UTF-8-based XML or text editor.

Steps

1. Back up the IBM Cognos version 10.1 system.xml files and the customized system.xml files from the prior version of IBM Cognos.

2. Copy the customized system.xml files from the installation directory to the corresponding directory in the IBM Cognos version 10.1 installation directory. For example, copy the system.xml file from the c10_location/templates/ps directory to the c10_location/templates/ps directory.
   
   Note: You must copy all system.xml files that require upgrade. The process cannot be repeated for each file separately.

3. Restart the IBM Cognos service.
   
   If the automatic upgrade fails, do a manual upgrade as follows:
   
   - on Windows, open a DOS prompt and from the c10_location/templates/ps directory run the system_upgrade.bat file.
   - on UNIX, from the c10_location/templates/ps directory, run the ./system_upgrade.sh file.

Customizing IBM Cognos Connection

You can do the following to customize IBM® Cognos® Connection:

- Add or hide user interface elements based on groups and roles (p. 633)
- Hide and disable the new URL button (p. 639)
- Limit the number of entries that users can cut, copy, and paste (p. 639)
- Customize object actions (p. 640)
- Restrict content browsing (p. 645)
Add or Hide User Interface Elements Based on Groups and Roles

You can customize the IBM® Cognos® Connection user interface based on the group and role membership. Depending on the group or role to which users belong, certain user interface elements will or will not be available to them. For example, you can hide the preferences and studio links from some users and add links to external applications for other users.

To implement this functionality, perform the following tasks:

- Hide user interface elements (p. 633)
- Add user interface elements (p. 636)
- Reference the required groups or roles in the system.xml file (p. 637)

Some user interface elements are shared by IBM Cognos Connection and IBM Cognos Viewer, for example the top header (m1). If you hide these shared interface elements in IBM Cognos Connection, they are also hidden in IBM Cognos Viewer.

For a list of elements you can hide and add, see "User Interface Elements Reference List" (p. 875).

Note: It is important to note that there is a difference between hiding a UI element and disabling it. Hiding means that the element will no longer be visible, but that the functionality is still available. Disabling a UI element means that the element is not visible and that the underlying functionality is no longer available.

Hide User Interface Elements

You can use URL commands to hide user interface elements for a session, or you can edit the applicable system.xml file to hide user interface elements permanently.

When you hide user interface elements in page headers, these elements are not hidden elsewhere in IBM Cognos Business Intelligence. For example, Report Studio can be run from the Welcome page or from the Launch menu in the h1 header. Hiding the IBM Cognos Business Intelligence header using the URL command does not hide the Report Studio link in the Welcome page.

Using URL Commands

Type URL commands in your browser if you want to hide user interface elements for the current IBM Cognos request or session only. You can use URL commands to hide UI elements for both IBM Cognos Connection and IBM Cognos Viewer.

IBM Cognos Connection commands can only be appended to IBM Cognos Connection URLs, and IBM Cognos Viewer commands can only be appended to IBM Cognos Viewer URLs. For example, adding &ui=t3m4 at the end of an IBM Cognos Viewer URL does not affect IBM Cognos Connection.
IBM Cognos Viewer commands do not affect the IBM Cognos Connection user interface. For example, adding the IBM Cognos Viewer command `&tb=0` at the end of an IBM Cognos Connection URL will show no effect.

However, IBM Cognos Connection commands may affect IBM Cognos Viewer indirectly. For example, hiding the top header in IBM Cognos Connection will also hide the header in IBM Cognos Viewer.

The following example shows the headers in the IBM Cognos Connection main page.

![IBM Cognos Connection Main Page](image)

You can use URL commands to hide the following IBM Cognos Connection headers or sections of a header:

- the IBM Cognos Connection top header (`h1`) that includes the title (`t1`), the **Launch** menu (`m1`), and all right-hand side header options.
- the tab bar (`h3`) that includes tabs such as Public Folders, My Folders, and custom pages (`t3`).
- the IBM Cognos Connection header (`h4`) that includes the navigation path (`t4`), and the toolbar menu (`m4`).

### Using the System.xml File

To hide all instances of a user interface element in IBM Cognos Connection, you must modify the system.xml file. To hide user interface elements in **Public Folders** or **My Folders**, modify the system.xml file in the `c10_location/templates/ps/portal` directory. To hide user interface elements in portal pages and dashboards with multiple tabs, modify the system.xml file in the `c10_location/templates/ps` directory.

Modifying the system.xml file is more flexible than using URL commands for these reasons:

- You can hide more user interface elements.
- You can restrict the appearance of user interface elements based on user type or membership in groups and roles.

### Steps Using URL Commands in IBM Cognos Connection

1. Start IBM Cognos software.

2. In IBM Cognos Connection, click in the Web address box and type the following at the end of the URL:

   ```url
   &ui=user_interface_elements_to_hide
   ```

   where `user_interface_elements_to_hide` is one or more of `t1`, `t4`, `m1`, `m4`, `h1`, `h3`, or `h4`.
   
   For example, type:
   ```url
   &ui=h1m4
   ```
The hidden UI remains hidden for the rest of the user session.

3. To restore the hidden elements, type &ui= at the end of the URL.

**Steps Using URL Commands in IBM Cognos Viewer When Viewing Reports**

1. Start IBM Cognos software.

2. In IBM Cognos Viewer, click in the Web address box and type one of the following at the end of the URL:

   - To turn off the IBM Cognos Viewer toolbar, type:
     `cv.toolbar=false`
   - To turn off the IBM Cognos Viewer header, type:
     `cv.header=false`

   The hidden UI remains hidden for the rest of the user request.

**Steps Using the System.xml File**

1. Stop the IBM Cognos service.

2. Open the system.xml file in one of the following locations:

   - `c10_location/templates/ps/portal`
     Use the system.xml file in this directory to hide user interface elements in Public Folders or My Folders.
   - `c10_location/templates/ps`
     Use the system.xml file in this directory to hide user interface elements in pages and dashboards with multiple tabs.

3. Use the following syntax in the `<system>` element to hide a user interface element:

   ```xml
   <param name="ui_hide">
   <!--list of user interface elements-->
   </param>
   ```

   For example, the following XML code hides the entire IBM Cognos Connection header and the New Job button in the toolbar:

   ```xml
   <param name="ui_hide">
   <CC_HEADER/>
   <CC_TOOLBAR_BUTTONS_newjobDefinition/>
   </param>
   ```

   For information about all the user interface elements that you can hide, see "Elements You Can Hide" (p. 875). Ensure that you match the case of each user interface element you want to hide.

4. Specify one or more groups or roles you want to view the hidden element by adding their IDs as values of the `show` attribute.
Use the group or role IDs as documented in the topic "Reference the Required Groups or Roles in the system.xml File " (p. 637).

Separate IDs using spaces.

Here is an example:

```xml
<param name="ui_hide">
  <CRN_HEADER show="Administrators g1 g2 RSUsers"/>
</param>
```

5. Repeat steps 3 to 4 for each element that you want to hide.

6. Save the file.

7. Start the IBM Cognos service.

Tip: There can be only one `<param name="ui_hide">` element in `system.xml`. Therefore, all items you want to hide must be placed inside this element.

### Add User Interface Elements

You can add user interface elements to IBM Cognos® Connection to connect to external applications or to modify the functionality of IBM Cognos Connection. You can restrict the appearance of these new user interface elements based on different types of users.

The `xml:lang` attribute of the `label` and `tooltip` elements corresponds to the product locale in use at the time of the portal page generation. If a new product locale is added to IBM Cognos software, you must add a translation for the label and tooltip fields. When no label or tooltip is found that matches the product locale, nothing is displayed.

The graphic referenced by the `icon` element must exist in the `c10_location/webcontent/ps/portal/images` directory.

To add a user interface element in IBM Cognos Connection, you must modify the `system.xml` file.

### Steps

1. Stop the IBM Cognos service.

2. Open the `c10_location/templates/ps/portal/system.xml` file in an XML or text editor.

3. Use the following syntax in the `<system>` element to add a user interface element:

```xml
<param name="ui_add">
<!--list of user interface elements-->
</param>
```

For example, the following XML code adds an option to start a Google search in a new browser window.

```xml
<param name="ui_add">
  <CRN_HEADER_OPTIONS>
    <item>
      <url>http://www.google.com</url>
      <target>_blank</target>
      <label xml:lang="en">Google</label>
      <tooltip xml:lang="en">Google</tooltip>
      <label xml:lang="fr">Google</label>
      <tooltip xml:lang="fr">Google</tooltip>
    </item>
  </CRN_HEADER_OPTIONS>
</param>
```
For information about all the user interface elements that you can add, see "Elements You Can Add" (p. 882). Ensure that you match the case of each user interface element you want to add.

4. Specify one or more groups or roles you want to view the new interface element by adding their IDs as values of the show attribute.

Use the IDs as documented in the topic "Reference the Required Groups or Roles in the system.xml File " (p. 637). Separate IDs using spaces.

Here is an example:

```xml
<param name="ui_add">
  <CC_VIEW_TOOLS>
    <item show="Administrators RSUsers g1 g2">
      <url>http://my_server_url/myApplication</url>
      <target>_blank</target>
      <label xml:lang="en">My_label in English</label>
      <label xml:lang="fr">My_label in French</label>
      <label xml:lang="de">My_label in German</label>
      <label xml:lang="ja">My_label in Japanese</label>
    </item>
  </CC_VIEW_TOOLS>
</param>
```

5. Save the file.

6. Restart the IBM Cognos service.

Tip: There can be only one `<param name="ui_add">` element in system.xml. Therefore, all items you want to add must be placed inside this element.

Reference the Required Groups or Roles in the system.xml File

Before you start implementing the customization changes in the IBM® Cognos® Connection user interface, you must identify the groups or roles on which your customizations will be based.

Add a reference about the groups or roles you want to use to the portal system.xml file. Modify this file by adding the `ui_groups` parameter and listing all required groups and roles within this parameter. Each group or role is represented by the `group` element that must contain a unique `id` attribute. The value of the `id` attribute is specified in the group or role search path in IBM Cognos Connection.

Include only the groups and roles you want to use for the purpose of hiding or adding user interface elements. The groups and roles must already exist in IBM Cognos software and can be associated with any namespace configured for your IBM Cognos environment. You can use the predefined groups and roles (p. 297), or your custom groups and roles (p. 270).

The predefined groups and roles that can be used include:
### Steps

1. Stop the IBM Cognos service.

2. Open the `c10_location/templates/ps/portal/system.xml` file in an XML or text editor.

3. Add a parameter named `ui_groups` and then do the following:
   - Add the `group` element for each group or role you want.
   - Specify a unique `id` attribute for each group or role.
     
     The IDs are case sensitive.
     
     For the custom groups or roles, the IDs cannot contain more than two characters, and cannot contain spaces. For example, the following IDs can be used: `a1`, `b2`, `Ab`, `AB`. The following IDs cannot be used: `abc`, `A 1`, `a bc`.
     
     For the IBM Cognos predefined groups, use the associated IDs as documented the table above.
     
     - Specify a value for the `id` attribute for each group element.

     **Tip:** To find the ID in IBM Cognos Connection, open the group or role properties page and, on the General tab, click the View the search path, ID and URL link.

   The following example shows the syntax of the `ui_groups` parameter.

   ```xml
   <param name="ui_groups">
   <group id="g1">xOm5ldyBncm91cHM6dWlHMV91bg_</group>
   <group id="g2">xOm5ldyBncm91cHM6dWlfUjI_</group>
   <group id="55">xOf5ldyBnc4htcHM6dAlfUjI_</group>
   </param>
   ```

4. Save the system.xml file.

5. Restart the IBM Cognos service.

---

<table>
<thead>
<tr>
<th>User</th>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anonymous</td>
<td>Anonymous</td>
<td>Users who can access IBM Cognos software without being prompted for authentication</td>
</tr>
<tr>
<td>Administrators</td>
<td>Administrators</td>
<td>Users who have the administration capability</td>
</tr>
<tr>
<td>Consumers</td>
<td>Consumers</td>
<td>All authenticated users, which includes Administrators, Query Studio Users, and Report Studio Users</td>
</tr>
<tr>
<td>Query Studio Users</td>
<td>QSUsers</td>
<td>Users who have the Query Studio capability</td>
</tr>
<tr>
<td>Report Studio Users</td>
<td>RSUsers</td>
<td>Users who have the Report Studio capability</td>
</tr>
</tbody>
</table>
Hide and Disable the New URL Button

Hiding UI elements such as toolbar buttons allows you to declutter the UI, but hiding alone will not disable the functionality behind the UI element. For security reasons, if you want to hide the new URL button, it is best to disable it. Doing so hides the button, but more importantly, eliminates the possibility of someone adding an undesirable URL.

Steps
1. Stop the IBM® Cognos® service.
2. Open the c10_location/templates/ps/portal/system.xml file in an XML or text editor.
3. Add the following parameter:
   <param name="disableURLObjectCreation">true</param>
4. Save the system.xml file.
5. Restart the IBM Cognos service.

The new URL toolbar button is removed, the URL field on the object creation wizard is disabled, and all URL object creation requests on the server handler will be ignored.

Limit the Number of Entries That Users Can Cut, Copy, and Paste

You can limit the number of entries that users can cut, copy, and paste to improve the performance of IBM® Cognos® software. This allows you to control the storage space taken up by temporary entries and reduce the time required to execute cut, copy, and paste requests.

For example, you can set the limit to 50 entries. If users cut, copy, or paste more than 50 entries, they receive a maximum entries message.

For more information about other tasks you can perform to improve the performance of IBM Cognos software, see "Tune Server Performance" (p. 159).

To change the limit, you must have access to the computer where the report server is installed.

Steps
1. On each computer where IBM Cognos software is installed, open the c10_location/templates/ps/portal/system.xml file in an editor.
   Ensure that your editor supports saving files in UTF-8 format.
2. Find and edit the maxEditEntries parameter as follows:
   <param name="maxEditEntries">50</param>
3. Save the system.xml file.
4. Stop and then restart the IBM Cognos service.
   For more information about stopping IBM Cognos software, see the Installation and Configuration Guide.
Customizing Object Actions

You can customize actions available for objects, such as packages, folders, URLs, jobs, queries reports, or report views, in IBM® Cognos® Connection. For example, if your IBM Cognos environment does not support creating report views or copying reports, you can remove the actions associated with these options from the user interface.

The actions include the buttons in the Actions column in the IBM Cognos Connection main view, and the links and icons in the Perform an action page that is accessed by clicking the More link in the Actions column.

The customizable actions for each object class are specified under the base-object-actions element in the c10_location/templates/ps/portal/system.xml file. To customize the actions, you must modify this file.

You can perform the following customizations of actions:

- Remove an action from the main view in IBM Cognos Connection (p. 640)
- Remove an action from the actions page (p. 641)
- Add a custom action (p. 642)
- Expose a shortcut action (p. 644)

Remove an Action From the Main View in IBM Cognos Connection

You can remove object actions from the Actions column in the IBM® Cognos® Connection main view by deleting or commenting out the action from the base-object-actions section in the c10_location/templates/ps/portal/system.xml file.

This functionality applies only to actions that are available from the Actions column.

If you want to remove an action from the Perform an action page, but keep it in the main view in IBM Cognos Connection, perform the steps in the "Remove an Action From the Actions Page" (p. 641) section instead of the steps below.

Steps

1. Stop the IBM Cognos service.
2. Open the c10_location/templates/ps/portal/system.xml file in an XML or text editor.
3. Locate the following XML code that describes the actions for objects in IBM Cognos Connection:

   ```xml
   <param name="base-object-actions">
      <actions>
         ...
      </actions>
   </param>
   ```

4. Find the object class that you want to customize, and delete or comment out the required action.

   In the following example, the actions to run reports using the associated studio and to view report output versions are commented out.

   ```xml
   <object class="report">
      <action name="run_options"/>
      <!-- action name="edit"/-->
   </object>
   ```
As a result, these actions are no longer available for reports in the Actions column in the IBM Cognos Connection main view, but they are still available in the Perform an action page.

5. Save the file.

6. Start the IBM Cognos service.

Remove an Action From the Actions Page

Actions available from the Perform an action page can be removed from the user interface by adding the exclude attribute to the appropriate object class in the base-object-actions section of the c10_location/templates/ps/portal/system.xml file.

If the action that you want to remove from this page is also available from the Actions column in the main IBM® Cognos® Connection view, and you want to remove the action from both places, perform the steps in the "Remove an Action From the Main View in IBM Cognos Connection" (p. 640) section in addition to the steps below.

Steps

1. Stop the IBM Cognos service.

2. Open the c10_location/templates/ps/portal/system.xml file in an XML or text editor.

3. Locate the following XML code that describes the actions for objects in IBM Cognos Connection:

    <param name="base-object-actions">
    <actions>
        ...
    </actions>
    </param>

4. In this section, find the object class for which you want to remove an action.

   For example, to modify report actions, find <object class="report">.

5. To remove an action listed under the object class, add the exclude attribute to the object node, as in the following example:

    <object class="report" exclude="customview"> >
    <action name="run_options"/>
    <action name="edit"/>
    <action name="schedule"/>
    <action name="run_once"/>
    <action name="previous_versions"/>
    <action name="run_history"/>
    <action name="customview"/>
    <action name="shortcut"/>
    <action name="add_alert"/>
<action name="remove_all_alerts"/>
</object>

This example excludes the **Create the report view of this report** action from the **Perform an action** page.

You can remove a few actions for the same object class, as shown in the following example:

<object class="report" exclude="run_history previous_versions schedule shortcut">

This example removes the **View report output versions**, **New schedule**, and **Create a shortcut to this entry** actions from the **Perform an action** page.

**Note:** The removed actions may still be available in the **Actions** column in the main IBM Cognos Connection view.

6. Save the system.xml file.

7. Start the IBM Cognos service.

### Add a Custom Action

To add a custom action for an object such as a package, folder, URL, job definition, query, report, or report view in the IBM® Cognos® Connection user interface, you must modify the system.xml file. Add a custom action when you want to run a Software Development Kit application for a particular class of object, such as a report. You can pass the following properties of an object to an application:

- defaultName
- defaultOutputFormat
- searchPath
- uri
- permissions
- usage
- disabled

In the IBM Cognos Connection main view, custom action icons appear to the left of the **More** link. In the **Perform an action** page, custom actions appear under the IBM Cognos-specified actions.

### Steps

1. Stop the IBM Cognos service.

2. Open the `c10_location/templates/ps/portal/system.xml` file in an XML or text editor.

3. Locate the following XML code that describes the actions for the objects in IBM Cognos Connection:

   ```xml
   <param name="base-object-actions">
     <actions>
     ...
   </param>
   ```
4. Use the following syntax to add a custom action as a child of the `<object>` element for the class of object you want to associate the custom action with. The `<object>` elements are children of the `<actions>` element. Note that an English tooltip and label are required.

```xml
<action name="name" type="custom">
  <icon>
    icon to show for this element
  </icon>
  <url>
    http-encoded URL to execute
  </url>
  <label xml:lang="en">
    link text
  </label>
  <tooltip xml:lang="en">
    tooltip text
  </tooltip>
  <objProperties encode="encoding">
    <property>
      property to be passed to application
    </property>
  </objProperties>
</action>
```

For example, the following XML code defines a custom action for a report object that launches an ASP application named myapp. The `defaultName` and `searchPath` properties of the report are passed to the application.

```xml
<param name="base-object-actions">
  ...
  <object class="report">
    ...
    <action name="showPath" type="custom">
      <icon>
        action_myaction.gif
      </icon>
      <url>
        /myapp.asp</url>
      <label xml:lang="en">
        View the search path
      </label>
      <tooltip xml:lang="en">
        View the search path
      </tooltip>
      <label xml:lang="fr">
        Afficher le chemin d'accès
      </label>
      <tooltip xml:lang="fr">
        Afficher le chemin d'accès
      </tooltip>
      <objProperties encode="shift_jis">
        <property>
          defaultName
        </property>
        <property>
```
Expose a Shortcut Action

A shortcut action gives users the ability to create shortcuts to a class of objects. By default, shortcut actions appear on the Perform an action page.

To add a shortcut action for a class of objects, such as reports, to the IBM® Cognos® Connection main page, you must modify the system.xml file.

Steps

1. Stop the IBM Cognos service.
2. Open the $c10_location/templates/ps/portal/system.xml file in an XML or text editor.
3. Locate the following XML code that describes the actions for the objects in IBM Cognos Connection:

```
<param name="base-object-actions">
  <actions>
    ...
  </actions>
</param>
```
4. Add the following line of XML code to the actions for the class of objects:

```
<action name="shortcut" visible="main"/>
```

For example, the following XML code includes a shortcut action in the actions for folders:

```
<param name="base-object-actions">
  <actions>
    ...
    <object class="folder">
      <action name="shortcut" visible="main"/>
    </object>
    ...
  </actions>
</param>
```
5. Save the file.
6. Start the IBM Cognos service.

The shortcut icon now appears in the Actions column, to the left of the More link, in the main IBM Cognos Connection view.
Restrict Content Browsing

By default, IBM® Cognos® Connection and Query Studio users can browse Public Folders starting at the root content folder (/content). You may want to restrict the folders that users can browse.

You can set the root content folder to any path for a given session using the URL interface (p. 645), or for all sessions using the system.xml file (p. 645). The second option does not restrict content browsing for administrators.

The consequences of specifying a root folder other than the root content folder are as follows:

- Content navigation is restricted to the specified root folder and its subfolders.
- The location property in the properties dialog box shows the path beginning at the specified root folder.
- The choice of destination folders when a user creates new content is limited to the specified root folder and its subfolders.

Restricting content browsing has no impact on the administrative functions, such as schedule management. It does not affect the IBM Cognos studios, either, except for Query Studio.

Restricting content browsing is not a means of enforcing security. Folder access must be controlled using the IBM Cognos security.

Steps Using a URL Command

1. Start IBM Cognos software.

2. Click in the Web address box and delete any path parameters specified by &m_path.
   If you do not remove these path parameters, they override the root setting.

3. Type the following at the end of the URL:
   &m_root=url-encoded search path
   For example, if you want to restrict browsing to the Go Sales package, while hiding the tab bar, toolbar and standard IBM Cognos header options, type the following:
   &m_root=%2Fcontent%2Fpackage%5B%40name%3D'GO%20Sales’%5D&ui=m1h3m4

Steps Using the System.xml File

1. Stop the IBM Cognos service.

2. Open the c10_location/templates/ps/system.xml file in an XML or text editor.

3. Modify the <param name="consumer-root"> line in the following way:
   <param name="consumer-root">search path</param>
   For example, typing the following sets the root folder to a folder named Folder1 in the package named Pack1.
   <param name="consumer-root">
    /content/package[@name='Pack1']/folder[@name='Folder1']</param>

4. Save the file.
5. Start the IBM Cognos service.

**Implementing a Custom Welcome Page**

You can create a custom Welcome page and configure IBM® Cognos® Connection to use this page instead of the default page provided by IBM Cognos software.

The custom Welcome page can be any type of a browser page, such as .html, .asp, or .jsp. To provide Welcome pages that are locale- and style-sensitive, you must create a separate page for each language and style (p. 550).

When you create a custom Welcome page, you can reuse some elements from the default Welcome page to make your job easier (p. 646).

After the page is created, configure your Web server and your application server to expose the new Welcome page (p. 647), and configure IBM Cognos Connection to use it (p. 648).

**Reuse Elements From the Default Welcome Page**

There are elements in the IBM® Cognos® Welcome page that may be difficult to implement, especially the logon link and the links to different studios. To make your job easier, you can reuse these elements from the default Welcome page. You can create a page with any content that, through an iFrame, frame, and so on, references the links-only section of the Welcome page.

The links-only page will look like this.

![Welcome Page](image)

If you want to change the background color, modify the `welcomeToolPanel` parameter in the `default.css` file associated with the style you are using. For more information, see "Example - Customize the Default Welcome Page" (p. 610).

**Steps**

1. In a text editor, such as Notepad, type the code for the page using the following parameters in the page URL.
### Parameter Values Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>basewelcome</td>
<td>yes</td>
<td>This mandatory parameter renders the default Welcome page that only contains the links.</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>wtarget</td>
<td>top</td>
<td>This optional parameter specifies where the links appear in the custom Welcome page.</td>
</tr>
<tr>
<td></td>
<td>parent</td>
<td>Do not include this parameter if you want the links to appear in the same frame.</td>
</tr>
<tr>
<td></td>
<td>self (default)</td>
<td></td>
</tr>
</tbody>
</table>

The following URL renders the links-only, default Welcome page:

http://localhost/ibmcognos/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/welcome/welcome.xts&basewelcome=yes&wtarget=top

For example, if you want to create a custom Welcome page with only one iFrame that uses the links-only page, the source code for the page could be as follows:

```html
<html>
<head></head>
<body>
<iframe width="100%" height="100%"
src="http://localhost/ibmcognos/cgi-bin/cognos.cgi?b_action=cognosViewer&m=portal/welcome/welcome.xts&basewelcome=yes&wtarget=top"></iframe>
</body>
</html>
```

2. Save the file.

### Create the Required Directories

After the custom Welcome page is created, you must save it in a directory that can be accessed by IBM® Cognos® software. We recommend that you place your file in a directory that is separate from your IBM Cognos installation.

If you create your page as a set of HTML pages, you can set up a virtual directory for your custom Welcome page. For example, you can create the my_welcome virtual directory in c10_location\my_welcome, where my_welcome is the location of your custom Welcome page, and grant read permissions for the directory.

After the virtual directory is set up, you can save the custom Welcome page in it. If you create custom pages for different locales and styles, you must create directories for each locale and style. The directories must be named after the style and locale.

For example, if you want to provide a custom Welcome page for the English, French, German, and Japanese locales for all the predefined styles, you must create the following directory structure for each of the en, fr, de, and ja locales, where my_welcome is the virtual directory, and then copy the individual custom Welcome pages into the proper directories.

- my_welcome/locale/business
- my_welcome/locale/classic
Configure IBM Cognos Connection to Use a Custom Welcome Page

You configure IBM® Cognos® Connection to use a custom Welcome page by adding the `welcomeURLOverride` parameter to the system.xml file located in the `c10_location/templates/ps/portal` directory.

The `welcomeURLOverride` parameter overrides the default Welcome page URL. Depending on the location of the custom Welcome page, the URL can be specified as a relative or absolute path.

**Note:** The path names are case sensitive on UNIX® operating system.

**Locale and Style Considerations**

If you want to implement a custom Welcome page that is style and locale-sensitive, the page URL must use the exposed replacement parameters for the locale and style. The parameters are `%LOCALE%` and `%STYLE%`. When the URL is processed, `%LOCALE%` is replaced by the product locale, and `%STYLE%` is replaced by the user's currently selected style.

For example, if the product language is English and the style is Corporate, the `welcomeURLOverride` parameter is as follows:

```
<param name="welcomeURLOverride">/ibmcognos/my_welcome/%LOCALE%/%STYLE%/customwel.htm</param>
```

When the URL is processed, the `%LOCALE%` parameter is replaced with en, and the `%STYLE%` parameter is replaced with Corporate. The URL for this example is as follows:

```
/ibmcognos/my_welcome/en/Corporate/customwel.htm
```

If the product locale were set to French and the style to Classic, the URL would be as follows:

```
/ibmcognos/my_welcome/fr/Classic/customwel.htm
```

**Steps**

1. From the `c10_location/templates/ps/portal` directory, open the system.xml file.

2. Add the `welcomeURLOverride` parameter to the file, where `customwel.htm` is the custom Welcome page.

   If you use a relative path, the syntax is:
   
   ```
   <param name="welcomeURLOverride">/ibmcognos/customwel.htm</param>
   ```

   If you use an absolute path, the syntax is:
   
   ```
   <param name="welcomeURLOverride">http://.../customwel.htm</param>
   ```
If your Welcome page supports different locales and styles and you use a relative path, the syntax is:
```xml
<param name="welcomeURLOverride">/ibmcognos/my_welcome/%LOCALE%/%STYLE%/customwel.htm</param>
```

3. Save and close the `system.xml` file.

4. Refresh IBM Cognos Connection.

### Customize Report Output Formats in IBM Cognos Connection and IBM Cognos Viewer

You can specify which formats are available for users to view their reports. For example, you may want to prevent users from exporting reports in Excel.

The report formats available to a user appear in the user preferences (p. 325).

The report formats are controlled by the `format` element of the `reportFormats` parameter in the `system.xml` file located in the `c10_location/templates/ps` directory.

The `format` element has the following attributes:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>Report output formats.</td>
<td>Specifies the supported report format.</td>
</tr>
<tr>
<td></td>
<td>For example, HTML or PDF</td>
<td>This attribute cannot be modified.</td>
</tr>
<tr>
<td>browserHide</td>
<td>ie</td>
<td>Excludes Web browsers in which the report format should be hidden from users.</td>
</tr>
<tr>
<td></td>
<td>safari</td>
<td>You can modify this attribute.</td>
</tr>
<tr>
<td></td>
<td>moz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>other</td>
<td></td>
</tr>
<tr>
<td>downloadable</td>
<td>true</td>
<td>Specifies the download support.</td>
</tr>
<tr>
<td></td>
<td>false</td>
<td>You can modify this attribute.</td>
</tr>
<tr>
<td>appMode</td>
<td>basic - basic run options and preferences</td>
<td>Specifies the IBM® Cognos® software functions where the report format must be supported.</td>
</tr>
<tr>
<td></td>
<td>adv - advanced run options and scheduling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>rv - report viewing options</td>
<td></td>
</tr>
<tr>
<td>extension</td>
<td>Extension value</td>
<td>Optional attribute that specifies the file extension of the output format. It is used to control download functionality.</td>
</tr>
<tr>
<td></td>
<td>For example, xls</td>
<td></td>
</tr>
<tr>
<td>Attribute</td>
<td>Value</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>mime</td>
<td>Mime value. For example, application/vnd.ms-excel</td>
<td>Optional attribute that specifies the MIME type. It is used to control download functionality.</td>
</tr>
<tr>
<td>cafaction</td>
<td>true, false</td>
<td>Specifies the IBM Cognos Application Firewall settings. This attribute cannot be modified.</td>
</tr>
</tbody>
</table>

**Note:** Because the `format` element settings can be used to control access to output formats, this setting can affect how reports that were saved previously are accessed. For example, if a report is saved in PDF format, users cannot view the saved report if the administrator chooses to make the PDF format unavailable.

The following example shows how to remove CSV format from the list of available format options, for example, when setting personal preferences or scheduling reports, while still allowing users access to saved CSV output in the portal.

```xml
<format id="CSV" browserHide="" downloadable="true" appMode="" extension="csv"/>
```

The following example shows how to hide the report output completely.

```xml
<!--[if format id="CSV" browserHide="" downloadable="true" appMode="" extension="csv"/> -->
```

**Steps**

1. Open the system.xml file in the `c10_location/templates/ps` directory.

2. In the following code, remove or comment out the `format` element associated with the report format you want to disable.

```xml
<param name="reportFormats">
  <!-- Comments -->
  <format id="HTML" browserHide="" downloadable="false" appMode="basic adv rv"/>
  <format id="XHTML" browserHide="" downloadable="false" appMode="adv"/>
  <format id="HTMLFragment" browserHide="" downloadable="false" appMode="adv"/>
  <format id="PDF" browserHide="" downloadable="true" appMode="basic adv rv" extension="pdf"/> -->
  <format id="spreadsheetML" browserHide="safari" downloadable="true" appMode="basic adv rv" extension="xlsx"/> -->
  <format id="XLWA" browserHide="safari" downloadable="true" appMode="basic adv rv" extension="xls" mime="application/vnd.ms-excel"/>
  <format id="singleXLS" browserHide="safari" downloadable="true" appMode="basic adv rv" extension="xls"/>
  <format id="XLS" browserHide="safari moz other" downloadable="false" appMode="basic adv rv" cafaction="true"/>
  <format id="CSV" browserHide="" downloadable="true" appMode="basic adv rv" extension="csv"/>
  <format id="XML" browserHide="" downloadable="true" appMode="basic adv rv" extension="xml"/>
</param>
```
The following example shows how to disable the PDF format:

```xml
<!-- <format id="PDF" browserHide="" downloadable="true" appMode="basic adv rv"/> -->
```

The following example shows how to disable support for the CSV format for advanced run options and scheduling by deleting the `adv` attribute:

```xml
<format id="CSV" browserHide="" downloadable="true" appMode="basic rv"/>
```

3. Save the system.xml file.

4. Restart the IBM Cognos service.

Note that the configuration settings you specify in the system.xml file apply only to the presentation services which includes the portal, portal administration, and IBM Cognos Viewer. The settings do not apply to the report server.

### Configure the Document Lookup Table

The document format lookup table is used to look up file extensions when downloading document objects. Most browsers require file extensions to determine which program to use to open the file. If the name of the file being downloaded does not end with the expected extension, the portal will append one based on the document lookup table, found in the system.xml file.

The following example shows the document format code:

```xml
<param name="documentFormats">
  <format extension="doc" id="application/vnd.coc-wd"/>
  <format extension="xls" id="application/vnd.coc-xl"/>
  <format extension="ppt" id="application/vnd.coc-pp"/>
  <format extension="xlsx" id="application/vnd.openxmlformats-officedocument.spreadsheet.sheet"/>
  <format extension="pptx" id="application/vnd.openxmlformats-officedocument.presentationml.presentation"/>
  <format extension="docx" id="application/vnd.openxmlformats-officedocument.wordprocessingml.document"/>
</param>
```

### Hide Inaccessible Tabs Referenced in the User Account Preferences

By default, IBM® Cognos® Connection shows all tabs referenced in the user account preferences regardless of the user’s access permissions for the associated pages. The tabs that a user cannot access are flagged, and a message is displayed when the tab is clicked.

You can change this functionality so that users can only see the tabs for which they have access permissions.

**Steps**

1. Open the system.xml file in the `c10_location\templates\ps\portal` directory.
2. Find the `hideInaccessibleTabs` parameter and change its value to `true`.
3. Save the system.xml file.
4. Restart the IBM Cognos service.
The tabs do not appear in the main IBM Cognos Connection view, but are still listed in the user’s My Preferences, Portal Tabs page.

**Customizing the IBM Cognos Connection Login Page**

You customize the IBM® Cognos® Connection login page by adding predefined macros, UI element names, JavaScript™, and CSS classes to a login template on the gateway machine. Customizations can include changes to the text, images, and the overall appearance of the login page. For example, you can provide bilingual messages, create a different look for the login page based on the gateway that is accessed, or redirect users to a specific Web site upon logoff. For more information, see the following topics:

- "Login Page" (p. 652)
- "Set Up and Configure a Login Page" (p. 653)
- "Customizing the Login Page" (p. 654)
- "Redirect User to a Web Site When They Log Off" (p. 658)
- "Samples" (p. 658)

**Login Page**

The default login page has three sections: header, prompt, and footer. Each section and any elements within a section, if they exist, can be customized.

You assemble and customize the login page using a template. The template specifies which sections appear in the login page and allows you to customize elements within a section, such as the input fields. You can also modify the style of the login page by modifying existing CSS classes.

For information about setting up the login template, see "Set Up and Configure a Login Page" (p. 653).
For information about customizing the login page, see "Customizing the Login Page" (p. 654).

**Set Up and Configure a Login Page**

To set up and configure a login page, you must

- create a login template file

  The template file is where you make login page customizations. You can create locale-sensitive template files. If locale-sensitive templates are required, you must create a template file for each locale.

  A template file can be created for each gateway installation.

- enable custom login

  At run time, when custom login is enabled, IBM® Cognos® Connection locates the template by searching the `<installation_location>/webcontent/ps/login` directory for the following:

  - the template file named by the `base-template-name` parameter specified in the system.xml file
  - the session product locale
  - the .xhtml extension

**Steps to create a login template file and a locale-sensitive template file**

1. Create a template file with an .xhtml extension and add it to the `<installation_location>/webcontent/ps/login` directory. For example, `myGateway1Template.xhtml`.

2. Optionally, create a locale-sensitive template by appending a locale identifier to the template filename. For example, `myGateway1Template_en.xhtml` contains the 'en' locale identifier. To support English and French, you must create the following template files:

   - `myGateway1Template_en.xhtml`
   - `myGateway1Template_fr.xhtml`

   At run time, the customizing JavaScript engine searches for the appropriate template using the active session locale. If the template cannot be found, the login page defaults to the basic login page.

**Step to enable custom login**

- Set the `custom-auth` parameter setting to true in the system.xml file located on the server where the Presentation Service is installed, for example, `<installation_location>/templates/ps` directory. Set the parameter as follows:

  ```xml
  <param name="custom-auth">
  <logon enabled="true">
    <base-template-name>myGateway1Template</base-template-name>
  </logon>
  </param>
  ```

  The parameter, `base-template-name`, names the customizing template used at run time, where the file extension is expected to be .xhtml.
Customizing the Login Page

You can customize the IBM® Cognos® Connection login page using predefined macros (p. 654), UI element names (p. 654), JavaScript (p. 657), and CSS classes (p. 656).

Before you begin using these methods to customize the login page, you must set up and enable a login page. For more information, see "Set Up and Configure a Login Page" (p. 653).

Content Macros

Use the content macros to build your login page. You can create a basic login page using only three content macros: CL_HEADER, CL_PROMPT, and CL_FOOTER. The macros are added to the login template as follows:

```html
<%CL_HEADER%>
<%CL_PROMPT%>
<%CL_FOOTER%>
```

Note that the content macros are not mandatory. If a macro is not specified in the template, the content associated with the macro is not added to the login page. For example, if a template specifies CL_HEADER and CL_PROMPT, but not CL_FOOTER, the footer is not included in the login page. Optionally, you can add your own footer.

If you create a custom login page, and the login template where customizations are defined cannot be found, the login page defaults to the basic login page.

UI Element Names

UI elements identify each section of the login page, including the input fields and captions in a section, if they exist. Each UI element is customizable.

You customize each UI element using the UI element name that references the element. For example, to customize the namespace label so that the standard text is replaced by bilingual text, you edit the namespace label element using the UI element name, %CL_PROMPT_namespace_label%, in the template as follows:

```html
<div id="%CL_PROMPT_namespace_label">Namespace / Espace-noms:</div>
```

The following is a list of the UI element names that are available:

<table>
<thead>
<tr>
<th>Element name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>%CL_HEADER%</td>
<td>Inserts the header section in the template</td>
</tr>
<tr>
<td></td>
<td>Usage: Content</td>
</tr>
<tr>
<td>%CL_PROMPT%</td>
<td>Inserts the prompt section in the template</td>
</tr>
<tr>
<td></td>
<td>Usage: Content</td>
</tr>
<tr>
<td>%CL_FOOTER%</td>
<td>Inserts the footer section in the template</td>
</tr>
<tr>
<td></td>
<td>Usage: Content</td>
</tr>
<tr>
<td><strong>Element name</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>%CL_PROMPT_namespace_label%</code></td>
<td>References the namespace label input field</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt label</td>
</tr>
<tr>
<td><code>%CL_PROMPT_username_label%</code></td>
<td>References the username label input field</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt label</td>
</tr>
<tr>
<td><code>%CL_PROMPT_password_label%</code></td>
<td>References the password label input field</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt label</td>
</tr>
<tr>
<td><code>%CL_PROMPT_oldPassword_label%</code></td>
<td>References the old password label input field</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt label</td>
</tr>
<tr>
<td><code>%CL_PROMPT_newPassword_label%</code></td>
<td>References the new password label input field</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt label</td>
</tr>
<tr>
<td><code>%CL_PROMPT_newPasswordConfirm_label%</code></td>
<td>References the new password confirmation input field</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt label</td>
</tr>
<tr>
<td><code>%CL_PROMPT_selectNamespace_caption%</code></td>
<td>References the &quot;select a namespace&quot; information message</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt context message</td>
</tr>
<tr>
<td><code>%CL_PROMPT_enterCredentials_caption%</code></td>
<td>References the &quot;enter user’s credentials&quot; information message</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt context message</td>
</tr>
<tr>
<td><code>%CL_PROMPT_badCredentialsEntered_caption%</code></td>
<td>References the &quot;bad credential&quot; error message</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt context message</td>
</tr>
<tr>
<td><code>%CL_PROMPT_passwordExpire_caption%</code></td>
<td>References the &quot;password has expired&quot; information message</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt context message</td>
</tr>
<tr>
<td><code>%CL_PROMPT_general_caption%</code></td>
<td>References the general information or error message</td>
</tr>
<tr>
<td></td>
<td>Usage: Prompt context message</td>
</tr>
</tbody>
</table>
Replacement Syntax

You can override a UI element and specify replacement content using html 'div' syntax. At run time, the content defined by the 'div' replaces the targeted section.

Here is an example for simple text replacement using 'div' syntax:

```html
<div id="%CL_PROMPT_namespace_label%">Namespace / Espace-noms:</div>
```

Here is an example of an html code snippet that results in an image appearing next to a customized message:

```html
<div id="%CL_PROMPT_newPasswordConfirm_label%">
    <span>Confirm new password / Confirmez le nouveau mot de passe:</span>
    <img style="vertical-align:middle" src=_u46 ?./ps/portal/images/state_warning_lrg.gif"/>
</div>
```

CSS Styles

Each customizable UI element in the login page has an associated CSS style that you can use to change the appearance of the element. The styles are located in the styles.css file located in the `<installation_location>/webcontent/ps/login` folder.

The following is a list of the available CSS styles:

<table>
<thead>
<tr>
<th>CSS class name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>.loginHeader</td>
<td>Styles the header container</td>
</tr>
<tr>
<td>.loginHeaderTitle</td>
<td>Styles the title in the header</td>
</tr>
<tr>
<td>.loginHeaderLink</td>
<td>Styles the UI sections in the header</td>
</tr>
<tr>
<td>.loginHeaderLinkAnchor</td>
<td>Styles the links in the header</td>
</tr>
<tr>
<td>.loginHeaderButton</td>
<td>Styles the buttons in the header</td>
</tr>
<tr>
<td>.loginHeaderButtonOver</td>
<td>Styles how buttons in the header will appear when they are hovered over</td>
</tr>
<tr>
<td>.loginPrompt</td>
<td>Styles the prompt container</td>
</tr>
<tr>
<td>.loginPromptCaption</td>
<td>Styles the caption message in the prompt body</td>
</tr>
<tr>
<td>.loginPromptInputLabel</td>
<td>Styles the prompt input label</td>
</tr>
<tr>
<td>.loginPromptInputText</td>
<td>Styles the prompt input</td>
</tr>
<tr>
<td>.loginPromptInputStaticText</td>
<td>Styles the static (read-only) text in the prompt</td>
</tr>
<tr>
<td>.loginFooter</td>
<td>Styles the footer container</td>
</tr>
</tbody>
</table>
Example - Customize the Prompt Caption

You want to specify that text in the prompt caption is bolded and colored red. To do this, you must set the `loginPromptCaption` class name in the `styles.css` file as follows:

```css
.loginPromptCaption {
  font-weight: bold;
  color: #FF0000;
}
```

JavaScript

You can use JavaScript™ functions to invoke certain actions in the login page. These actions include OK, Cancel, Help, Close, and `getLocale`. Using the JavaScript functions, you can ignore the standard footer that handles actions, such as the OK and Cancel functions, and replace it with your own UI implementation instead. Here are some sample customizations for the OK and Cancel actions:

```html
<a onclick="javascript: executeOKCommand();" href="#">Signin</a>
<a onclick="javascript: executeCancelCommand();" href="#">Goback</a>
```

The following is a list of the JavaScript functions that are available:

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>getLocale()</code></td>
<td>Returns the active product locale</td>
</tr>
<tr>
<td><code>executeOKCommand()</code></td>
<td>Handles the action when the OK button is clicked</td>
</tr>
<tr>
<td><code>executeCancelCommand()</code></td>
<td>Handles the action when the Cancel button is clicked</td>
</tr>
<tr>
<td><code>executeCloseCommand()</code></td>
<td>Handles the action when the Close button is clicked</td>
</tr>
<tr>
<td><code>executeHelpCommand()</code></td>
<td>Handles the action when the Help button is clicked</td>
</tr>
</tbody>
</table>

The Customize JavaScript Function

Use the JavaScript function named `customize` to specify additional customizations that you want to occur last in the processing sequence. For example, the `customize()` code in the following example can define a customization that is executed after all other customizations have been performed:

```html
<script language="JavaScript">
  function customize() {
```

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The customize JavaScript function can be added anywhere in the login template (p. 653).

### Redirect User to a Web Site When They Log Off

When users log off from IBM® Cognos® Connection, you can redirect them to a Web site of your choice by specifying a URL for redirection. For security reasons, this URL must be within a domain that is registered with the IBM Cognos Application Firewall software.

**Steps**

1. Edit the system.xml file located in the `<installation_location>/templates/ps` directory, and specify the URL to use for redirection using the `<redirect-url>` element. For example,

   ```xml
   <param name="custom-auth">
     <logoff enabled="true">
       <redirect-url>http://www.google.com</redirect-url>
     </logoff>
   </param>
   ```

2. In the IBM Cognos Configuration component, register the domain for the URL used for redirection. Specify the domain name using the `Valid domains or hosts` property located under Security, IBM Cognos Application Firewall.

   Note that if IBM Cognos Application Firewall is enabled and the specified URL uses an unregistered domain, IBM Cognos Connection returns an error page at logoff.

### Samples

To show some typical login page customizations, you are provided with several samples. You can leverage these samples to help with your own customizations.

To view the samples, see the `<installation_location>/webcontent/ps/login/samples` folder. Here is a list of the samples that are provided:

- **Sample1** shows how to add a simple message to the login page.

- **Sample2** shows how to call the public JavaScript™ functions to handle OK and Cancel actions. As a result, you can ignore the standard OK and Cancel buttons and render your own. This sample also shows how you can add a bilingual footnote at the end of the login page.

- **Sample3** shows how you can replace the standard login names and messages with custom bilingual messages. It also shows how to add a background image to the login page.

- **Sample4** shows how to render the out-of-the-box IBM look for the login page.

### Customizing Server-side Printing for UNIX and Linux Platforms

The way in which the IBM® Cognos® Connection portal handles server printing can differ depending on your platform. For this reason, you can customize the way in which the IBM Cognos Connection portal handles the printing of PDF format reports for UNIX® and Linux® platforms by configuring the `rsprintpdf.sh` file.
When a user selects Run with Options, changes the Format to PDF, selects Print the Report from the Delivery section, and then specifies additional formats through advanced options such as Landscape orientation, A4 paper size or a Time and Mode to run the report, problems might occur when printing to a UNIX or Linux print server. The output might not be generated, or it might appear cropped or incorrectly orientated.

The rsprintpdf.sh file should not be configured for Microsoft® Windows® operating system print servers.

**Steps**

1. Open the rsprintpdf.sh file located in the c10_location/bin directory.

2. In a text editor, customize the section that is specific to your print server’s platform, for example AIX®, HP-UX, or Linux.

3. Use the following information for customization. The information is passed to the rsprintpdf.sh script by the server process as command line options.

<table>
<thead>
<tr>
<th>Option</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-p</td>
<td>printer</td>
<td>Specifies the print queue. If no print queue is specified, the default queue is used.</td>
</tr>
<tr>
<td>-o</td>
<td>orientation</td>
<td>Specifies the page orientation for a file, for example landscape or portrait. If no orientation is specified, portrait orientation is used.</td>
</tr>
<tr>
<td>-m</td>
<td>media</td>
<td>Specifies the media size of the output, for example letter or A4 paper size. If no media, or no height or width are specified, the default paper tray is used.</td>
</tr>
<tr>
<td>-h</td>
<td>height</td>
<td>For custom page sizes. Specifies the height of the page in points. It is valid only if specified with the -w option, and without the -m option.</td>
</tr>
<tr>
<td>-w</td>
<td>width</td>
<td>For custom page sizes. Specifies the width of the page in points. It is valid only if specified with the -h option, and without the -m option.</td>
</tr>
<tr>
<td>-L</td>
<td>log file</td>
<td>Specifies a path to a user-specified file for logging error messages. The default filename for the log file is rsprintpdf.errors.log.</td>
</tr>
</tbody>
</table>

4. **Tip:** Keep a copy of the rsprintpdf.sh file in case it should be overwritten by a future software upgrade.
Start Query Studio in Preview Mode

You can configure Query Studio to start in preview mode. Users can then create or modify reports without retrieving actual data from the database. Instead, simulated data is shown.

If you later upgrade IBM® Cognos® software, you must reapply this configuration.

Steps
1. Using IBM Cognos Configuration, stop IBM Cognos Business Intelligence.
2. Rename the `c10_location/templates/ps/async/system.xml.sample` file to `system.xml`.
   Tip: To restore the regular mode, rename the `c10_location/templates/ps/async/system.xml` file to `system.xml.sample`.
3. Using IBM Cognos Configuration, start IBM Cognos software.

Customizing Data Formats for Query Studio

You can customize the data formats that are available for selection in Query Studio. The data formats listed in the following table are defined in the `c10_location/configuration/cogformat.xml` file.

<table>
<thead>
<tr>
<th>Data format</th>
<th>Examples</th>
<th>XML code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>19/12/03</td>
<td>formatList name = qsdates</td>
</tr>
<tr>
<td></td>
<td>December 19, 2003</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>11:05 PM</td>
<td>formatList name = qstimes</td>
</tr>
<tr>
<td></td>
<td>23:05</td>
<td></td>
</tr>
<tr>
<td>Date and time</td>
<td>19/12/03 13:30</td>
<td>formatList name = qsdatetimes</td>
</tr>
<tr>
<td></td>
<td>Dec 19, 03 1:30 PM</td>
<td></td>
</tr>
<tr>
<td>Time interval</td>
<td>Days</td>
<td>formatList name = qsintervals</td>
</tr>
<tr>
<td></td>
<td>Seconds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Milliseconds</td>
<td></td>
</tr>
<tr>
<td>Negative numbers</td>
<td>-29</td>
<td>formatList name = qsnegatives</td>
</tr>
<tr>
<td></td>
<td>(29)</td>
<td></td>
</tr>
<tr>
<td>Decimal character</td>
<td>1.23</td>
<td>formatList name = rsnumberinput</td>
</tr>
<tr>
<td></td>
<td>1,23</td>
<td></td>
</tr>
</tbody>
</table>
By modifying the cogformat.xml file, you can change the order in which data formats are presented in Query Studio. You can also change the text string that appears in Query Studio or delete a data format.

If the data formats that you prefer are not available in Query Studio, you can add them to the file.

Note: If you upgrade to a new version of IBM® Cognos® software, your changes to the cogformat.xml file are not reflected in the new version of the file. Make a copy of the file before the upgrade, then replace the new version with your changed version.

Modify the cogformat.xml File

To modify the cogformat.xml file, follow these steps:

Steps
1. Make a backup of the c10_location/configuration/cogformat.xml file.
2. Stop the IBM Cognos service.
3. Open the cogformat.xml file in an XML or text editor.
4. Make your changes as required:
   • "Change the Order of Data Formats" (p. 661)
   • "Change the Text Strings" (p. 662)
   • "Remove Data Formats" (p. 663)
   • "Add a Data Format to a Locale" (p. 664)
   • "Add Data Formats for a New Locale" (p. 665)
5. Save the file.
6. Test the file.
7. Restart the IBM Cognos service.
   The changes that you made to the cogformat.xml file are implemented.

Change the Order of Data Formats

You can modify the cogformat.xml file to change the order in which data formats are presented in Query Studio. For example, in your locale, the dates might be presented in the following order:

   • 19/12/03
   • 19-Dec-03
   • December 19, 2003
   • Friday, December 19, 2003
If your users are most likely to choose the last date format, you might want it to appear first on the list of dates.

**Steps**

1. In the cogformat.xml file, locate the data format for the locale that you want to modify. For example, the following XML code defines the order of date formats for the en-CA (English Canadian) locale:

   ```xml
   ...<formatList name="qsdates" xml:lang="en-CA">
   <dateFormat dateStyle="short">19/12/03</dateFormat>
   <dateFormat dateStyle="medium">19-Dec-03</dateFormat>
   <dateFormat dateStyle="long">December 19, 2003</dateFormat>
   <dateFormat dateStyle="full">Friday, December 19, 2003</dateFormat>
   </formatList>...
   ``

2. To change the order in which data formats appear in Query Studio, rearrange the order of the code. For example, to have Friday, December 19, 2003 appear as the first date format, change the XML code as follows:

   ```xml
   ...<formatList name="qsdates" xml:lang="en-CA">
   <dateFormat dateStyle="full">Friday, December 19, 2003</dateFormat>
   <dateFormat dateStyle="short">19/12/03</dateFormat>
   <dateFormat dateStyle="medium">19-Dec-03</dateFormat>
   <dateFormat dateStyle="long">December 19, 2003</dateFormat>
   </formatList>...
   ``

The dates are now presented in the following order in Query Studio:

- Friday, December 19, 2003
- 19/12/03
- 19-Dec-03
- December 19, 2003

**Change the Text Strings**

You can modify the cogformat.xml file to change the text strings that are presented in Query Studio. For example, in your locale, the dates might be presented as follows:

- 19/12/03
- 19-Dec-03
- December 19, 2003
- Friday, December 19, 2003
If your organization uses the standard date format "19/12/03," you can change the text that appears in Query Studio to "Corporate Standard (19/12/03)."

Steps

1. In the cogformat.xml file, locate the date format for the locale you want to modify. For example, the following XML code defines the text strings for date formats for the en-CA (English Canadian) locale:

```xml
<formatList name="qsdates" xml:lang="en-CA">
  <dateFormat dateStyle="short">19/12/03</dateFormat>
  <dateFormat dateStyle="medium">19-Dec-03</dateFormat>
  <dateFormat dateStyle="long">December 19, 2003</dateFormat>
  <dateFormat dateStyle="full">Friday, December 19, 2003</dateFormat>
</formatList>
```

2. To change the text string for a data format, edit it in the XML code. For example, change the text string for that format as follows:

```xml
<dateFormat dateStyle="short">Corporate Standard (19/12/03)</dateFormat>
```

The dates now appear as follows:

- Corporate Standard (19/12/03)
- 19-Dec-03
- December 19, 2003
- Friday, December 19, 2003

Remove Data Formats

You can modify the cogformat.xml file to remove data formats. For example, you may not want to present users with all the interval formats that are available.

Steps

1. In the cogformat.xml file, locate the data format for the locale that you want to modify. For example, the following XML code defines time interval formats for the en-CA (English Canadian) locale:

```xml
<formatList name="qsintervals" xml:lang="en-ca">
  <intervalFormat units="days">2 days</intervalFormat>
  <intervalFormat>1 day 23 hours 45 minutes 12 seconds 345 milliseconds</intervalFormat>
  <intervalFormat units="time" showSeconds="false">1 23:45</intervalFormat>
  <intervalFormat units="time" showMilliseconds="false">1 23:45:12</intervalFormat>
</formatList>
```

2. To remove an interval format, remove the associated XML code line. For example, to remove milliseconds as an available interval format, remove the following line:
Add a Data Format to a Locale

You can modify the cogformat.xml file to add data formats. For example, you may want to add a time format that is not included for your locale.

Valid Syntax

You must use valid syntax when adding a data format.

You can use Report Studio to show you the XML code that you need for a data format. In Report Studio, create a list report that contains the data that you want. Then, select the column and change the Data Format settings in the Report Studio Properties pane to get the format you want. It’s a good idea to run the report to make sure the data format looks the way you want it to. Select View XML and use the same code syntax in the cogformat.xml file. (For an XML file that you can copy and paste from, follow instructions to Open and Save a Report Locally.)

For example, if you want to add a data format for date, create a report that contains a date column. Change the format of the date. Use the appropriate XML code syntax in the cogformat.xml file.

Your syntax might look similar to the bold code shown below:

```xml
<formatList name="qsdates" xml:lang="en-CA">
  <dateFormat dateStyle="short" datesSeparator=".">
    <formatText />
  </dateFormat>
  <dateFormat dateStyle="full">Friday, December 19, 2003</formatText>
  <dateFormat dateStyle="short">19/12/03</dateFormat>
  <dateFormat dateStyle="medium">19-Dec-03</dateFormat>
  <dateFormat dateStyle="long">December 19, 2003</dateFormat>
</formatList>
```

Steps

1. In the cogformat.xml file, locate the data format for the locale that you want to modify. For example, the following XML code defines time formats for the en-CA (English Canadian) locale:

   ```xml
   ... 
   <formatList name="qstimes" xml:lang="en-ca">
     <timeFormat timeStyle="short">1:30 PM</timeFormat>
     <timeFormat timeStyle="medium">1:30:55 PM</timeFormat>
     <timeFormat timeStyle="long">1:30:55 EST PM</timeFormat>
     <timeFormat timeStyle="full">1:30:55 o’clock EST PM</timeFormat>
   </formatList>...
   ```

2. To add another time format, add another XML code line. For example, to add the time format "1:30 EST PM," add the following line:

   ```xml
   <timeFormat timeStyle="long" showSeconds="false">1:30 EST PM</timeFormat>
   ```

3. Insert the text that you want to appear in Query Studio into the line you copied and pasted. For example:
Add Data Formats for a New Locale

The cogformat.xml file contains most locales already. However, if necessary, you can add data formats for a new locale. Add a block of XML code for each of the data formats type.

Steps

1. Copy and paste a similar block of XML code for each data format type. For example, if you want to add a new locale such as en-xx, copy and paste the XML code that defines time formats for the en-CA (English Canadian) locale:

   ...  
   <formatList name="qstimes" xml:lang="en-ca">  
   <timeFormat timeStyle="short">1:30 PM</timeFormat>  
   <timeFormat timeStyle="medium">1:30:55 PM</timeFormat>  
   <timeFormat timeStyle="long">1:30:55 EST PM</timeFormat>  
   <timeFormat timeStyle="full">1:30:55 o’clock PM EST</timeFormat>  
   </formatList>...

2. Change the name of the locale. For example, for the new locale en-xx, change the first line of the copied code to:

   <formatList name="qstimes" xml:lang="en-xx">

3. Change the data formats as required, following the instructions in one of the following sections:

   - "Change the Order of Data Formats" (p. 661)
   - "Change the Text Strings" (p. 662)
   - "Remove Data Formats" (p. 663)
   - "Add Data Formats for a New Locale" (p. 665)

4. Make similar changes for the other data format types for the new locale.

Change the Default Query Studio Template

All Query Studio reports use a default template. You can create a custom template, for example, to include your company logo in it, and set it up as the default template for Query Studio reports. The templates are created in Report Studio. For more information, see the IBM® Cognos® Report Studio User Guide.

Steps

1. Go to the c10_location/configuration directory.

2. Locate the file qrsvpproperties.xml.sample, and rename it to qrsvpproperties.xml.

3. Open the qrsvpproperties.xml file, and in the following code:

   <structure>
   <!-- Default template for reports. -->
   "!-- Default template for reports. -->

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Un-comment the property and value elements

For the value, type the search path of the new template.

**Tip:** To find the template search path in IBM Cognos Connection, open the template properties page and, on the General tab, click the View the search path, ID and URL link.

Following, is an example of the resulting code:

```xml
<structure>
  <!-- Default template for reports. -->
  <property>defaultSystemTemplate</property>
  <value>/content/configuration/reportTemplate[@name='QSdefault']
  </value>
</structure>
```

4. Save the qrsvpproperties.xml file.

5. Restart the IBM Cognos server.

### Modify Properties for the CSV Output Format

You can modify properties for the comma separated values (CSV) output format. For example, you can specify encoding and field delimiter characters to suit your environment.

The CSV properties are system-wide settings and cannot be specified for specific reports.

**Note:** Always set the CSV output format at the server administration level. Do not override CSV output format settings at lower levels.

**Steps**

1. Start IBM® Cognos® Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Status tab, click System.

4. From the System drop-down menu, click Set properties.

5. Click the Settings tab.

6. Next to Environment, Advanced Settings, click Edit.

7. Enter parameters and values from "CSV Properties and Values" (p. 667), as required.

8. Click OK.

After the 30 seconds required for your changes to take effect, your changes are reflected when reports are generated in CSV format.
## CSV Properties and Values

The following table describes the CSV properties that you can modify. If a property is not specified or its value is empty, the default setting is used.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSVP.CSV.ENCODING</td>
<td>The encoding used for CSV output.</td>
</tr>
<tr>
<td></td>
<td>Enter a supported encoding value ( \text{p. 668} ). LOCALSE Encoding is derived from the content locale.</td>
</tr>
<tr>
<td></td>
<td>The default value is utf-16le.</td>
</tr>
<tr>
<td>RSVP.CSV.DELIMITER</td>
<td>The field delimiter character used for CSV output.</td>
</tr>
<tr>
<td></td>
<td>Enter one of the following:</td>
</tr>
<tr>
<td></td>
<td>• a single character</td>
</tr>
<tr>
<td></td>
<td>If you enter more than one character, only the first character is used.</td>
</tr>
<tr>
<td></td>
<td>• TAB (tab)</td>
</tr>
<tr>
<td></td>
<td>This is the default value.</td>
</tr>
<tr>
<td>RSVP.CSV.QUALIFIER</td>
<td>The string qualifier used for CSV output.</td>
</tr>
<tr>
<td></td>
<td>The default value is &quot; (quotation mark).</td>
</tr>
<tr>
<td></td>
<td>Enter a single character. If you enter more than one character, only the first character is used.</td>
</tr>
<tr>
<td></td>
<td>If the qualifier appears as part of your data, it is duplicated. For example, if the qualifier is a quotation mark and your data is ab&quot;cd, the CSV output is &quot;ab&quot;&quot;cd&quot;.</td>
</tr>
<tr>
<td>RSVP.CSV.TERMINATOR</td>
<td>The line terminator used for CSV output.</td>
</tr>
<tr>
<td></td>
<td>Enter one of the following values:</td>
</tr>
<tr>
<td></td>
<td>• CR (carriage return)</td>
</tr>
<tr>
<td></td>
<td>• LF (line feed)</td>
</tr>
<tr>
<td></td>
<td>This is the default value.</td>
</tr>
<tr>
<td></td>
<td>• CRLF (carriage return/line feed)</td>
</tr>
<tr>
<td></td>
<td>• LFCR (line feed/carriage return)</td>
</tr>
<tr>
<td></td>
<td>If you enter more than one value, only the first value is used.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>RSVP.CSV.MIMETYPE</td>
<td>The MIME type attributed to the CSV output. The default value is: application/vnd.ms-excel/</td>
</tr>
</tbody>
</table>
| RSVP.CSV.REPEAT_XTABLABELS | Specifies whether to repeat the edge labels in a nested crosstab report. For example, a crosstab has years in the rows and order method nested within years. You can show the year label in each order method row or only in the top row for each year. The values are:  
  - True  
    The crosstab edge labels are repeated.  
  - False (default)  
    The crosstab edge labels are not repeated. |

**Supported Encoding Values**

The following table shows encoding values that are supported and tested by IBM® Cognos®.

<table>
<thead>
<tr>
<th>Character set</th>
<th>Supported encoding value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTF-8</td>
<td>utf-8</td>
</tr>
<tr>
<td>Western European (ISO 8859-1)</td>
<td>iso-8859-1</td>
</tr>
<tr>
<td>Western European (ISO 8859-15)</td>
<td>iso-8859-15</td>
</tr>
<tr>
<td>Western European (Windows-1252)</td>
<td>windows-1252</td>
</tr>
<tr>
<td>Central and Eastern European(ISO 8859-2)</td>
<td>iso-8859-2</td>
</tr>
<tr>
<td>Central and Eastern European (Windows-1250)</td>
<td>windows-1250</td>
</tr>
<tr>
<td>Cyrillic (ISO 8859-5)</td>
<td>iso-8859-5</td>
</tr>
<tr>
<td>Cyrillic (Windows-1251)</td>
<td>windows-1251</td>
</tr>
<tr>
<td>Turkish (ISO 8859-9)</td>
<td>iso-8859-9</td>
</tr>
<tr>
<td>Turkish (Windows-1254)</td>
<td>windows-1254</td>
</tr>
<tr>
<td>Greek (ISO 8859-7)</td>
<td>iso-8859-7</td>
</tr>
</tbody>
</table>
### Repeat Crosstab Labels in CSV Output Format

By default, labels are not repeated for a nested crosstab when the output is in CSV format. This ensures upgrade compatibility with previous builds of IBM Cognos software. However, you can have nested crosstab row and column labels repeat in CSV format output by setting the report server advanced property RSVP.CSV.REPEAT_XTAB_LABELS to True.

Note that RSVP.CSV.REPEAT_XTAB_LABELS is a system level setting and applies to all CSV files. In a distributed environment using multiple dispatchers, ensure that you set this property for the report service and batch report service for each dispatcher. This same report server advanced property also applies to charts, which appear in a similar fashion to crosstabs, when output to CSV format.

### Steps

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. From the All Servers drop-down menu, click Services, Batch Report.
5. From the drop-down menu for BatchReportService, click Set properties.
6. Click the **Settings** tab.

7. For the **Environment** category, next to **Advanced settings**, click the **Edit** link.

8. If it appears, select the **Override the settings acquired from the parent entry** check box. Otherwise, proceed to the next step.

9. Enter the **RSVP.CSV.REPEAT_XTAB_LABELS** property and set the value to True.

10. Click **OK**.

### Auto-Size Select and Search Prompts

Often with large text items, the select and search prompt display areas are not wide enough to display the data. By default, the select and search prompt control display areas are fixed width and information that extends beyond the display area is truncated. For example, the phrase **Product Line: 991 Camping Equipment** displays as

```
Product Line: 991 Camping Equ
```

Optionally, you can use the setting **SYSTEMPROPERTY_CSEARCH_AUTO_RESIZE_RESULT_LIST** to make the display areas dynamically resize to meet the demands of wider data.

**Steps**

1. Open the properties.js file located in `\c10_location\webcontent\prompting`.

2. Find the **SYSTEMPROPERTY_CSEARCH_AUTO_RESIZE_RESULT_LIST** setting and set it to true.

   After changing this setting, the select and search prompt control display areas are variable width and wide information is no longer truncated.

   This setting also affects multi-value select and search prompts. With multi-value prompts, both the **Results** and **Choices** display areas are dynamically re-sized when this option is used.

### Using in_range Filters with Character Data

If you use an **in_range** filter with character data, and the **From** value is greater than the **To** value, the filter returns no results. For example, if the **From** value is "Zone" and the **To** value is "Aloe Relief", the report returns no data.

To allow results within a range regardless of whether the **From** value is greater than the **To** value, the IBM® Cognos® administrator can enable a prompting setting.

**Steps**

1. Open the properties.js file.

2. Find the **SYSTEMPROPERTY_REORDER_DROPDOWN_VALUES_IN_RANGES** and set it to true.
After changing this setting, and you re-run the original report using the same values, the report returns all data between “Zone” and “Aloe Relief” because the range is no longer treated as absolute.

**Modify Properties for the Batch Report Service and Report Service**

You can modify advanced properties for the Batch Report service and the Report service. For example, you can specify that prompt values entered by a user be saved automatically.

**Steps**

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. From the All Servers drop-down menu, click Services, Batch Report.
5. From the drop-down menu for BatchReportService, click Set properties.
6. Click the Settings tab.
7. For the Environment category, next to Advanced settings, click the Edit link.
8. If it appears, select the Override the settings acquired from the parent entry check box. Otherwise, proceed to the next step.
9. Enter parameters and values from "Batch Report Service and Report Service Properties and Values" (p. 671), as required.
10. Click OK.

**Batch Report Service and Report Service Properties and Values**

The following table describes the Batch Report service and Report service properties that you can modify. If a property is not specified or its value is empty, the default setting is used.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSVP.PARAMETERS.SAVE</td>
<td>Specifies that report prompt values entered by a user should be saved automatically.</td>
</tr>
<tr>
<td></td>
<td>Default: false</td>
</tr>
<tr>
<td>RSVP.CHARTS.ALTERNATECOLOURS</td>
<td>Specifies that each chart instance assigns colors in palette order, and does not attempt to preserve the color of items from one chart instance to another.</td>
</tr>
<tr>
<td></td>
<td>Default: false</td>
</tr>
</tbody>
</table>

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### Customize Error-Handling on the SMTP Mail Server

The way in which an SMTP mail server handles errors can differ depending on your mail server implementation. For this reason, you can customize the actions that the delivery service should take when it encounters specific errors by setting up SMTP rules in an XML file.

A set of default rules for error-handling is stored in a sample file provided with IBM® Cognos® software. To customize the rules, you should create a copy of this file and amend it. You then configure the delivery service to use this file.

#### SMTP Rules

Use the `<smtpRule>` tag to define an SMTP rule and the `<smtpError>` tag to define the error code for which you are applying a rule. For example:

```xml
<smtpRule>
  <smtpError>
    <errorCode>502</errorCode>
  </smtpError>
  ...
  <smtpError>
    <errorCode>550</errorCode>
  </smtpError>
  ...
</smtpRule>
```

**Note:** The priority of rules is determined by the order in which they appear in the XML file.

You can define the following types of SMTP errors:

- **transport errors**
  
  For example, there is no connection to the mail server, the mail server does not exist or is not configured correctly, or the user has no access to the mail server.
  
  Use `<transport>true</transport>` to include this type of error in your rules.

- **recipient errors**

### Parameter Description Table

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSVP.FILE.EXTENSION.XLS</td>
<td>Specifies to use XLS as the file extension on XLS output format email attachments instead of HTML. Default: false</td>
</tr>
<tr>
<td>RSVP.RENDER.VALIDATEURL.XLS</td>
<td>Specifies whether rules are applied to values specified by any URL values contained within a report specification. CAF must be enabled for the RSVP. RENDER.VALIDATEURL setting to take effect. Default: false</td>
</tr>
</tbody>
</table>
For example, there are invalid recipients, too many recipients, or no recipients. Use `<invalidRecipients>true</invalidRecipients>` to include this type of error in your rules.

- other specified errors
  Any standard SMTP error code generated by the mail server.
  Use `<errorCode>nnn</errorCode>` to include this type of error in your rules.

The following actions can be performed for each error type, and are defined as behaviors in the XML file:

- resend behavior
  Specifies how many times to resend an email (n) and the resend interval in seconds (x).
  Use `<resends number="n" delaySeconds="x" />` to apply this behavior.
  **Note:** To resend an email indefinitely, use `<resends number="-1"/>`.

- keep mail behavior
  Specifies whether the delivery service should keep the failed email in a separate queue after it has been resent the required number of times and is unsuccessful. The queue is named SMTP-BackupQueue.
  **Note:** No further action is performed on emails in the backup queue. To add emails from SMTPBackupQueue to the regular SMTPQueue, you must change the queue name in the database table and restart the server.
  Use `<keepMail>true</keepMail>` to apply this behavior.

- fail mail behavior
  Allows you to customize the email notification that is sent when an email delivery has failed.
  Use the `<failMail>` tag to apply this behavior.
  There are two further optional attributes you can use to specify the email notification subject (`<subject>`), and recipient (`<recipients>`).
  **Tip:** If you omit these tags, the email notification is sent by default to original recipients list with the subject "Send failed: ".
  To remove all current recipients, use `<recipients sendToCurrentRecipients="false"/>`.
  To send an email notification to the agent owner, use `<owner>true</owner>` and, if required, use `<recipient address="name@address.com"/>` to specify an email address.

- default behavior
  Defines the action to perform when no matching rule is found.
  Use the `<defaultSmtpBehaviour>` tag to apply this behavior.
Examples

The first example shows how to set up a rule for the default behavior. Here, the delivery service attempts to resend the undelivered email three times at hourly intervals. If it is unsuccessful, it sends an email notification using the default fail mail behavior.

```
<defaultSmtpBehaviour>
  <smtpBehaviour name="default">
    <keepMail>false</keepMail>
    <resends number="3" delaySeconds="3600" />
    <failMail />
  </smtpBehaviour>
</defaultSmtpBehaviour>
```

The second example shows how to set up a rule for a transport error. Here, the delivery service resends the email indefinitely, at 30 second intervals, until it is successful.

```
<smtpRule>
  <smtpError>
    <transport>true</transport>
  </smtpError>
  <smtpBehaviour name="transport">
    <keepMail>false</keepMail>
    <resends number="-1" delaySeconds="30" />
  </smtpBehaviour>
</smtpRule>
```

The third example shows how to set up a rule for a recipient error. Here, the email notification is sent to the agent owner using the email address stored in their user ID. The original email recipients are removed from the recipient list.

```
<smtpRule>
  <smtpError>
    <invalidRecipients>true</invalidRecipients>
  </smtpError>
  <smtpBehaviour name="invalidRecips">
    <keepMail>false</keepMail>
    <failMail>
      <recipients sendToCurrentRecipients="false">
        <owner>true</owner>
      </recipients>
    </failMail>
  </smtpBehaviour>
</smtpRule>
```

The fourth example shows how to set up a rule for a specified error code. Here, the undelivered email is sent to the backup queue whenever error 550 occurs. It remains there until you process it manually. A customized email subject is set up for the fail mail notification.

```
<smtpRule>
  <smtpError>
    <errorCode>550</errorCode>
  </smtpError>
  <smtpBehaviour name="specialErrorCode-550">
    <keepMail>true</keepMail>
    <failMail>
      <subject>Error code 550 keep mail</subject>
    </failMail>
  </smtpBehaviour>
</smtpRule>
```
Steps

1. Copy the `c10_location\configuration\smtpRules-sample.xml` file to the `c10_location\webapps\p2pd\WEB-INF\classes` folder.
   
   **Note:** To use your own file rather than a copy of the sample file, copy it to the same folder.

2. If you are using the sample file, rename the copied file to `smtpRules-custom.xml`.

3. Open the required file in an XML or text editor.

4. Amend the file to customize the rules.

5. Start IBM Cognos Connection.

6. In the upper-right corner, click Launch, IBM Cognos Administration.

7. On the Status tab, click System.

8. From the All Servers drop-down menu, click Services, Delivery.

9. From the drop-down menu next to DeliveryService, click Set properties.

10. Click the Settings tab.

11. Next to Environment, click Edit.

12. In the Parameter column, type the parameter name `smtp.rules.properties.location`.

13. In the Value column, type the name of the customized xml file you are using.

14. In the Parameter column, type the parameter name `smtp.rules.properties.reread`.
   
   Although not mandatory, it is useful to set this parameter for testing purposes so that the SMTP rules are read for every request.

15. In the Value column, type `true`.

16. Click OK.

17. In the Set properties page, click OK.
   
   When you have finished testing the rules, you must reset the `smtp.rules.properties.reread` parameter.

18. Repeat steps 5 to 11 to access the advanced settings.

19. In the Value column for the `smtp.rules.properties.reread` parameter, type `false`.

20. Click OK.
Disable Report Attachments in Email Messages

To prevent users from sending reports as email attachments, modify the system file system.xml. This change hides the Include the report check box under Attachments in the Set the email options dialog box.

This restriction applies to all IBM® Cognos® Business Intelligence users.

Steps
1. Stop the IBM Cognos service.
2. Open the c10_location/templates/ps/portal/system.xml file in an XML or text editor. For pages and dashboards, open the c10_location/templates/ps/system.xml file.
3. Add the following XML code to the <system> element:
   
   ```xml
   <param name="ui_hide">
     <CC_RUN_OPTIONS_email_attachment/>
   </param>
   ```

   If you hide other user interface elements by modifying the system.xml file (p. 635), the <param name="ui_hide"> element already exists. In this case, add the following to the element:

   ```xml
   <CC_RUN_OPTIONS_email_attachment/>
   ```

4. Save the file.
5. Start the IBM Cognos service.

Show Attachments in IBM Lotus Notes

When chart reports are sent as email attachments, they may not be shown properly in Lotus Notes. You can specify that .png file types be automatically converted to .jpg to avoid this possibility.

Steps
1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. From the All Servers drop-down menu, click Services, Delivery.
5. For the drop-down menu next to DeliveryService, click Set properties.
6. Click the Settings tab.
7. Next to Environment, click Edit.
8. Select the Override the settings acquired from the parent entry check box.
9. In the Parameter column, type the parameter name lotus.compatibility.mode.
10. In the Value column, type true.
11. Click OK.

12. In the Set properties page, click OK.

Chart reports are converted to .jpg files and appear properly in Lotus Notes.

**Disable Support for Trigger-based Scheduling**

By default, trigger-based scheduling (p. 372) is enabled. An occurrence acts as a trigger, causing the report to run. You can disable this feature by modifying the system.xml file.

**Steps**

1. Stop the IBM® Cognos® service.

2. Open the c10_location/templates/ps/portal/system.xml file in an XML or text editor.

3. Locate the following XML code in the system element:

   ```xml
   <param name="enable-trigger-support"> true 
   </param>
   <param name="enable-trigger-tab"> true 
   </param>
   ```

4. Change the value of both trigger parameters from true to false.

   The XML code should appear as follows:

   ```xml
   <param name="enable-trigger-support"> false 
   </param>
   <param name="enable-trigger-tab"> false 
   </param>
   ```

5. Save the file.

6. Start the IBM Cognos service.

The By Trigger tab on the Schedule page no longer appears. Entries that are already scheduled for trigger-based scheduling continue to run, but no further trigger scheduling can occur while support is disabled.

**Set Up a Trigger Occurrence on a Server**

As part of setting up trigger-based report scheduling (p. 372), you must set up the trigger occurrence on a server. You link the external occurrence, such as a database refresh or an email, with a trigger on the server that causes the entry to run. You must also specify the name of the occurrence.

Trigger occurrences can also be set up by a Software Development Kit developer using the IBM® Cognos® software development kit. For more information, see the The IBM Cognos Software Development Kit Developer Guide.
**Scripts**

Using the Microsoft® Windows® script named trigger.bat or the shell script named trigger.sh, you can trigger one or more schedules to run on the server.

The script syntax follows where **URL** is the IBM Cognos server URL, **username** is a valid username in the specified namespace, **password** is the password for the username, **namespace** is the namespace for the username, and **triggerlist** is a comma separated list of trigger names:

```
trigger.bat URL [username password namespace] triggerlist
```

For example, if users want to schedule a report based on a database refresh and want to schedule a second report based on receipt of an email, your custom trigger command line may look similar to this:

```
trigger.bat http://localhost:9300/p2pd/servlet/dispatch username password namespace databaserefreshtriggername,emailtriggername
```

**Steps**

1. If you are setting up a trigger occurrence on a server other than an IBM Cognos server, complete the following tasks:
   - Ensure that the server has a supported version of either a Java™ Runtime Environment or a Java Development Kit.
   - Copy the following files from `c10_location/webapps/p2pd/WEB-INF/lib` on an IBM Cognos server to the location on the server where you are setting up the trigger occurrence:
     - `activation.jar`
     - `axis.jar`
     - `axisCrnpClient.jar`
     - `commons-discovery.jar`
     - `commons-logging.jar`
     - `jaxrpc.jar`
     - `saaj.jar`
     - `mail.jar`
     - `xml-apis.jar`
     - `xercesImpl.jar`
   - Copy the following files from `c10_location/webapps/utilities/trigger` on an IBM Cognos server, to the location on the server where you are setting up the trigger occurrence:
     - `trigger.bat`
     - `trigger.sh`
     - `trigger.class` (a Java utility that can run on any IBM Cognos-supported platform)

2. Ensure that the command line runs when the external occurrence, such as a database refresh or email, occurs.
The mechanism that you use to invoke your custom trigger command depends on the application that you are working with, such as a database system or an email application. For information, see the documentation for your application.

3. Inform users that they can now schedule entries based on the trigger occurrence.

   If a user scheduled an entry based on the occurrence, when the user clicks the schedule button for a report view, occurrence information replaces frequency information on the Schedule page.

After the script runs, the trigger method returns an integer value representing the number of schedules that were run. The following integers represent errors:

- -1 is a usage error, such as invalid parameter or syntax
- -2 is a communication problem with IBM Cognos server

Change the Default File Extension for Excel 2002 Spreadsheets

By default, Excel 2002 spreadsheets sent by email are created in Excel Multipart HTML format with the .mht file extension. You can change the default file extension to .xls by setting the RSVP.FILE.EXTENSION.XLS parameter to true. Setting RSVP.FILE.EXTENSION.XLS to true does not change the file content. The content remains as Excel Multipart HTML.

Steps

1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Dispatchers and Services.
4. In the Configuration pane, under Name, click the dispatcher to configure.
5. With the dispatcher selected, on the toolbar in the upper-right corner, click Set Properties.
6. Click the Settings tab.
7. For the Environment category, next to Advanced settings, click the Edit link.
8. Select the Override the settings acquired from the parent entry check box.
9. In the Parameter column, type RSVP.FILE.EXTENSION.XLS.
10. In the Value column, type true.
11. Click OK twice.
12. Repeat steps 5 to 11 for ReportService.
13. Restart the server.
Specify Whether the Don’t Print Style is Applied to Excel 2007 Report Output

You can use the advanced setting parameter, RSVP.EXCEL.XLS2007_PRINT_MEDIA, to control whether the Don’t Print style is applied to Excel 2007 report output.

For information about the Don’t Print style, see the Report Studio User Guide.

Steps
1. Start IBM® Cognos® Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Dispatchers and Services.
4. In the Configuration pane, in the Name column, click the dispatcher you want to customize.
5. In the Name column, find the ReportService, and then under Actions, click the set properties icon.
6. Click the Settings tab.
7. Under Category, click Environment, and next to Advanced Settings, click Edit.
8. Select Override the settings acquired from the parent entry.
9. In the Parameter column, type the parameter name RSVP.EXCEL.XLS2007_PRINT_MEDIA.
10. In the Value column, enter a value.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>The Don’t Print style affects Excel 2007 report output.</td>
</tr>
<tr>
<td>False</td>
<td>The Don’t Print style is ignored for Excel 2007 report output.</td>
</tr>
</tbody>
</table>

Disabling Toolbox Widgets

System administrators can disable any of the following toolbox widgets:

- Web Page
- RSS Feed
- Image
- Text
- My Inbox Features

To disable a widget, you change its file extension. For example, to disable the Web page widget, rename htmViewer_contribution.atom to htmlViewer_contribution.atom.disabled.
The following table shows the name and location of the configuration file for each widget.

<table>
<thead>
<tr>
<th>Widget</th>
<th>Configuration File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Page</td>
<td><code>&lt;c10&gt;\configuration\icd\contributions\contrib\HTMLViewer_contribution.atom.</code></td>
</tr>
<tr>
<td>RSS Feed</td>
<td><code>&lt;c10&gt;\configuration\icd\contributions\contrib\RSSViewer_contribution. atom</code></td>
</tr>
<tr>
<td>Image</td>
<td><code>&lt;c10&gt;\configuration\icd\contributions\contrib\ImageViewer_contribution. atom</code></td>
</tr>
<tr>
<td>Text</td>
<td><code>&lt;c10&gt;\configuration\icd\contributions\contrib\RichTextViewer_contribution. atom</code></td>
</tr>
<tr>
<td>My Inbox</td>
<td><code>&lt;c10&gt;\configuration\icd\contributions\contrib\MyInBox_contribution.atom</code></td>
</tr>
</tbody>
</table>
Chapter 36: Troubleshooting Resources

Troubleshooting resources are sources of information that can help you resolve a problem that you are having with a product.

Generally, sources of troubleshooting information include logs, debugging modes, documentation, and technical support. In addition to this document, the following troubleshooting resources are available when you work with IBM® Cognos® Business Intelligence:

- Error messages
- Log files
- Core dump files
- Metric dump file
- Windows® Event Viewer
- Samples
- Report Definition in Query Studio
- IBM Cognos Customer Center
- IBM Cognos diagnostic tools

By learning what troubleshooting resources are available, you are better able to resolve problems while using IBM Cognos BI.

Error Messages

The first indication of a problem is often an error message. Error messages contain information that can be helpful in determining the cause of a problem.

You can click the Details link to see the full error message. The administrator can use this information, as well as other information about what product you are using and what you did before the error message displayed, to resolve an issue.

If you click OK in response to the error message, IBM® Cognos® BI undoes the last action and returns to the previous state.

Log Files

Log files can help you troubleshoot problems by recording the activities that take place when you work with a product. Operations performed in IBM® Cognos® BI are recorded in various log files for tracking purposes. For example, if you experienced problems installing IBM Cognos BI, consult the transfer log file to learn what activities the installation wizard performed while transferring files.
Before you begin viewing log files, ensure that they contain the information that you need. The number of log files and the information they contain are set by parameters in IBM Cognos Connection and in IBM Cognos Configuration.

Use IBM Cognos Administration to learn about logging categories and how to set the level of detail to log for each category.

Use IBM Cognos Configuration to specify the size, number, and location of log files, and to configure the properties of the log server. For more information, see the IBM Cognos Configuration User Guide.

When troubleshooting, the following files can assist you:

**The Transfer Log File**
This file records the activities that the installation wizard performed while transferring files. The transfer log file is located in the `c10_location\instlog` directory. The file name identifies the product name, version, and build number, and includes a time stamp. The following is an example of the file name format:

```
 tl-BISRVR-8.1-0.0-20080901_1122.txt
```

**The Transfer Summary-Error Log File**
This file records the components you installed, disk space information, the selections you made in the transfer dialogs, and any errors the installation wizard encountered while transferring components. The transfer summary-error log file is located in the `c10_location\instlog` directory. The file name identifies the product name, version, and build number, and includes a time stamp. The following is an example of the file name format:

```
 tl-BISRVR-8.1-0.0-20080901_1122_summary_error.txt
```

**The Startup Configuration File**
This file records your configuration choices each time you save your property settings. The file name is `cogstartup.xml`. If you are unable to save your configuration, or are having problems you can revert to a previously saved configuration file. The backup configuration files are located in the `c10_location\configuration` directory. The following is an example of the file name format for backup configuration files:

```
 cogstartup_200811231540.xml
```

**The Startup Configuration Lock File**
This file is created each time you open IBM Cognos Configuration. It prevents you from opening more than one IBM Cognos Configuration window. If you experience problems opening IBM Cognos Configuration, you can check the `c10_location\configuration` directory for the `cogstartup.lock` file. If the file exists and IBM Cognos Configuration is not open, it means that IBM Cognos Configuration did not shut down properly the last time you used it. You can delete the lock file and then open IBM Cognos Configuration.
The Locale Configuration File
This file records the configuration choices you make in IBM Cognos Configuration for product and content locales, locale mapping, and currency support. If you experience problems with language support in the user interface or in reports, use these files to track your changes. The backup configuration files are located in the c10_location/configuration directory. The following is an example of the file name format:

coglocale_200811231540.xml

The Runtime Log File
The default IBM Cognos log file, named cogserver.log file, or other log files that you configure to receive log messages from the log server, record information after you start the IBM Cognos BI service. They are located in the c10_location/logs directory. If you configured another destination for log messages, check the appropriate file or database.

Some log messages indicate problems. Most messages provide information only, but others can help you to diagnose problems in your runtime environment.

The Gateway Log File
The gateways record errors in the gateway log file, which is located in the c10_location/logs directory. You can use the gateway log file to troubleshoot problems that prevent the gateway from processing requests or from using encryption. Symptoms of these problems are as follows:

- User IDs and passwords do not work
- Single signon does not work
- The dispatcher is running but users receives an error message advising that the IBM Cognos BI server is not available

The gateway log file uses the following naming format, where gateway_interface is cgi, mod (Apache 1.3 module), mod2 (Apache 2.0 module), or isapi.

gwgateway_interface.log (for example, gwcgi.log)

The Uninstallation Log File
This file records the activities that the Uninstall wizard performed while uninstalling files. The log file is named cognos_uninst_log.htm and is located in the Temp directory. You can use the log file to troubleshoot problems related to uninstalling IBM Cognos BI components.

The Silent Mode Log File
This file records the activities that IBM Cognos Configuration performed while running in silent mode. This log file is named cogconfig_response.csv and is located in the c10_location/logs directory.

The ReportNet to IBM Cognos BI Upgrade File
This file contains a summary of the results of an upgrade from ReportNet® to IBM Cognos BI. The log file is named upgradeLog.xml and is located in the c10_location/logs directory. The file is in xml format and references an xslt style sheet. You can double-click the file to have it display in your browser.
Core Dump Files

If you receive an error message about the report server not responding, IBM® Cognos® BI wrote a core dump (.dmp) file to the file system. Core dump files indicate a serious problem with the program, such as an unhandled exception or an IBM Cognos BI process that terminated abnormally. Core dump files create a complete memory dump of the current state of the program when the problem occurs. The core file usually indicates a bug that requires a software fix.

If you see the report server not responding message, immediately check the \bin directory of the IBM Cognos BI server installation for any core dump files. On Windows®, these files are named processID.dmp, such as BIBusTKServerMain_seh_3524_3208.dmp. On UNIX®, the files are named core. On Linux®, the files are named core.processID. These binary files must be viewed with a debugging program such as dbx, GNU debugger, or the WinDbg debugger for Windows.

If your server administrator cannot solve the problem, contact IBM Cognos Customer Center and provide them with a test case, if possible, and the core files.

Core files can be 300 MB or more, and a new one of the same size is created each time that the problem occurs. In Windows, the files should be checked and cleaned regularly, during regular server maintenance. In UNIX and Linux, system settings can control how and when the core file is written to the file system when a process abnormally terminates.

In Windows, you can use a configuration file to turn off the creation of .dmp files. In a production environment, you can then enable core dumps when you encounter problems. Because not all problems are easy to reproduce, core file creation should be enabled in your testing and development environment so that you can use them.

With some IBM Cognos BI hotsite builds, core dump files are automatically created. The configuration file that controls this setting is different for IBM Cognos BI 8.1 MR1 (p. 686) and later versions of the product (p. 686). During an upgrade, configuration settings are not overwritten.

Steps to Turn Off Core File Creation for IBM Cognos BI MR1

1. On the server where IBM Cognos BI is installed, open the rsvpproperties.xml file from the c10_location\configuration directory.
2. Change the Win32StructuredExceptionHandling property to 0 (zero) so that it reads
   
   <property>Win32StructuredExceptionHandling</property>
   <value type="long">0</value>

3. Save the file.

Steps to Turn Off Core File Creation for IBM Cognos BI MR2 and Later Versions

1. On the server where IBM Cognos BI is installed, open the cclWin32SEHConfig.xml file from the c10_location\configuration directory.
2. In the configuration element, change the value of the environment variable setting to 0 (zero) so that it reads
   
   <env_var name="CCL_HWE_ABORT" value="0"/>

3. Save the file.
Metric Dump File

You can use the metric dump file to obtain detailed information about the state of the system at a particular time, and to track system trends over a given period of time for historical purposes. The default name of this file is metricdump.xml and it is located in the c10_location/logs directory.

The metric dump file records a snapshot of the current system metrics. The file does not appear in the c10_location/logs directory until metric dumping is enabled in IBM® Cognos® Administration (p. 687). By default, metric dumping is disabled.

The process of metric dumping is configured using the metricdumpconfiguration.xml file in the c10_location/configuration directory (p. 688). This file is used to specify the resources to be tracked in the metric dump file, and to control the size and location of the metric dump file. After metric dumping is enabled in IBM Cognos Administration, you can keep it inactive by renaming the metricdumpconfiguration.xml file. To reactivate metric dumping for a particular event, rename the configuration file back to its original name.

Note: You can rename the metricdump.xml file and change its location using the metricdumpconfiguration.xml file.

Steps to Enable Metric Dumping in IBM Cognos Administration

1. Log on to IBM Cognos BI, and open IBM Cognos Connection.
   Tip: If the Welcome page displays, click IBM Cognos Administration and go to step 3.

2. In the upper-right corner, click Launch > IBM Cognos Administration.

3. On the Configuration tab, click Dispatchers and Services.

4. From the toolbar in the upper-right corner of the page, click the set properties button.
   The Set properties - Configuration page displays.

5. Click the Settings tab.

6. For the Environment category, next to Advanced settings, in the Value column, click Edit.

7. In the Set advanced settings page, in the Parameter column, type the following setting:
   DISP.MetricDumpEnabled
   Note: The setting name is case-sensitive.

8. In the Value column, type the URI of the dispatcher.
   You can find the dispatcher URI in IBM Cognos Configuration, under Environment > Dispatcher Settings. Use only the first part of the URI that ends with /p2pd. For example, type http://c10_server:9300/p2pd.
   Tip: To delete this setting, click the check box next to the setting, click Delete, and click OK twice.

9. Click OK twice.
10. If you have multiple dispatchers, repeat these steps for each dispatcher computer.

**Steps to Change the Metricdumpconfiguration.xml File**

1. Open the file `c10_location/configuration/metricdumpconfiguration.xml` in an editor.

2. To configure the resources for which metrics are to be logged, specify the resource in the following section:
   ```xml
   <mbeans>
   <mbean>com.cognos:type=Metrics,*</mbean>
   <mbean>com.cognos:type=MetricHealth,*</mbean>
   <mbean>com.cognos:type=ServiceHealth,*</mbean>
   <mbean>com.cognos:type=ServiceOperationalStatus,*</mbean>
   </mbeans>
   
   For example, to specify a service, type
   ```
   ```xml
   <mbean>com.cognos:type=Metrics,service=contentManagerService</mbean>
   ```
   
3. To rename the metric dump file and change the path, edit the following line:
   ```xml
   <filename>../logs/metricdump.xml</filename>
   ```

4. To change the time interval for dumping, edit the following line:
   ```xml
   <interval>15000</interval>
   
The time is specified in milliseconds.
   ```

5. To specify whether to reset the MBeans after the values were dumped, edit the following line:
   ```xml
   <resetAfterDump>false</resetAfterDump>
   
   Changing the value to `true` resets metric values back to 0 in the user interface. For more information, see "Reset Metrics for the System" (p. 133).
   ```

6. To change the maximum number of dumps, edit the following line:
   ```xml
   <count>-1</count>
   
   -1 means unlimited number of dumps.
   ```

7. To change the maximum file size before rollover, edit the following line:
   ```xml
   <filesize>10000000</filesize>
   ```

8. To change the number of metric dump files to keep, edit the following line:
   ```xml
   <rollover>1</rollover>
   ```

9. Save the changes.

**Windows Event Viewer**

Windows® Event Viewer provides information about program, security, and system events. For example, if an IBM® Cognos® BI service fails to start, this fact is recorded in the event log.

Windows Event Viewer does not record information that is specific to operations or tasks performed in IBM Cognos BI. Consult the IBM Cognos BI log files for these problems.

For information about how to use Windows Event Viewer, see the Windows help.
Samples

IBM® Cognos® BI uses samples to highlight product features and to help you learn how to use the product. You can also use samples to troubleshoot problems.

You can use the samples that come with IBM Cognos BI to determine if various components are working together as expected. For example, if you are having a problem running a report, you can try running a sample report to see if problem persists. You may discover that the problem is related to connecting to a database.

Example - Testing Report Studio

You are a database administrator responsible for troubleshooting problems that report authors encounter when designing reports. Report Studio is now installed, and you want to ensure that it is working properly before the author begins using it.

To test Report Studio, you open and run one of the reports in the Report Samples folder in Report Studio.

If the report opens successfully, it displays in Report Studio, and the GO Sales and Retailers model associated with the report is loaded. When you run the report, IBM Cognos Viewer displays, and the report contains data.

View the Report Definition in Query Studio

You can use the Report Definition command on the Manage File menu or the Query Information command in the Report Definition box to troubleshoot problems with your reports. The Report Definition command shows the expression for each report item. The Query Information command shows the query information for each report item.

Note: You cannot change the report properties using these commands.

Steps

1. In Query Studio, open the report that you want.

2. From the Manage File menu, click Report Definition.

   The Report Properties dialog box displays. It contains a table that lists every filter, report item, and corresponding expression in the report.

   Tip: Click Query Information to bring up a text box containing information about the query.

Contact IBM Cognos Customer Center

If you are unable to resolve a problem using all other troubleshooting resources, contact IBM® Cognos® Customer Center to receive immediate help. For information about locations and programs, see the IBM Cognos Customer Center Web site (http://www.ibm.com/software/data/cognos/customercenter/).

To contact IBM Cognos Customer Center, you must have a current support agreement.
Before you call, do the following:

- Ensure that the problem is related to IBM Cognos software and results in an error message.
- Attempt to reproduce the problem to ensure that it is not just a simple error.
- Check obvious things like file locations, directories, paths, and access.
- Review all relevant documentation, including any release notes or readme files.
- Check to see if any recent changes in your computing environment may be responsible for the problem.

Tip: You can also use the IBM Cognos diagnostic tools.

**Steps**

1. Have the following information at hand:
   - Your customer identification number
   - Your service request number, if it is an ongoing service request
   - The phone number where you can be reached
   - The version of the software you use
   - The version of the operating environment you use
   - A description of what you were doing when the problem occurred
   - The exact wording of any error messages that display
   - Any steps you took to attempt to solve the problem

2. Contact the IBM Cognos Customer Center center nearest you.

   You are asked whether this is a new or ongoing service request. If it is an ongoing service request, provide your service request number or, if appropriate, your customer identification number.

   If you don’t have support on the software about which you are calling, you will be directed to a support renewal representative.

**IBM Cognos Diagnostic Tools**

IBM® Cognos® Customer Center provides diagnostic tools to help you:

- Verify your environment
- Identify and troubleshoot issues
- Supply the details and systems information needed to log a case with IBM Cognos Customer Center
The diagnostic tools were developed in Java™. Each contains a JAR file, a batch file, and a PDF that explains what the diagnostic tool does and the results you can expect. IBM Cognos diagnostic tools are read-only and do not make changes to your environment or to your IBM Cognos products.

New diagnostic tools are continually being developed. To check for the most recent updates, as well as for more information about IBM Cognos diagnostic tools, see the IBM Cognos Customer Center Web site (http://www.ibm.com/software/data/support/cognos_diagnostictools.html).
Chapter 37: Problems Using Documentation

The topics in this section provide solutions for problems you may encounter when using the IBM Cognos documentation.

Problems When Printing a PDF Manual

You print a document in PDF format, but the print job is incomplete. For example, the job stops printing when it reaches a particular graphic. This is an Adobe Acrobat Reader issue that can occur when printing some PDFs using some versions of Acrobat Reader and some printer models. The same PDF may print correctly under one or both of the following conditions:

- using a different version of Acrobat Reader
- using a different printer

If you print from an Acrobat 4.0 or later product, you can try the following solution.

Steps to Force a Page to Print as an Image

1. In Acrobat Reader, from the File menu, click Print.
2. In the Printer section, select the Print as image check box.
   Because files print more slowly using this option, make sure you specify only the nonprinting page.
3. In the Print Range section, click Pages from and Pages to, type only the page number of the nonprinting page, and then click OK.
   You can print the rest of the PDF by resending the job starting on the next page.
4. Clear the Print as image check box.
5. In the Print Range section, click Pages from and Pages to, type the page range for the remaining pages, and then click OK.
   Although you can use the Print as image option to print the file, this setting does not resolve the original printing problem. For more information, see the Adobe Web site.

Unable to Launch a Web Browser When Accessing Help

You are running IBM Cognos Connection on a Linux computer. You click Help and the following message appears:

Unable to launch a web browser

Attempting to execute netscape-remote openURL

Ensure that the web browser is defined in the path.
This error occurs if the Netscape browser is not installed on the computer or the browser path is not set correctly.

The solution is to either install Netscape if it is not installed, or add a BrowserPath entry to the file cogconfig.prefs. The entry must specify the full path for the browser.

**Text Does Not Appear Properly in Quick Tours**

If your computer uses large fonts, you may not see all the text or text may not wrap properly in the IBM Cognos quick tours.

To fix this problem, do one of the following:

- Use small fonts for your computer.
- Use the smallest font setting in your Web browser.

**Problem Viewing Double-byte Character Sets in Internet Explorer**

You may encounter problems when viewing text in languages that use double-byte character sets in Internet Explorer Web browser version 6. For example, you open online help and the page is blank.

To ensure that double-byte characters appear properly in your Internet Explorer Web browser, do the following.

**Step**

- In Internet Explorer, on the **View** menu, select **Encoding, Auto Encoding**, and ensure that **Auto-Select** is selected.
Chapter 38: Installation and Configuration Problems

You may encounter problems during installation and configuration, or when setting up IBM® Cognos® BI to run within an application server.

Problems Starting IBM Cognos Business Intelligence

You may encounter problems when you try

- to start the IBM® Cognos® BI service
- to open the Welcome page for the IBM Cognos BI portal for the first time
- to start an application server, such as WebLogic or WebSphere®

The following table shows some common symptoms and their solutions.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>You do not see the splash screen for the IBM Cognos BI portal when you start IBM Cognos BI.</td>
<td>Check your Web server configuration.</td>
</tr>
<tr>
<td>The service starts, but no tables are created in the content store database.</td>
<td>Check your content store configuration.</td>
</tr>
<tr>
<td>The service does not start.</td>
<td>Ensure that you wait a few moments before submitting a request.</td>
</tr>
<tr>
<td>The application server does not start.</td>
<td>Check the file permissions and directory names of the application server installation location.</td>
</tr>
</tbody>
</table>

Ensure that you use other software that is supported by IBM Cognos components. You can view an up-to-date list of environments, such as operating systems, patches, browsers, Web servers, directory servers, and database servers on the IBM Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter/).

CFG-ERR-0106 Error When Starting the IBM Cognos service in IBM Cognos Configuration

When you start the IBM® Cognos® BI service, you may receive the following error message:

CFG-ERR-0106 IBM Cognos Configuration received no response from the IBM Cognos service in the allotted time. Check that IBM Cognos service is available and properly configured.
There are two possible causes for this problem:

- The IBM Cognos service needs more time to start.
- A standby Content Manager computer may be configured incorrectly.

**The IBM Cognos service Needs More Time**

By default, IBM Cognos Configuration checks the progress of the start request every half second for three minutes. If IBM Cognos Configuration does not receive a response within this time, the error message displays.

To avoid this error, you can change the amount of time that IBM Cognos Configuration waits to receive a response from the IBM Cognos service. You do this by configuring the ServiceWaitInterval and ServiceMaxTries properties in the \texttt{c10\_location/configuration/cogconfig.prefs} file.

The ServiceWaitInterval property represents the time interval, in milliseconds, at which IBM Cognos Configuration checks the progress of the start request. By default, its value is 500, which is equivalent to half a second.

The ServiceMaxTries property represents the number of times that IBM Cognos Configuration checks the progress of the start request. By default, its value is 360.

**Content Manager Is Configured Incorrectly**

If the error message displays on a standby Content Manager computer, the setting for storing the symmetric keys may be incorrect.

To avoid this problem, configure the standby Content Manager computer to store the symmetric keys locally.

**Steps to Change the Wait Time**

1. Using IBM Cognos Configuration, stop the IBM Cognos service.
2. Open the \texttt{c10\_location/configuration/cogconfig.prefs} file in an editor.
   
   This file is created automatically the first time you open IBM Cognos Configuration.
3. Add the following code to the file:

   \begin{verbatim}
   ServiceWaitInterval=number of milliseconds
   ServiceMaxTries=number of times
   \end{verbatim}

   Tip: Add the numeric values that correspond to your configuration needs.
4. Save the file.
5. Using IBM Cognos Configuration, start the IBM Cognos service.

**Steps to Store Symmetric Keys Locally**

1. On the standby Content Manager computer, start IBM Cognos Configuration.
2. In the Explorer window, under Security, click Cryptography.
3. In the Properties window, under CSK settings, set Store symmetric key locally to True.
4. From the **File** menu, click **Save**.

5. From the **Actions** menu, click **Start**.

   This action starts all installed services that are not running. If you want to start a particular service, select the service node in the **Explorer** window and then click **Start** from the **Actions** menu.

### Cryptographic Error When Starting IBM Cognos BI

You received the following error when you tried to start the IBM® Cognos® BI service after installing server or client components:

```
[Cryptography]
1. [ERROR] java.lang.NoClassDefFoundError:
   javax/net/ServerSocketFactory:
```

Your Java™ Runtime Environment (JRE) is missing the encryption and decryption routines that are required by IBM Cognos BI. You must copy the Java Archive (.jar) file that is provided to your JRE directory.

**Step**

- Copy the bcprov-jdknn-nnn.jar file from the `c10_location/bin/jre/version/lib/ext` directory to the `Java_location/jre/lib/ext` directory.

### Unable to Start the IBM Cognos service Because the Port is Used by Another Process

You may not be able to start the IBM® Cognos® BI service or process if one of the default ports is used by another process.

**Tip:** To view the current network TCP/IP network connections, use the `netstat` command.

Use IBM Cognos Configuration to change the default port that IBM Cognos BI uses.

When you change the port used by the local dispatcher, you must change the value of the Dispatcher URI properties. Because the change affects all the URIs that are based on the local dispatcher, you must change the URIs of all local components. By default, local components contain localhost in the URI.

For example, if you install all components on one computer and you want to change the dispatcher port, replace 9300 in all dispatcher and Content Manager URIs with the new port number.

**Steps to Change the Default Port**

1. Start IBM Cognos Configuration.

2. In the **Explorer** window, click the appropriate group or component:

   - To access the port number in the dispatcher and Content Manager URIs, click **Environment**.
   - To access the port number for the local log server, under **Environment**, click **Logging**.
To access the shutdown port number, under Environment, click IBM Cognos services > IBM Cognos BI.

To access the port number for the location of the applications.xml file used by Portal Services, under Environment, click Portal Services.

3. In the Properties window, click the Value box next to the property that you want to change.

4. Change the value from 9300 to the new value.

Ensure that you change the ports in all URIs that contain localhost:9300.

5. From the File menu, click Save.

6. From the Action menu, click Start.

**IBM Cognos service Does Not Start or Fails After Starting**

You start the IBM® Cognos® BI service but services either do not start correctly or are very slow to start. After services start, the system fails a short time afterwards. While services are starting, Java™ uses 100 percent of the CPU time. You may also receive multiple occurrences of error messages such as the following:

- **DPR-DPR-1035 Dispatcher detected an error.**
- **CAM-CRP-1157 Unable to synchronize the local common symmetric key store with Content Manager.**

If you use a DB2® database for the content store, ensure that the database version and Java version are compatible. For DB2 version 8.2, Java 1.5 is not supported. For DB2 version 9, Java 1.5 is supported on all operating systems except HPUX and Solaris.

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, visit the IBM Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter/).

**IBM Cognos BI Server Fails to Start and Gives No Error Message**

An IBM® Cognos® BI server may fail to start after an upgrade or new installation, but no error message displays. This may occur when a previously running or new IBM Cognos BI server is configured to use a large amount of memory.

If the server on which IBM Cognos BI is installed contains version 1.0 of Microsoft® security update 921883, there may be an issue when a lot of contiguous memory is requested by an application.

This is a known issue with version 1.0 of Microsoft security patch 921883. Microsoft distributed a second version of the patch to fix the problem. As a workaround, uninstall the first security patch, or install version 2.0 of the patch. Alternatively, you can configure the IBM Cognos BI server to use less memory.

For more information, see the Microsoft knowledge base article about programs using a lot of contiguous memory failing, at the Microsoft support Web site.
IBM Cognos BI Server Not Available When Starting IBM Cognos BI

After you configure IBM® Cognos® components and start the IBM Cognos services, when you connect to the IBM Cognos BI portal, the following error message may display:

*The Cognos Gateway is unable to connect to the Cognos BI server.*

*The server may be unavailable, or the gateway may not be correctly configured.*

Check the IBM Cognos server log file for more information. By default, the cogserver.log file is located in the `c10_location/logs` directory. If you configured another destination for log messages, check the appropriate file or database.

Content Manager may not be able to connect to the content store if the content store is not configured properly. This may occur if

- the content store uses an unsupported character encoding
- the content store uses a database collation sequence that is case sensitive
- the configuration settings you specified in IBM Cognos Configuration are not valid

**Unsupported Character Encoding**

If the following messages display in the log file, the database you created for the content store does not use a supported character encoding:

- For Oracle:
  
  CM-CFG-5063 *A Content Manager configuration error was detected while connecting to the content store.*
  
  CM-SYS-5121 *Content Manager cannot start because the database character set for the content store is not supported.*
  
  CM-SYS-5126 *The content store database server uses the character set US7ASCII.*
  
  CM-SYS-5125 *The content store database client uses the character set US7ASCII.*

- For DB2® UDB:
  
  CM-CFG-5063 *A Content Manager configuration error was detected while connecting to the content store.*
  
  CM-SYS-5121 *Content Manager cannot start because the database character set for the content store is not supported.*
  
  CM-SYS-5124 *The content store database server uses the code page 1252.*

- For Sybase:
  
  CM-CFG-5063 *A Content Manager configuration error was detected while connecting to the content store.*
  
  CM-SYS-5121 *Content Manager cannot start because the database character set for the content store is not supported.*

For Content Manager to connect to the content store, the content store must use the appropriate character encoding, as listed in the following table.
To resolve this problem, you must recreate the content store database using the correct character encoding, or convert the character encoding. For more information, see the database documentation.

**Case Sensitive Collation Sequence**

If the following messages are in the log file, the database you created for the content store uses a database collation sequence that is case sensitive:

CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.

CM-SYS-5122 The content store database has a default collation that is case-sensitive. Content Manager requires a content store that has a case-insensitive collation.

CM-SYS-5123 The content store database server uses the collation &lt;parameter&gt;.

CM-SYS-5007 Content Manager build @cm_build_version@ failed to start! Review the Content Manager log files and then contact your system administrator or customer support.

To resolve this problem, you must recreate the content store database using a database collation sequence that is not case sensitive. For more information, see the database documentation.

**Invalid Configuration Settings**

If the following or similar messages are in the log file, you did not configure the content store correctly in IBM Cognos Configuration.

- For Microsoft SQL Server:
  
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.

  CM-CFG-5036 Content Manager failed to connect to the content store. The connection string is "jdbc:JSQLConnect://localhost:1433/cm".


- For DB2:

  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
CM-SYS-5003 Content Manager is unable to access the content store. Verify your database connection parameters and then contact your database administrator.

[IBM][CLI Driver] SQL1013N The database alias name or database name "CM123" could not be found.

- For Oracle:
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
  CM-CFG-5036 Content Manager failed to connect to the content store. The connection string is "jdbc:oracle:thin:@localhost:1521:pb1".
  ORA-01017: invalid username/password; logon denied.

- For Sybase:
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
  CM-CFG-5036 Content Manager failed to connect to the content store. The connection string is "jdbc:sybase:Tds:localhost:5000/cm".
  JZ006: Caught IOException: java.net.ConnectException: Connection refused: connect.

If you are using an Oracle database, do not use illegal characters, such as an underscore in IBM Cognos Configuration for the Service Name property. If the Service Name includes illegal characters, tables are not created in the content store database when the IBM Cognos service is started.

Steps for Microsoft SQL Server, Oracle, DB2, and Sybase
1. On the computer where you installed Content Manager, start IBM Cognos Configuration.
2. In the Explorer window, under Data Access > Content Manager, right-click Content Store and click Delete.
   This deletes the default resource. Content Manager must be configured to access only one content store.
3. Right-click Content Manager, and then click New resource > Database.
4. In the Name box, type a name for the resource.
5. In the Type box, select the type of database and click OK.
   If you are upgrading and want to use an existing content store, ensure that you select the type of database you use for the older version of ReportNet® or IBM Cognos BI.
   If you installed more than one version of IBM Cognos BI, you must use a different content store for each version. When a content store is used by a new version of IBM Cognos BI, it cannot be used by an older version of ReportNet or IBM Cognos BI.
   Tip: If you want to use Oracle Net8 keyword-value pair to manage the database connection, select Oracle database (Advanced).
6. In the Properties window, provide values depending on your database type:
• If you use a Microsoft SQL Server database, type the appropriate values for the **Database server with port number or instance name** and **Database name** properties.

For the **Database server with port number or instance name** property, include the port number if you use nondefault ports. Include the instance name if there are multiple instances of Microsoft SQL Server.

To connect to a named instance, you must specify the instance name as a JDBC URL property or a data source property. For example, you can type `localhost\instance1`. If no instance name property is specified, a connection to the default instance is created.

Note that the properties specified for the named instance, along with the user ID and password, and database name, are used to create a JDBC URL. Here is an example:

```
jdbc:JSQLConnect://localhost\instance1/user=sa/more properties as required
```

• If you use a DB2 database, for the **Database name** property, type the database alias.

• If you use an Oracle database, type the appropriate values for the **Database server and port number** and **Service name** properties.

• If you use an advanced Oracle database, for the **Database specifier** property, type the Oracle Net8 keyword-value pair for the connection.

Here is an example:

```
(description=(address=(host=myhost)(protocol=tcp)(port=1521)(connect_data=(sid=(orcl)))))
```

• If you use a Sybase database, type the appropriate values for the **Database server and port number** and **Database name** properties.

7. If you want to change the logon credentials, specify a user ID and password:

• Click the **Value** box next to the **User ID and password** property and then click the edit button when it displays.

• Type the appropriate values and click **OK**.

8. From the **File** menu, click **Save**.

The logon credentials are immediately encrypted.

9. Test the connection between Content Manager and the content store.

**Tip:** In the **Explorer** window, right-click the new database and click **Test**.

Content Manager connects to the database, checks the database permissions, and creates and populates a table. The table is not deleted and is used each time that the test is repeated.

---

**Cannot Log On to a Namespace When Using IBM Cognos Connection**

You open IBM® Cognos® BI through IBM Cognos Connection. However, when you attempt to create a data source and log on to a namespace, the following error messages display:

• **PRS-CSE-1255 Exception error encountered in data decryption.**
CAM-CRP-1064 Unable to process the PKCS #7 data because of an internal error. Reason: java.lang.IndexOutOfBoundsException.

This issue may occur if you do not have the necessary permissions for the following directories:

- c10\configuration
- c10\configuration\csk
- c10\configuration\encryptkeypair
- c10\configuration\signkeypair

The solution is to enable the read and execute permissions on the directories listed above for anyone who must start the IBM Cognos service.

**IBM Cognos services Fail to Restart After a Network Outage**

The IBM® Cognos® Bootstrap Service restarts IBM Cognos services after a network outage. For Tomcat installations where a network IP address is specified in the internal dispatcher URI, the IBM Cognos services may not initialize successfully during the restart. This then requires a manual restart after the network is restored.

To resolve the problem, configure the **Internal dispatcher URI** property in IBM Cognos Configuration to use localhost or the network host name.

**No Warning That Installing a Later Version of IBM Cognos BI Will Automatically Update the Earlier Version of the Content Store**

You have a version of ReportNet® or IBM® Cognos® BI installed on your computer. You install a later version into a new location. You use the same database for the content store for both versions. After you configure the later version and start the IBM Cognos service, the earlier version of ReportNet or IBM Cognos BI no longer works because all content is automatically upgraded.

If you want to use different versions of ReportNet and IBM Cognos BI after you upgrade, ensure that before you install the later version, you

- back up the database you use for the content store
- restore the backup to a new location

Alternatively, you can choose to use the deployment tool to import the entire content store from an earlier version to the later version. All existing content in the content store database is replaced by the imported content. You receive a warning message about this.

**Download of Resource Fails**

You start Report Studio in Internet Explorer and the following error message displays:

*The download of the specified resource has failed.*

This problem may be caused by recent Microsoft® XMLHTTP upgrades if you do not have a language preference set in Internet Explorer.

To resolve the problem, specify a language preference in Internet Explorer.
DB2 Returns SQL1224N Error When Connecting from AIX

If your content store is a DB2® database and you receive an SQL1224N error on AIX®, check the db2diag.log file for additional information about the error.

If the error includes reason code 18, you may need to change the DB2 configuration to accept more connections. For more information, see the IBM® DB2 support pages for the error SQL1224N.

Content Manager Error When Starting IBM Cognos BI

After starting IBM® Cognos® BI, no BIBUSTKSERVMA process is started. There are errors listed in the pogo******.log and cogserver.log files. Users receive errors in the browser when connecting to the IBM Cognos BI portal.

In the pogo******.log file, an error related to Content Manager displays.

In the cogserver.log file, the following error displays:

An attempt to register the dispatcher in Content Manager was unsuccessful. Will retry periodically.

When connecting to http://computer name/ibmcognos, the following error messages display in the browser:

- DPR-ERR-2058 The dispatcher cannot service the request at this time. The dispatcher is still initializing
- SoapSocketException: Connection Refused

IBM Cognos Configuration uses a user ID to bind to the LDAP database. If this user ID is moved to another group, IBM Cognos Configuration can no longer locate it.

To correct the problem, move the user ID back to the original group.

Content Manager Fails to Start or Takes a Long Time to Start

On Microsoft® Windows®, you try to start the service on the computer where you installed Content Manager. As the service is starting, the details include errors similar to the following:

DPR-CMI-4006 Unable to determine the active Content Manager. Will retry periodically.

CM-SYS-5007 Content Manager build x.x.x.x failed to start!

Details within the error log may also include references to OutOfMemoryError.

To resolve this problem, start the service using the DuseCMLargeResultSet parameter. You can add the parameter to the bootstrap configuration file and then start the service using IBM Cognos Configuration or you can add the parameter to the startup configuration file and then run the file.

Steps Using the Bootstrap Configuration File

1. Go to the c10_location\bin directory and open bootstrap_win32.xml in an XML editor.
2. Find the section that begins with <param>"${install_path}.
3. Add the DuseCMLargeResultSet parameter to that section, in the location shown by the bold text in the following example.

   <param>"-Dcatalina.base=${install_path}/tomcat"</param>
4. Save and close the file.

5. Start IBM Cognos Configuration and start the service.

Steps Using the Startup Configuration File

1. Go to the c10_location\bin directory and open startup.bat in a text editor.

2. Find the following line:
   
   ```
   set CATALINA_OPTS=-Xmx768m -XX:MaxNewSize=384m -XX:NewSize=192m -XX:
   MaxPermSize=128m %DEBUG_OPTS%
   ```

3. Append the DuseCMLargeResultSet parameter to the line, as shown by the bold text in the following example:

   ```
   set CATALINA_OPTS=-Xmx768m -XX:MaxNewSize=384m -XX:NewSize=192m -XX:
   MaxPermSize=128m %DEBUG_OPTS%-DuseCMLargeResultSet=true
   ```

4. Save and close the file.

5. Start the service by running the startup.bat file.

DPR-ERR-2014 Error Displays in Log File on Content Manager Computer

If Content Manager is installed on a separate computer and the event management service on the Content Manager computer is disabled, the following error message may be in the cogserver.log file:

```
DPR-ERR-2014 Unable to load balance the request because no nodes in the cluster are available, or no nodes are configured for the service: eventManagementService
```

To correct the problem, do the following:

- Start IBM® Cognos® Configuration on the Content Manager computer.
- In the Explorer pane, go to Environment > IBM Cognos services.
- Set the Event management service enabled? property to False.

Non-ASCII Characters in Installation Directory Cause Run-time Errors

On all operating systems, if you use non-ASCII characters in the installation directory for IBM® Cognos® BI, it causes run-time errors. It also causes some product functions, such as report execution, to fail.

To resolve this issue, install IBM Cognos BI in the default directory or use a directory name that contains only ASCII Latin-1 characters.
Cannot Open an MS Cube or PowerCube

You are unable to open an MS Cube or PowerCube, or you can open an MS Cube but only metadata is shown. For an MS Cube, you may receive the following error message:

MO-ERR-0030

"Cannot connect to the datasource. Please set the service to run as a domain user with the correct privileges."

To solve this problem, ensure that the user running the IBM Cognos BI service has access rights to the cube.

PowerCubes are accessed through mapped drives or UNC path names.

Steps for MS Cubes

1. Add the domain user account that starts the IBM Cognos service to the Act as part of the operating system privilege:
   - Under Administrative Tools, select Local Security Policy.
   - Expand Security Settings, Local Policies and click User Rights Assignment.
   - Right-click the Act as part of the operating system policy and select Properties.
   - Click Add User or Group and add the user account that starts the IBM Cognos service.

2. If you use the domain userID and password method of authentication, add the user account that starts the IBM Cognos service to the domain that includes Content Manager, the Application Tier Components, IIS Web server, and the data source server (Microsoft SQL Server or Microsoft Analysis Server).

3. If you use an external namespace, such as Active Directory Server, for authentication, add the user account that starts the IBM Cognos service to the domain that includes the authentication provider.
   This domain must also include Content Manager, the Application Tier Components, IIS Web server, and the data source server (Microsoft SQL Server or Microsoft Analysis Server).
   For more information about configuring external namespaces for authentication, see the topics about authentication providers in the Installation and Configuration Guide.

Step for PowerCubes

- Ensure that the IBM Cognos user profile has sufficient operating system or domain access rights to open the PowerCube file.

The Page Cannot Be Found When Starting IBM Cognos BI in Windows 2003

After installing IBM Cognos BI on Microsoft Windows operating system 2003, the following message may display when you try to start IBM Cognos BI:

The page cannot be found. The page you are looking for might have been removed, had its name changed, or is temporarily unavailable. HTTP Error 404 - File or Directory not found.
This error is caused by a security feature in Windows 2003 Internet Information Services (IIS). This security feature does not allow unknown cgi file extensions.

To resolve this problem, add a new file extension in IIS for the cognos.cgi file. For more information, see the IIS documentation.

The Page Is Not Shown When Opening a Portal After Installing IBM Cognos BI

After you install and configure IBM® Cognos® BI, you are unable to connect to the Cognos BI portal.

This may be because the Web server is not properly configured. For example, the virtual directories required for IBM Cognos BI may not exist or they may point to the wrong physical folders.

For information about configuring the Web server, see the Installation and Configuration Guide.

DPR-ERR-2058 Error Displays in Web Browser When Starting IBM Cognos BI

After you start the services in IBM® Cognos® Configuration and then try to open the portal, a message similar to one of the following may display:

DPR-ERR-2058 The dispatcher encountered an error while servicing a request. XTS handler must be initialized before being invoked.

DPR-ERR-2058 The dispatcher cannot service the request at this time. The dispatcher is still initializing. Please try again or contact your administrator.

These error messages usually occur when the dispatcher cannot communicate with Content Manager. To help you determine the specific cause, look in the cogserver.log file in the c10_location/logs directory. The most common causes are listed below, with solutions.

IBM Cognos Services are Not Done Initializing

After you start the services in IBM Cognos Configuration and the configuration tool shows that the services are running, wait a few minutes for all services to start before you open the portal.

Content Manager is Not Available

In a distributed installation, ensure that Content Manager is installed, configured, and running. Ensure also that the other IBM Cognos computers are configured with the correct Content Manager URI.

The Content Store is Not Available or is Not Configured Properly

Ensure that the content store database was created and that you configured it correctly in IBM Cognos Configuration.

Tables are Not Created in the Content Store

Ensure that you are using a version of DB2®, Microsoft® SQL Server, Oracle, or Sybase that is supported by IBM Cognos components.
The Logon Credentials for the Content Store Are Incorrect
Check whether the information changed. For example, DB2 reads information from the NT user management. If the password for the NT account changed, you must also change the logon credentials for the content store in IBM Cognos Configuration.

Check for special characters in the logon password. Occasionally, the JDBC driver does not accept characters that are reserved for xml, such as %, !, <, and >.

The User Does not Have Appropriate Permissions
Ensure that the user has the appropriate permissions.

Out of Memory on HP-UX
If you are using Tomcat, you can determine the issue is related to HP-UX server configuration. You may be exceeding the expected maximum number of simultaneously active threads per process.

Steps to Check for an HP-UX Configuration Problem
1. In the /bin/startup.sh file, find
   ..../tomcat/bin/catalina.sh start "$@
2. Change it to the following:
   ..../tomcat/bin/catalina.sh run "$@
   The run command causes the Tomcat output to display in the console window for IBM Cognos BI.
3. Stop and restart IBM Cognos BI using the ./shutdown.sh and ./startup.sh commands.
   If the following error message displays in the console window for any of the application servers, the issue is an HP-UX configuration problem:
   OutofMemoryException error: Unable to create new native thread on HP-UX.
   The problem is that the default values for HP-UX 11.0 and 11i are set too low for most Java™ applications.
   Tip: You can check the number of threads in your process by using the -eprof option available in JDK 1.1.8 and by analyzing the Java.eprof file using HPjmeter by selecting the threads metric.

Steps to Increase the maximum Number of Threads Per Process
1. Have your system administrator change the Kernel parameter as follows:
   - max_thread_proc = 512
   - nkthread = 1024
2. Ensure that the ulimit settings are unlimited.

Content Manager Cannot Connect to the Content Store on Oracle
If you are using an Oracle database as a content store, the DPR-ERR-2058 error may be generated when logging onto the portal http://host_name/ibmcognos. All tables are created on the database.
You may also receive the following error messages:

- CM-CFG-5036 Content Manager failed to connect to the content store.
- ORA-01017: invalid username/password; logon denied

**Steps to Set the Oracle Database Server Name**

1. In the Explorer window, click Data Access > Content Manager > Content Store.
2. Change the Oracle database server name to a fully qualified name such as host_name.companyname:1534 to match the name in the tnsnames.ora file.

**Report Studio Does Not Start**

You may not be able to start Report Studio if you are using pop-up blocking software on your computer.

When you start Report Studio, it opens in a new browser window. In addition, a new browser window opens when you run a report and when an error is detected.

To correct the problem, disable any pop-up blocking software when working in Report Studio.

**DPR-ERR-2022 Error Displays in Web Browser When Starting IBM Cognos BI**

After you start the services in IBM® Cognos® Configuration and then try to open the portal, a message similar to the following may display:

*DPR-ERR-2022 No response generated. This may be due to an incorrect configuration, a damaged installation, or the dispatcher not having finished initializing.*

**Opening the Portal Too Soon**

This problem can occur if you try to open the portal before IBM Cognos services are initialized.

To avoid this problem, after you start the services in IBM Cognos Configuration and the configuration tool shows that the services are running, wait a few minutes for all services to start before you open the portal.

**The system.xml File Contains Errors**

The system.xml file may have been edited.

Replace the system.xml file in the c10_location\templates\ps\portal directory with a copy from backup or use an XML editor to edit it.

**Corrupt Characters While Installing in Some Languages on Linux**

When running the installation wizard on Linux® in Korean, Chinese (simplified or traditional), or Japanese, you may see corrupted characters in the dialog boxes of the user interface or in messages that display during the installation.

To avoid the problem of corrupt characters in the user interface during installation, you can use one of the following solutions:

- Configure the Asian fonts on the Linux server:
Chapter 38: Installation and Configuration Problems

- Set the locale to utf8.
  For example,
  ko_KR.utf8, ja_JP.utf8, zh_CN.utf8, or zh_TW.utf8
- Ensure that Asian language Fontset *medium-r*--14* is available on X server.
- Run an unattended installation using the default response.ats file that is provided with your IBM® Cognos® BI product. For information about setting up an unattended installation, see the Installation and Configuration Guide.

**Unable to Download the cognos.xts File**

After installing IBM® Cognos® BI, you are prompted to download the cognos.xts file when connecting to the IBM Cognos BI portal. The following error message may display:

*You have chosen to download a file from this location. cognos.xts from servername*

This problem occurs when the permissions on the virtual directories are not set properly. You must provide the cgi-bin virtual directory in the Microsoft® Internet Information Service (IIS) with execute permissions.

To resolve this problem, recreate the virtual directories in IIS with the permissions from the following table, where c10_location represents the installation location.

<table>
<thead>
<tr>
<th>Alias</th>
<th>Path</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ibmcognos</td>
<td>c10_location\webcontent</td>
<td>Read</td>
</tr>
<tr>
<td>ibmcognos\cgi-bin</td>
<td>c10_location\cgi-bin</td>
<td>Read Execute</td>
</tr>
</tbody>
</table>

For example, the default installation location is C:\Program Files\IBM\Cognos\c10.

**Application Server Startup Script Fails**

You may have problems running the startup scripts for an application server to deploy the IBM Cognos application if IBM® Cognos® BI components are installed in a directory with a name that includes spaces.

To resolve this problem, reinstall to a new directory and do not include spaces in the new name. If this solution is not easily handled by the startup scripts, try adding quotation marks around the directory name that includes spaces or use the 8.3 DOS naming convention.

**IBM Cognos BI Running under WebLogic Application Server on AIX Fails**

The IBM® Cognos® BI server instance may go into a FAILED_NOT_RESTARTABLE state in the WebLogic Administration Console on AIX®. Numerous core files and Java™ core files are written to the IBM Cognos BI domain directory. IBM Cognos BI terminates and is not accessible via the portal.
This behavior occurs only when the IBM Cognos BI Managed Node is started with the WebLogic Administration Console. Start the IBM Cognos BI Managed Node using the WebLogic startup scripts instead.

**Deploying IBM Cognos BI to an Oracle Application Server or IBM WebSphere Application Server Fails**

Deploying IBM® Cognos® BI to an Oracle application server or an IBM WebSphere® application server may fail with any of the following errors:

- *Browser timeout in administration console*
- *HTTP 500 Internal Error*
- *Deployment failed: Base Exception: java.rmi.RemoteException (Oracle)*
- *Return to application file selection page (IBM WebSphere)*

These errors can occur because the application file that you are trying to deploy is too large.

To solve this problem, do the following:

- If you are using the **Build Application Wizard**, clear the *Include static files from the Webcontent folder* check box when you select the application to build.
  
  This will reduce the size of the application file. If static content is required, you can manually copy it to the deployed application location after you have successfully deployed IBM Cognos BI into the application server.

- If you are deploying the application file manually for an Oracle application server, type the following command:

  ```
  dcmctl deployapplication -f path_and_name_of_ear_file -a application_name -co OC4J_instance_name
  ```

  This command is not supported for Oracle Release 3.

  For more information about deploying IBM Cognos BI to an application server, see the *Installation and Configuration Guide*.

**Unable to Deserialize Context Attribute Error When Deploying the p2pd.war File to WebLogic**

When you deploy the p2pd.war file to WebLogic, you may see the following error:

```
Error [context]Could not deserialize context attribute
java.io.NotSerializableException: com.cognos.logserver.LogService
```

This error does not affect the deployment of the p2pd.war file.

To avoid this problem, add at least one language preference in Internet Explorer.
Error Displays After Upgrading IBM Cognos BI on a WebLogic Application Server

You are using WebLogic and upgrade IBM® Cognos® BI from an earlier release. After you deploy the p2pd.war file for the new installation, a message similar to the following may display:

<BEA-101215>  <Malformed Request "null". Request parsing failed, Code: -10>

This can occur if you undeploy IBM Cognos BI from WebLogic and some files from the earlier version are not removed from the system.

To solve this problem, use the administrative tools for your application server to ensure that IBM Cognos BI has been undeployed. For information about undeploying applications, see your application server documentation.

If the directory to which IBM Cognos BI was originally deployed is not removed during the undeploy process, delete the directory. Also, remove any IBM Cognos BI .jar files that are cached in your application server environment.

After you remove all files from the previous installation, you can redeploy IBM Cognos BI.

Chinese, Japanese, or Korean Characters Are Different After Upgrade

If you use Chinese, Japanese, or Korean characters, you may notice differences in some characters after upgrading from ReportNet® to IBM® Cognos® BI.

Examples

● You run an existing report. When you compare the output to the same report in ReportNet, you see that some of the characters are different.

● You do a search that you did in ReportNet and get different results.

The differences occurred because the conversion tables that are used for Chinese, Japanese, and Korean were modified to meet global standards. If your report specifications or search filters contain expressions that use constant values, the results may be affected.

If you want to use the same conversion table that you used in ReportNet, run the following script in the $c10_location/bin directory:

● On UNIX®, type
  
  conv_compat.sh

● On Linux®, type
  
  conv_compat.sh

● On Microsoft® Windows® operating system, type
  
  conv_compat.cdm

Accented or Double-Byte Characters May Not Display Correctly When Installing IBM Cognos BI on Linux

If you are using issetup under a UTF-8 locale, accented or double-byte characters may not display correctly.
To resolve this problem when installing in German or French, use a non-UTF-8 locale and then launch issetup to install IBM® Cognos® BI.

To resolve this problem when installing in Japanese, change the encoding setting of X Terminal to Shift-JIS, and then install IBM Cognos BI using an unattended installation. For more information, see the Installation and Configuration Guide.

RSV-SRV-0066 A soap fault has been returned or RQP-DEF-0114 The user cancelled the request Errors Display in High User Load Environments

These errors may be in the IBM® Cognos® cogserver.log if you have a high user load (over 165 users) and interactive reports are running continuously in a distributed installation.

To resolve this problem, increasing the async_wait_timeout_ms parameter parameter in webapps/p2pd/WEB-INF/services/reportservice.xml file. For more information, see the IBM Cognos BI Installation and Configuration Guide.

Also, increase the Queue Time Limit setting to 360.

Problems Configuring IBM Cognos Business Intelligence

After you install IBM® Cognos® BI components, you may encounter problems when you save changes in IBM Cognos Configuration.

Ensure that you

• configure and start the services on the computer where Content Manager is located before you configure other components

• restart the IBM Cognos service after you make any configuration changes

Configuration Tool cogconfig.sh Return Values Are Not Compliant with Conventional UNIX Return Values

On UNIX® platforms, the configuration tool command cogconfig.sh returns 0 for an unsuccessful execution and 1 for a successful execution. These return values are not compliant with the conventional UNIX return results, where a return value of 0 indicates a successful execution and a non-zero return value indicates an error.

The non-compliant behavior will be corrected in a future release. You may be required to make changes to your customer applications and scripts before making use of the new behavior.

Run Database and Index Cleanup Scripts

In some troubleshooting situations, you may be advised to start with new configuration data.

You can run SQL scripts to delete all the tables in any of the following databases that IBM® Cognos® BI components use:

• content store for data that IBM Cognos BI needs to operate

• delivery database for report notifications
 metric store for metric package content and Metric Studio user preferences

- database for human tasks and annotations

You can run SQL scripts to delete all the tables and indexes in the following database:

- logging database for log messages

When you delete a table, its structural definition and data are deleted permanently from the database. For the metric store, database objects may also be deleted.

When you delete the indexes from a logging database, they are deleted permanently from the database.

When you restart the IBM Cognos service, a new set of required database tables and indexes are created automatically in the location specified by your configuration settings.

**Steps**

1. On each computer where Content Manager is located, stop the IBM Cognos service.

2. Go to the appropriate directory:
   - To delete tables and indexes from the logging database, go to \c10\location\configuration\schemas\logging.
   - To delete tables from the content store, go to \c10\location\configuration\schemas\content.
   - To delete tables from the notification database, go to \c10\location\configuration\schemas\delivery.
   - To delete tables from the metric store, go to \c10\location\configuration\schemas\cmm.
   - To delete tables from the human task and annotation database, go to \c10\location\configuration\schemas\hts.

3. Go to the appropriate database directory.

4. Depending on the database and database type, run one of the following scripts in the appropriate database tool to delete the tables.

   The following table lists the script names for the content store database.

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Script Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2®</td>
<td>dbClean_db2.sql</td>
</tr>
<tr>
<td>DB2 on z/OS®</td>
<td>dbClean_db2zOS.sql</td>
</tr>
<tr>
<td>Derby</td>
<td>dbClean_derby.sql</td>
</tr>
<tr>
<td>Informix®</td>
<td>dbClean_informix.sql</td>
</tr>
<tr>
<td>Microsoft® SQL Server</td>
<td>dbClean_mssqlserver.sql</td>
</tr>
</tbody>
</table>
The following table lists the script names for the notification database.

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Script Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>dbClean_oracle.sql</td>
</tr>
<tr>
<td>Sybase</td>
<td>dbClean_sybase.sql</td>
</tr>
</tbody>
</table>

The following table lists the script names to clean up tables and indexes for the logging database.

For Informix, the index cleanup script must be edited if you host more than one audit logging database on the Informix instance and use them at the same time. See step 5.

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Script Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2</td>
<td>NC_DROP_DB2.sql</td>
</tr>
<tr>
<td>DB2 on z/OS</td>
<td>NC_DROP_DB2.sql</td>
</tr>
<tr>
<td>Derby</td>
<td>NC_DROP_Derby.sql</td>
</tr>
<tr>
<td>Informix</td>
<td>NC_DROP_IFX.sql</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>NC_DROP_MS.sql</td>
</tr>
<tr>
<td>Oracle</td>
<td>NC_DROP_ORA.sql</td>
</tr>
<tr>
<td>Sybase</td>
<td>NC_DROP_SYBASE.sql</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Script Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2</td>
<td>LS_dbClean_db2.sql</td>
</tr>
<tr>
<td></td>
<td>LS_dbCleanIndexes_db2.sql</td>
</tr>
<tr>
<td>DB2 on z/OS</td>
<td>LS_dbClean_db2zOS.sql</td>
</tr>
<tr>
<td></td>
<td>LS_dbCleanIndexes_db2zOS.sql</td>
</tr>
<tr>
<td>Derby</td>
<td>LS_dbClean_derby.sql</td>
</tr>
<tr>
<td></td>
<td>LS_dbCleanIndexes_derby.sql</td>
</tr>
<tr>
<td>Informix</td>
<td>LS_dbClean_informix.sql</td>
</tr>
<tr>
<td></td>
<td>LS_dbCleanIndexes_informix.sql</td>
</tr>
</tbody>
</table>
The following table lists the script names for the metric store database.

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Script Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft SQL Server</td>
<td>LS_dbClean_mssql.sql</td>
</tr>
<tr>
<td></td>
<td>LS_dbCleanIndexes_mssql.sql</td>
</tr>
<tr>
<td>Oracle</td>
<td>LS_dbClean_oracle.sql</td>
</tr>
<tr>
<td></td>
<td>LS_dbCleanIndexes_oracle.sql</td>
</tr>
<tr>
<td>Sybase</td>
<td>LS_dbClean_sybase.sql</td>
</tr>
<tr>
<td></td>
<td>LS_dbCleanIndexes_sybase.sql</td>
</tr>
</tbody>
</table>

Specify the dbalias only if a database with the same name is already cataloged.

The following table lists the script names for the Human Task and Annotation database.

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Script Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>all types</td>
<td>humanTaskService-dropScript.sql</td>
</tr>
</tbody>
</table>

5. If you have host more than one audit logging database on your Informix instance, do the following:
   - Go to `c10_location\configuration\schemas\logging\informix` and open the file `LS_dbCleanIndexes_informix.sql` in a text editor.
   - Replace every instance of IPFSCRIPTIDX with the value that you specified when you created the IPFSCRIPTIDX property in IBM Cognos Configuration. For more information, see the
topic about specifying a log messages repository in the *Installation and Configuration Guide*.

- Save and close the file.

6. Start the IBM Cognos service.

**Error Trying to Encrypt Information When Saving Your Configuration**

When you save your configuration using the configuration tool, you may see an error message that the cryptographic information cannot be encrypted. An error occurred when requesting a certificate from the Certificate Authority.

*The cryptographic information cannot be encrypted. Do you want to save the configuration in plain text?*

Before you can encrypt your configuration settings, the computer where Content Manager is installed must be configured and running. On UNIX®, ensure that you copied the appropriate .jar files to the installation location of your Java™ Runtime Environment. In addition, ensure that your Java environment is configured correctly, the URIs are correct, and the same certificate authority password is configured for all Content Manager computers.

On Linux®, ensure that you copied the appropriate .jar files to the installation location of your Java Runtime Environment.

Also, an error message similar to the following may display:


The cryptographic error usually means the Java environment is not configured correctly. Ensure that the JAVA_HOME environment variable is set correctly and the appropriate security providers are installed, such as JSSE for JRE 1.5.

**Steps to Check the Configuration**

1. On the Content Manager computer, start IBM® Cognos® Configuration.

2. In the **Explorer** window, click **Environment**.

3. In the **Properties** window, verify these properties:
   - Under **Gateway Settings** > **Gateway URI**
   - Under **Dispatcher Settings** > **External dispatcher URI** and **Internal dispatcher URI**
   - Under **Other URI Settings** > **Dispatcher URI for external applications** and **Content Manager URIs**

4. In the **Explorer** window, click **Security** > **Cryptography** > **Cognos**.

5. In the **Properties** window, under **Certificate Authority settings**, click the value for **Password**. Ensure that the same password is used on all Content Manager computers.

6. Save the configuration and restart IBM Cognos BI.
Problems Generating Cryptographic Keys in IBM Cognos Configuration

When you uninstall IBM® Cognos® BI, some temporary folders are left behind. Reinstalling the product to the same location without first removing the temporary folders may cause problems while attempting to generate the cryptographic keys in IBM Cognos Configuration.

To resolve this problem, uninstall IBM Cognos BI, remove the $c10_location/temp/cam$ folder, and install IBM Cognos BI again.

CAM-CRP-1315 Error When Saving Configuration

When you save your configuration, you may receive the following error message:

CAM-CRP-1315 Current configuration points to a different Trust Domain than originally configured.

This error occurs when there has been a change to your environment’s trust domain. The trust domain is managed by the Certificate Authority associated with the content store. This error can occur if the content store you originally used has been removed or if you modified your configuration to use a Content Manager associated with a different content store after you have saved your original configuration.

To resolve the problem, change your configuration to use the original content store or regenerate the cryptographic keys.

Steps to Regenerate Cryptographic Keys

1. On the Content Manager computer, back up the existing cryptographic keys by saving the following directories to an alternate location that is secure:
   - $c10_location/configuration/csk$
   - $c10_location/configuration/encryptkeypair$
   - $c10_location/configuration/signkeypair$

2. Delete the $csk$, $encryptkeypair$, and $signkeypair$ directories.

3. In IBM® Cognos® Configuration, save the configuration and restart the services.

4. Repeat steps 1 to 3 on all computers that have IBM Cognos BI components installed.

CAM-CRP-0221 Error When Logging Into the Portal

After installing IBM® Cognos® BI on Microsoft® Windows® operating system (either a 32-bit or 64-bit system) and configuring IBM HTTP Server as the gateway, attempts to log in to the IBM Cognos BI portal result in an error message that contains the following:

CAM-CRP-0221 Unable to load the provider 'CAM_Crypto_TOpenSSL.dll' specified in the configuration file.
This error occurs when incompatible versions of OpenSSL libraries are loaded. To resolve the problem, load the OpenSSL libraries that are provided with IBM Cognos BI.

**Steps**

1. On the gateway computer, go to `IBM_HTTP_location/conf` directory and open httpd.conf in a text editor.

2. Add the following lines to the file:
   
   ```plaintext
   LoadFile "c10_location/cgi-bin/ssleay32.dll"
   LoadFile "c10_location/cgi-bin/libeay32.dll"
   
   where `c10_location` is the path to the IBM Cognos BI installation directory.
   ```

**Manually Changing the Installation Directory Name Affects Installations Running Under an Application Server**

You installed IBM® Cognos® BI using the installation wizard and later renamed the installation directory or manually copied the contents to another directory. When you attempt to run IBM Cognos BI within an application server, you may have one of the following problems:

- IBM Cognos BI does not start.
- Log directories are empty.
- Logs contain a linkage error or unsatisfied link error.

When you manually change the installation directory, the information in the IBM Cognos BI root directory becomes invalid. To resolve the problem, you must either update the IBM Cognos BI root directory before you create the IBM Cognos BI application file to deploy to the application server or you must reinstall IBM Cognos BI in the original location. If you reinstall IBM Cognos BI, follow the process for upgrading.

**Steps**

1. In the new or renamed installation directory, open `c10_location/webapps/p2pd/WEB-INF/classes/cogroot.link` in a text editor.

2. Replace the path with the new location of the installation directory and save the file.

3. To build the application file to be deployed to the application server, in IBM Cognos Configuration, from the **Actions** menu, select **Build Application Files**.

4. If you built and deployed an application file to the application server before updating the cogroot.link file, undo the deployment.

5. Deploy the new application file to the application server.

For more information about configuring IBM Cognos BI for another application server, see the *Installation and Configuration Guide*. 

Chapter 38: Installation and Configuration Problems
**Configuration Data is Locked by Another Instance of IBM Cognos Configuration**

You may get an error message that the configuration data is locked by another instance of IBM® Cognos® Configuration.

When you start IBM Cognos Configuration, it checks to see if the cogstartup.lock file exists in $c10_location/configuration. The file may exist if a previous instance did not shut down properly or if another instance of IBM Cognos Configuration is running.

If another instance of IBM Cognos Configuration is running, you should exit that instance. Otherwise, any changes you make to the local configuration may result in errors.

If no other instance of IBM Cognos Configuration is running, delete the cogstartup.lock file in $c10_location/configuration.

If the IBM Cognos service is stopped, click **Start**.

**Unable to Exit a Tab Sequence When Using Keyboard-only Navigation in IBM Cognos Configuration**

If you use the Tab key to navigate in IBM® Cognos® Configuration, you may experience problems exiting a tab sequence. For example, in the Properties window, you can press the Tab key to move from one property to another.

However, because IBM Cognos Configuration is a Java™ application, when you want to close the Properties window, you must press Ctrl+Tab.

**Unable to Save Your Configuration**

You may be unable to save your configuration because you are missing a resource. For example, you delete a resource such as the Cognos namespace, a cryptographic provider, or the content store. You can replace the default database type for the content store with Oracle, DB2®, or Sybase. You cannot replace the Cognos namespace. You can recreate it, but you must then recreate your Cognos groups and roles.

**Steps to Recreate the Cognos Namespace**

1. Start IBM Cognos Configuration.

2. In the Explorer window, under Security, right-click **Authentication** and then click **New resource** > **Namespace**.

3. In the Name box, type a name for the resource.

4. In the Type box, click **Cognos**, and then click **OK**.
   
   The Cognos namespace displays in the Explorer window.

5. From the File menu, click **Save**.

**Java Error When Starting IBM Cognos Configuration**

When you start IBM® Cognos® Configuration, you may receive an error message that the Java™ Runtime Environment (JRE) has changed and that the current cryptographic information is not
compatible with the new JRE. You may then be prompted to regenerate the cryptographic information for the new JRE or exit to switch back to the previous JRE.

This error may occur for one of these reasons:

- Your configuration data was encrypted using a different JRE than the one IBM Cognos BI components are currently using.
- The cryptographic information may have been corrupted.

If you click Regenerate in the error dialog, the IBM Cognos service is stopped and the cryptographic information is regenerated.

If you click Exit in the error dialog, you must set the JAVA_HOME environment variable to point to the JRE that you used to save your configuration.

On Microsoft® Windows® operating system, if you want IBM Cognos BI components to use the JRE that is installed by default, unset JAVA_HOME or set JAVA_HOME to c10_location/bin/jre.

Note: If you want to change from one JRE to another, see the topic on changing the version of JVM that IBM Cognos BI components use. For more information, see the Installation and Configuration Guide.

**Cryptographic Error When Starting IBM Cognos Configuration**

When you start IBM® Cognos® Configuration, the following error message may display:

*The cryptographic information may have been corrupted or the cogstartup.xml file is invalid. You may have to fix this file or remove it from disk. For more information, see the Installation and Configuration Guide.*

This error occurs when IBM Cognos BI components detect an error in the cogstartup.xml file. This can occur when the cogstartup.xml file is manually edited and there is an error in the changed text. To resolve the problem, replace the cogstartup.xml file with a copy from your backup location.

**Current Configuration Settings Are Not Applied to Your Computer**

You change default property values or add a resource to your installation in IBM® Cognos® Configuration. After saving the current configuration, you may not see the changes or be able to use the resource in the run-time environment.

To apply the new settings to your computer, you must restart the IBM Cognos service.

**Steps to Restart the IBM Cognos service**

1. Start IBM Cognos Configuration.
2. From the Actions menu, click the appropriate command:
   - If the IBM Cognos service is currently running, click Restart.

   This action starts all installed services that are not running and restarts services that are running. If you want to restart a particular service, select the service node in the Explorer window and then click Restart from the Actions menu.
If the IBM Cognos service is stopped, click **Start**.

This action starts all installed services that are not running. If you want to start a particular service, select the service node in the **Explorer** window and then click **Start** from the **Actions** menu.

### CM-CFG-029 Error When Trying to Save a Configuration That Specifies a Microsoft SQL Server Content Store

In IBM® Cognos® Configuration, you try to save a configuration and the following error message is in the cogserver.log file:

**CM-CFG-029 Content Manager is unable to determine whether the content store is initialized.**

**EXECUTE permission is denied on object "sp_tables", database "master", owner "dbo".**

This indicates that you do not have the correct permissions to initialize a content store or create a table in the database.

The solution is to ensure that the content store user has permissions to use the sp_tables stored procedure in the master database.

### DB2 Not Found Error for Linux on System z

You have installed IBM® Cognos® BI and after you run the C8DB2.sh script, you see an error stating that DB2® cannot be found is displayed or written to the log files:

You can solve this problem by using the following steps:

1. Create a profile that sources the sqllib/db2profile from the user’s home directory for the user you enter when you run the script.

   An example .profile would contain something like the following:

   ```bash
   if [ -f /home/db2user/sqllib/db2profile ]; then
     /home/db2user/sqllib/db2profile
   fi
   ```

2. Run the C8DB2.sh script again.

### DPR-ERR-2079 When Content Manager Configured For Failover

You configured multiple computers as standby computers to ensure failover for Content Manager. However, the following error message displays to the user:

**DPR-ERR-2079 Firewall Security Rejection. Your request was rejected by the security firewall**

This error message can occur if you have not configured all the standby computers as valid hosts for the IBM® Cognos® Application Firewall.

To solve this problem, on each distributed computer, start IBM Cognos Configuration and enter the names of all the computers that you are configuring for failover.

**Steps**

1. In the **Explorer** pane, click **Security > IBM Cognos Application Firewall**.
2. In the right pane, click in the **Value** column next to **Valid domains or hosts**.
3. Click the edit button.
4. Enter the names of all the computers that you are configuring for failover.
5. Save and start the configuration.

**Importing a Large Content Store in Solaris using JRE 1.5 Fails**

If you export a content store that is greater than 2 GB when exported, and then attempt to import it in Solaris using JRE 1.5, the import fails with the error message "CM-SYS-5001 A Content Manager internal error occurred."

This is due to a bug in JRE 1.5 on Solaris. Use JRE 1.4.2 instead.

**Importing a Large Deployment in Windows Crashes the Java Virtual Machine**

The Java™ Virtual Machine under Microsoft® Windows® operating system may crash under the following circumstances.

1. The maximum Java memory setting is Medium (1152MB) or higher.
2. You are importing a large archive from a previous release of IBM Cognos BI.
3. The archive contains large models that require upgrading.

To resolve this issue, set the maximum Java memory setting to Small (768MB).

**Users are Prompted for Active Directory Credentials**

The single signon mechanism does not work when IBM® Cognos® BI is configured as follows:

- Microsoft® Internet Explorer runs on a Microsoft® Windows® operating system NT® computer.
- The authentication namespace is configured with the Active Directory provider.

As a result, users are prompted for their Active Directory credentials.

This problem occurs because the IBM Cognos BI Active Directory provider uses ADSI protocol and Kerberos delegation for authentication in a single signon environment. When Microsoft Internet Explorer runs on Windows NT, it cannot authenticate to the IIS server using Kerberos delegation.

When your system is configured for Windows Integrated Authentication, for the single signon to work with IIS, you must

- configure IBM Cognos BI to communicate with the Active Directory server using the LDAP provider.
- configure the external identity mapping property to read the REMOTE_USER environment variable.
Font on UNIX Not Found When Starting IBM Cognos Configuration

When you start IBM® Cognos® Configuration, the following error message may display:

_font specified in font.properties not found...

This is a common problem on UNIX®. It means that the Java™ Virtual Machine (JVM) is trying to use one or more fonts that are not installed on your computer. However, the JVM should use the system default, and IBM Cognos Configuration should start and run normally.

To avoid these errors, add the missing fonts to your Java Runtime Environment by editing the font.properties files. Several font.properties files, which contain standard font environment information, are installed with your Java Software Development Kit. You can find these files in the JRE_location/lib directory.

For more information, see the Java documentation.

ESSBASEPATH Cannot Be Detected

For Windows® and UNIX® platforms, Oracle Essbase software uses the ESSBASEPATH environment variable to locate the Essbase 11 client software. The Oracle Hyperion Enterprise Performance Management (EPM) System Installer creates ESSBASEPATH as a user environment variable.

If the IBM Cognos service is configured to run or log on as a system account, you must manually add ESSBASEPATH as a system environment variable, if it does not exist. When IBM Cognos software cannot locate the ESSBASEPATH environment variable, you receive the following error:

DB2-ERR-0044 Essbase environment variable "ESSBASEPATH" cannot be detected. Check if Essbase client is installed.

To resolve this issue, do one of the following, and then restart the IBM Cognos service:

• Double-click IBM Cognos service, and on the Log On tab, specify a user account that has access to ESSBASEPATH.

• Add ESSBASEPATH as a system environment variable.

Note that if you are upgrading to Essbase 11 software from Essbase 9 software, you must install the appropriate client and then edit the qfs_config.xml file to change the library name.

Steps

1. In the c10_location/configuration directory, open the file named qfs_config.xml.

2. Find the line of code <provider name="DB2OLapODP" libraryName="essodp93" connectionCode="DO"/> and change the library name from essodp93 to essodp111.

3. Save the changes.

Query Fails When Using Oracle Essbase Server

You run a query to retrieve metadata or data from an Oracle Essbase server and you receive a message similar to one of the following messages:
The IBM Cognos gateway is unable to connect to the IBM Cognos BI server. The server may be unavailable or the gateway may not be correctly configured.

DB2-ERR-0005 An unknown error occurred during the login. Database error code: 1,042,006.

XQE-DS-0006 Unable to logon to the data source.

These IBM Cognos errors can result from Windows not having enough Windows sockets or ports available. A lack of sufficient ports can cause data retrieval from Essbase to fail because of network communication errors.

To resolve this problem, increase the number of Windows sockets or ports that are available for program use by adding two entries in Microsoft Registry Editor.

**Important:** Use Microsoft Registry Editor at your own risk. Incorrect use may cause problems that require you to reinstall your operating system. Microsoft cannot guarantee that you can solve problems that result from using Registry Editor incorrectly.

**Steps**

1. From the Windows Start menu, run the regedit application.

2. In the HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters directory, create a new DWORD value named MaxUserPort.

3. Set the properties for MaxUserPort to use a value of 65534 and a base of Decimal.
   The range for value is from 30000 to 65534.

4. In the same directory, add another DWORD value named TcpTimedWaitDelay.

5. Set the properties for TcpTimedWaitDelay to use a value of 50 and a base of Decimal.
   The range for value is from 30 seconds to 300 seconds, with a default value of 240 seconds (4 minutes).

6. After closing the regedit application, restart the Microsoft CRM server or restart your computer.

For more information, visit the technet2.microsoft.com Web site and search on the terms MaxUserPort and TcpTimedWaitDelay.

**Group Membership is Missing From Active Directory Namespace**

If an Active Directory namespace is configured for the same forest and a user is authenticated using a credential, the group membership will be missing.

The process identity of IBM Cognos BI, when running as a local system account or a domain user, must have one of these privileges:

- impersonate a client after authentication
- act as part of the operating system

If the privilege is missing, there is no group membership for the authenticated user.
To solve this problem, perform the following steps.

**Steps**
1. From the Start menu, click Settings, Control Panel.
2. Click Administrative Tools, and then double-click Local Security Policy.
3. In the console tree, click Security Settings, Local Policies.
4. Click User Rights Assignment.
5. Add the process identity of IBM Cognos BI to one of the following policies:
   - Impersonate a client after authentication
     The default is Administrators, Service.
     For more information, see the library article fe1fb475-4bc8-484b-9828-a096262b54ca1033.mspx at the Microsoft® Web site.
   - Act as part of the operating system
     The default is Local system.
     For more information, see the library article ec4fd2bf-8f91-4122-8968-2213f96a95dc1033.mspx at the Microsoft Web site.

Both of these privileges give an account the ability to act as another user.

The privilege Impersonate a client after authentication is similar to the Act as part of the operating system privilege except that it will only allow a process to impersonate after authentication, whereas the privilege Act as part of the operating system allows a process to impersonate before authentication.

For more information, see the library article tkerbdel.mspx at the Microsoft Web site.

**Errors Displayed Deploying to Oracle 10G Application Server**
You are deploying IBM® Cognos® BI to an Oracle 10G Application Server, and get the following error messages:

- **CMM-APP-3254** The initialization of the metrics store failed.
- **DIS-ERR-3115** Task execution failed.
- **MDS-RUN-3213** Unable to locate database bulk load utility. Please install the appropriate database tool for this platform (‘bcp’ for SQL Server, ‘sqlldr’ for Oracle)

This occurs because the bulk loading utilities (SQL Loader on Oracle) are not included in the deployment file created by IBM Cognos Configuration.

To resolve this error, you must use the Oracle client software on the computer where you installed the Oracle 10G Application Server to install the missing components. Ensure that you install SQL Loader.
Page Cannot be Found Error Running Reports using IBM Cognos for Microsoft Office

In a Microsoft® Office document configured for IBM® Cognos® for Microsoft Office, you use Run Report but receive a "The page cannot be found" error message.

This can occur if the IBM Cognos BI gateway and dispatcher use "localhost" as the server name values on the IBM Cognos BI server.

To correct this, use the computer name for the gateway and dispatcher host values instead of "localhost".

Error Initializing Oracle Content Store After Upgrade from ReportNet

You are creating a content store in Oracle or upgrading a ReportNet® content store in Oracle to IBM® Cognos® BI, and you receive the following error message:

Content Manager can not initialise the content store with the assistance of the initialisation file: dbupgrade2_0021-to-2_0022_oracle.sql ORA-22858 invalid alteration of datatype

This error occurs if the Oracle database compatibility level is set lower than 9.0.1.

You can correct this by changing the compatibility level to 9.0.1 or higher and restarting the Oracle instance.

CGI Timeout Error While Connected to IBM Cognos BI Components Through a Web Browser

When performing operations through your Web browser, you receive the following error message:

CGI Timeout, process will be deleted from server.

The error occurs when you use Microsoft® Internet Information Services (IIS) as your Web server and the gateway is configured to use CGI. IIS has a default timeout for CGI applications.

To resolve this problem, you can configure the gateway to use ISAPI. IIS does not have a default timeout for ISAPI applications. Or, if you want to keep using a CGI gateway, you can increase the CGI timeout in IIS.

Steps to Change the Gateway to ISAPI

1. On the gateway computer, start IBM® Cognos® Configuration.

2. Under Environment, for the Gateway URI property, change the cognos.cgi portion of the URI to
cognosisapi.dll

3. In your Web browser, specify the ISAPI URI:
http://computer_name/ibmcognos/isapi

Steps to Increase the CGI Timeout

1. In the administrative tools for Microsoft® Windows® operating system, open Internet Information Services.
2. Under the local computer node, right-click **Websites** and select **Properties**.

3. In the **Home Directory** tab, click **Configuration**.

4. In the **Process Options** tab, increase the CGI script timeout.

**Servlet Class Fails to Load in WebLogic**

You may have problems when configuring a distributed server installation and using WebLogic as the application server for IBM® Cognos® BI.

When deploying the p2pd.war for the Application Tier Components computer, you may receive servlet exceptions and the dispatcher does not start. The cogserver.log is also not created.

The following error messages display in the WebLogic Server console:

```
<Jul 9, 2004 3:47:37 PM EDT> <Error> <HTTP><BEA-101249> <[ServletContext (id=19023494,name=p2pd,context-path=/p2pd)]:Servlet class com.cognos.pogo.isolation.ServletWrapper for servlet cfgss could not be loaded because the requested class was not found in the classpath /host2/bea812/user_projects/domains/c10/applications/p2pd/WEB-INF/classes. java.lang.ClassNotFoundException: com.cognos.pogo.isolation.ServletWrapper.>
<Jul 9, 2004 3:47:37 PM EDT> <Error> <HTTP> <BEA-101216> <Servlet: "cfgss" failed to preload on startup in Web application: "p2pd". javax.servlet.ServletException: [HTTP:101249][ServletContext(id=19023494,name=p2pd,context-path=/p2pd)]:Servlet class com.cognos.pogo.isolation.ServletWrapper for servlet cfgss could not be loaded because the requested class was not found in the classpath /host2/bea812/user_projects/domains/c10/applications/p2pd/WEB-INF/classes.java.lang.ClassNotFoundException: com.cognos.pogo.isolation.ServletWrapper. at weblogic.servlet.internal.ServletStubImpl.prepareServlet(ServletStubImpl.java:799)
at weblogic.servlet.internal.WebAppServletContext.preload Servlet(WebAppServletContext.java:3252)
```

To avoid this problem, do not deploy the p2pd application from the WebLogic applications directory. Create the p2pd directory in another location and deploy p2pd from there.

**Steps**

1. Open IBM Cognos Configuration and configure the Application Tier Components computer.

2. Restart the Content Manager computer.

3. Create a p2pd directory in a location that is accessible by the WebLogic server but is not in the WebLogic applications directory.

   For example, create a directory named p2pd in the following location:

   `WebLogic_location/user_projects/domain_name`

4. Create the p2pd.war file.

5. In the p2pd directory, extract the p2pd.war file to the WebLogic installation using the following command:
%JAVA_HOME%/bin/jar xvfm "c10_location/p2pd.war".


7. In the WebLogic Server Console, deploy the p2pd application.

**Desktop Icons or IBM Cognos Configuration Window Flicker on Windows**

When you run IBM® Cognos® Configuration on Microsoft® Windows® operating system, you may notice that the desktop icons or the IBM Cognos Configuration window flickers.

To resolve this issue, start IBM Cognos Configuration using the -noddrdraw command line option.
Chapter 39: Security Problems

You may encounter problems when using IBM Cognos Connection to administer security in IBM Cognos components.

For information about using IBM Cognos Connection, see the IBM Cognos Connection User Guide.

Problems Setting Up Security

The topics in this section document problems you may encounter when setting up security.

Access to Entries Is Denied During Deployment

If you deploy data using the Reports Administrator role, access to security entries may be denied. By default, the Reports Administrator role does not have write access to the Cognos namespace.

Before you deploy, modify the permissions of this role to ensure that it has read and write permissions to the Cognos namespace.

Prompt to Change Passwords When Logging on to an Active Directory Namespace

When logging on to IBM Cognos components using a Microsoft Active Directory namespace, the submitted password is recognized as expired and you are prompted to change it. This occurs even if the password should still be valid. If the password is successfully changed, the behavior still occurs.

The following error message appears:

Your password has expired. Please change it.

Please type your credentials for authentication.

The solution is to set up the authority for delegated administration for IBM Cognos components. Ensure that the server name or named account for starting the IBM Cognos service is set up in the Active Directory properties as an authority for delegated administration. Without these permissions, IBM Cognos components are unable to read all user properties from the Active Directory server.

For more information, see the Active Directory documentation.

Unable to Log on

If IBM Cognos components use an Active Directory Server as the security provider, you may not be able to log on using only your user ID. One of the following errors may appear:

Your password has expired. Please change it.

The provided credentials are invalid.

This problem occurs when the Content Manager service runs under the local system account and runs on a computer that is not part of the Active Directory Server domain.
To log on, you must qualify your user ID using the domain name. For example, when you log on, type
domain\user ID
If you still cannot log on, contact your IBM Cognos security administrator.

**Certificate Authority Error When Logging on to IBM Cognos Connection**

You attempt to log on, entering a valid user ID and Password, to IBM Cognos Connection in an environment that uses the default IBM Cognos Cryptographic Provider settings. However, the following error message appears:

*CAM-CRP-1071 Unable to process a remote request for the common symmetric key.*

*The certificate with the DN 'C=CA,O=Cognos,CN=CAMUSER' issued by the Certificate Authority with the DN 'C=CA,O=Cognos,CN=CA' is not trusted.*

*Reason: Exception thrown while doing CertPath validation*

*Cause: certificate expired on yyyyMMddhhmmGMT+00:00*

This problem occurs when the certificate issued by the Certificate Authority (CA) has expired. You can renew the certificate by saving the configuration in IBM Cognos Configuration on the computer where Content Manager is installed and then restarting the IBM Cognos service.

**HTTPS DRP-ERR-2068 Error in Log File When no Error Is Reported During a Switch to HTTPS**

You stopped the services on all computers in a distributed installation and configured the computers to use SSL (HTTPS). You started the services successfully, with no reported errors. However, when you checked the log file, you found an error similar to the following:

*HTTPS DPR-ERR-2068 The administration request failed. Cannot connect to dispatcher.*

The error occurred because when you restarted the services, the dispatchers were initializing and could not communicate with each other. During the initialization, a normal administration request could not be processed and a fault was generated. The fault was recognized as an initialization fault and so no error was shown during the startup. However, IBM Cognos Application Firewall does not distinguish between a regular fault and an initialization fault. As a security best practice, all messages are sent to the log file.

You can ignore the message in the log file.

**Entries Do Not Appear in IBM Cognos Connection for a Member of a Newly Created Group**

A user who is a member of a newly created group, which is itself a member of the Query Users group, logs on to IBM Cognos Connection. The user sees that some entries, such as My Folders, are missing. The user name may also be missing from the upper-left corner of the page.
The namespace that the user belongs to must have traverse rights to the Query Users group.

**Steps to Add Traverse Permissions**

1. Log on to IBM Cognos Connection as a system administrator.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
4. Next to the Cognos namespace, click the set properties button.
5. Click the Permissions tab.
6. If it is not already there, add the Query Users group to the namespace.
7. Click the check box for Query Users and ensure that Traverse permissions are granted.
8. Click Apply, and click OK.
9. Test with a user.

**Problems Logging On to Cognos Portlets**

There are several reasons why users with valid portal user IDs and passwords may not be able to log on to Cognos Portlets.

For information about configuring single signon between IBM Cognos components, Portal Services, and your portal, see the IBM Cognos Installation and Configuration Guide.

**Anonymous Access**

If IBM Cognos software is configured to allow anonymous access, all portlet users are logged on as anonymous.

**Multiple Namespaces**

If IBM Cognos software is configured to use more than one authentication namespace, you must install a separate IBM Cognos gateway and configure it to use the namespace for portal users.

You must also change the CPS connection point in the Cognos portlets:

- For IBM WebSphere, change the CPS Endpoint parameter in the portlet application.
- For SAP EP, change the _cpsserver: CPS Connection Server field in each iView.

**SAP Enterprise Portal Using the SAP Logon Ticket Method**

If you use the SAP Enterprise Portal and the SAP logon ticket method to enable single signon, ensure that the following is true:

- IBM Cognos software is configured to use an SAP BW authentication namespace.
- A proper trust relationship is established between the SAP portal and the SAP BW back end.
**SAP Enterprise Portal Using the User Mapping Method**

If you use the SAP Enterprise Portal and use the user mapping method to enable single signon, ensure that the following is true:

- A data source was created in the SAP Enterprise Portal, and it refers to the same IBM Cognos URL as in the iViews.
- The iView generating the error is associated with the IBM Cognos data source in the portal.
- The user entered valid IBM Cognos credentials in the portal.

These settings are located under user mappings in the personalize portal settings.

**IBM WebSphere Portal**

If you use the IBM WebSphere portal, ensure that the following is true.

- The credentials for the portal user are available in the IBM Cognos authentication namespace.
- The server running the portal and the server running IBM Cognos components are both configured to use the IBM WebSphere Application server.
- Both application servers are configured for single signon using one of the supported Active Credentials objects: HttpBasicAuth, LtspToken, SiteMinderToken, or WebSealToken.
- The selected Active Credentials method is indicated in the parameters for the Cognos portlet application.
- If using Ltsp token as an Active Credentials object, the IBM Cognos URL entry point is secured in IBM Cognos software.

Create a secure URL to access the dispatcher servlet or servlet gateway.

**Existing Passwords May not Work in an SAP Namespace**

When you log on to IBM Cognos Connection using an SAP namespace, some previously functional passwords may no longer work. The following error message may appear:

*Unable to authenticate a user. Please contact your security administrator. Please type your credentials for authentication.*

This is because of a policy change in SAP software. In previous versions of SAP software, passwords were not case sensitive. All password characters were automatically converted to uppercase. In SAP RFC 6.40, password characters are not automatically converted to uppercase and so passwords are case sensitive.

To address the password policy change, the SAP BAPI interface introduced a new configuration parameter named bapipasswordConv. Using this parameter, you can enable or disable the functionality that automatically converts all password characters to uppercase. To ensure that all previously
created passwords can still provide successful logon to IBM Cognos Connection, set the value of the bapiPasswordConv parameter to true.

**Steps to Change the Setting of the bapiPasswordConv Parameter**

1. Open the file bapiint_config.xml.
   
   This file is located in the `c8_location/configuration` directory.

2. Change the value of the bapiPasswordConv parameter to true, as shown in the following fragment of code:
   
   ```xml
   <bapiAbapDebug value="false"/>
   <bapiTransCall value="false"/>
   <bapiCharConv value="true"/>
   <bapiCmdRecording value="false"/>
   <bapiCacheReset value="false"/>
   <bapiCallLocks value="false"/>
   <bapiSupportCancel value="true"/>
   <bapiMaxSuspendTime value="200"/>
   <bapiPasswordConv value="true"/>
   ```

3. Save the file.

4. Restart the IBM Cognos service.

For more information, see the following SAP Notes:

- 792850 - Preparing ABAP systems to deal with incompatible passwords
- 862989 - New password rules as of Web AS ABAP 7.0/NetWeaver 2004

**Users Are Repeatedly Prompted for Credentials When Trying to Log On to an SAP Namespace**

When users whose user IDs or passwords contain special characters try to log on to an SAP namespace, they are repeatedly prompted for credentials and may not be granted access.

This is because SAP BW systems, version 3.5 and older, by default use a non-Unicode code page. Newer SAP systems use a Unicode code page. As a result, the default SAP server code page was modified for the SAP authentication provider to use a Unicode code page, which is SAP CP 4110.

To avoid this issue, in IBM Cognos Configuration, modify the default **SAP BW Server Code Page** parameter for the SAP authentication provider to use a non-Unicode code page, such as SAP CP 1100.

**Problems Using Authentication Providers**

The topics in this section document problems you may encounter when using an authentication provider.
**CAM-AAA-0096 Unable to Authenticate User When Using an IBM Cognos Series 7 Namespace**

When you try to log on to IBM Cognos version 10.1 using a user account that is deleted from all user classes in Access Manager, you receive the following error message:

*CAM-AAA-0096 Unable to authenticate because the account can not be accessed.*

The scenario is as follows:

- You create a new user in IBM Cognos Series 7 Access Manager and assign the user to a user class.
- You log on to IBM Cognos version 10.1 as an administrator and assign the same Series 7 user to an IBM Cognos version 10.1 role, such as Authors.
- You log off from IBM Cognos version 10.1 and log on again as the new Series 7 user.
- In Access Manager, you remove that user from the user class so that the user is not in any user class.
- In IBM Cognos version 10.1, when you try to log on as the user, you get the error message.

If you configured an IBM Cognos Series 7 namespace for use with IBM Cognos version 10.1, but a user in that namespace is not a member of at least one Access Manager user class, you cannot log on as that user to IBM Cognos version 10.1.

To correct the problem, add the user to at least one user class in Access Manager.

**Expired Password Error Appears When Using Active Directory Server**

You use Active Directory Server as an authentication provider. When you log on to IBM Cognos components, you see the following error message:

*Your password has expired. Please change it.*

*Please type your credentials for authentication.*

Ensure that you set up the authority for delegated administration for IBM Cognos components. The server name or named account for starting the IBM Cognos service must be set up in the Active Directory Server as an authority for delegated administration. IBM Cognos components can then read all user properties from the Active Directory server. For more information, see the Active Directory Server documentation.

**Single Signon Is Not Working When Using Active Directory Server**

You use Active Directory Server as an authentication provider and single signon is not working.

To ensure that users are not prompted to log on to IBM Cognos components, the following must be true:

- Active Directory is running in native mode.
- The user does not have the **Account is sensitive and cannot be delegated** attribute selected.
- For each IIS Web server
● This computer is part of the Active Directory domain.

● If the process is running as a Local System Account, the Trust computer for delegation attribute is selected.

● If the process is running as a Domain User Account, the Account is trusted for delegation attribute is selected.

● For each ReportNet Content Manager server
  ● This computer is part of the Active Directory domain
  ● If the process is running as a Local System Account, the Trust computer for delegation attribute is selected
  ● If the process is running as a domain User Account, the Account is trusted for delegation attribute is selected.

● Kerberos authentication must be the active WWW-authentication header.

Note: Kerberos will not work in an Internet zone.

Unable to Authenticate User for Cognos Portlets

When you attempt to access Cognos portlets through your portal, you may see the following error message:

Failed to process the request.

CPS-CCM-1200 The WSRP operation "getMarkup" failed.

CPS-WSF-2000 Authentication failed.

CAM-AAA-0055 User input is required. CAM-AAA-0036 Unable to authenticate because the credentials are invalid.

A more detailed description of the error that occurred can be found in the log.

This message indicates that Portal Services is unable to authenticate the current portal user with IBM Cognos software. For information about how to configure single signon between IBM Cognos software, Portal Services, and your portal, see the IBM Cognos Installation and Configuration Guide.

Unable to Identify Required SAP Permissions

You may encounter errors using SAP BW because your SAP user signon does not have sufficient permissions. To identify the permissions needed, use the ST01 transaction.

Steps
1. In SAP R/3, type /ST01 in the command window.
2. Under Trace components, select Authorization check.
3. Select Change trace.
4. In the Options for Trace Analysis Field, under General Restrictions, enter the user name of the IBM Cognos account you are tracing.

Unable to Access IBM Cognos Administration When an NTLM Namespace Is Used and Single Signon Is Enabled

When you are logged into IBM Cognos software using an NTLM namespace and single signon is enabled for your system, an IBM Cognos Application Firewall (CAF) error may occur when you try to access IBM Cognos Administration.

To avoid this problem, resolve any possible issues related to the gateway host name. You can either ensure that the gateway host name matches the gateway host or you can add the name of the gateway server to the list of valid domains and hosts.

Steps to Match the Gateway Host Name
1. Open IBM Cognos Configuration.
2. In the Explorer window, click Environment.
3. In the Properties window, under Gateway Settings, ensure that Gateway URI specifies the correct server name or IP address and not localhost.
   Tip: We recommend specifying a server name or IP address, not localhost, for all URI properties.
4. Save the configuration.

Steps to Add the Gateway Server as a Valid Host
1. Open IBM Cognos Configuration.
2. In the Explorer window, under Security, click IBM Cognos Application Firewall.
3. In the Properties window, click the Value column for Valid domains or hosts and then click the edit button.
4. Click Add.
5. Type the name of the gateway server in the blank row and then click OK.
   For more information about valid domains, see the Installation and Configuration Guide.
6. Save the configuration.
7. Restart the IBM Cognos service.

Unable to Automatically (by SSO) Connect to an SAP BW Data Source Although it Is Configured to Use an External SAP Namespace for Authentication

This problem occurs if all of the following conditions are met:

• An SAP namespace is configured in IBM Cognos pointing to SAP BW System A.
• IBM Cognos users are logged on to the SAP namespace using credentials (a user name and password), and not through the SAP Portal using single sign-on.
A data source referring to SAP BW system B is defined and is configured to use an external namespace for data source authentication. The namespace referred to as external is the SAP namespace configured for authenticating users to IBM Cognos components.

SSO tickets are enabled for the SAP BW server associated with the SAP namespace. The SAP provider generates and caches SAP logon tickets to be used for authentication with an SAP data source. The provider uses the current user credentials, user name and password, to generate an SAP logon ticket.

If the SAP BW system associated with the data source does not accept logon tickets because of the SAP server configuration, or if the logon ticket presented is not valid because it originates from a system in a different SAP SSO domain, data source authentication will fail.

To solve this problem, you can federate the SAP systems into one SAP SSO domain so that the ticket generated for the user in one system is valid in the other system as well. If this solution is not possible, disable the use of SAP BW SSO tickets for the provider to trigger it to fall back to passing the credentials of the current user instead of a logon ticket. The credentials must be valid for all systems accessed as a data source.

You can disable SAP SSO tickets either on the SAP BW system used as a data source, or by specifying the \texttt{bapiSSOSupport} parameter in the \texttt{bapiint_config.xml} file installed with IBM Cognos components. As a result, the provider will use the entered credentials of the current user for data source authentication.

To disable the use of SSO tickets for data source authentication in the \texttt{bapiint_config.xml} file, perform the following steps for all IBM Cognos application tier components installed in your system.

**Steps**

1. Stop the IBM Cognos service.

2. Open the \texttt{bapiint_config.xml} file.
   
   This file is located in the \texttt{c10_location/configuration} directory.

3. Search for the \texttt{bapiSSOSupport} parameter and change its value to 0, as shown below:
   
   \begin{verbatim}
   <bapiSSOSupport value="0"/>
   \end{verbatim}

   If this parameter is not specified in the file, you must add it under the root element.

4. Save the \texttt{bapiint_config.xml} file.

5. Start the IBM Cognos service.
Chapter 40: Report and Server Administration Problems

You may encounter problems when using IBM Cognos Connection to administer IBM Cognos software.

For information about using IBM Cognos Connection, see the IBM Cognos Connection User Guide.

Database Connection Problems

Each data source can contain one or more physical connections to databases. The topics in this section document problems you may encounter when setting up a database connection.

Unable to Select ODBC as the Type of Data Source Connection

Because IBM Cognos software on UNIX does not support all ODBC drivers, when you create data source connections to IBM Red Brick, Microsoft SQL Server, or NCR Teradata databases, you cannot select ODBC as the type of data source connection. To create an ODBC connection to these database vendors, select Other Type instead.

For the following database vendors, add the associated database codes when you type the connection string.

<table>
<thead>
<tr>
<th>Database vendor</th>
<th>Database code</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Red Brick</td>
<td>RB</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>SS</td>
</tr>
<tr>
<td>NCR Teradata</td>
<td>TD</td>
</tr>
</tbody>
</table>

Type the data source connection, as follows:

```
[^UserID:[^Password:];LOCAL;[RBSSTD];DSN=Data_Source; UID=%s;PWD=%s]][@ASYNC= [01]][@Connection_Timeout/Reply_Timeout[@COLSEQ=[Collation_Sequence]]
```

The following are examples of connection strings:

- `^UserID:^?Password:;LOCAL;RB;DSN=DB62SALES;UID=%s;PWD=%s@ASYNC=0`
- `;LOCAL;SS;DSN=TESTSERVER`

To create data source connections to Microsoft SQL Server from UNIX, you must use the DataDirect ODBC driver for SQL Server.
Cannot Connect to an SQL Server Database Using an OLE DB Connection

You cannot create a native connection to a Microsoft SQL Server using OLE DB in IBM Cognos Connection. The following error messages appear:

QE-DEF-0285 Logon failure
QE-DEF-0325 The cause of the logon failure is:
QE-DEF-0068 Unable to connect to at least one database during a multi-database attach to 1 database(s) in: testDataSourceConnection
UDA-SQL-0031 Unable to access the "testDataSourceConnection" database
UDA-SQL-0107 A general exception has occurred during the operation "{0}"
UDA-SQL-0208 There was an error initializing "MSDA" for OLEDB

The solution is to ensure that MDAC version 2.71 or higher is installed. The registry of the local system should hold the MDAC version information.

Intermittent Problems Connecting to an SQL Server Database

You use SQL Server database as a reporting data source. You test the same database connection several times in IBM Cognos Connection. Sometimes the test succeeds, but other times you see one of the following or a similar error message:

SQL Server cannot be found.
Access denied.

In addition, when you run reports, sometimes they run but other times you see the following or a similar error message:

Connection not found - Check DNS entry or select different connection.

You may also have problems creating the database that is used for the content store.

These errors can occur if you configure named pipes instead of TCP/IP protocol as the default network library in the SQL Server Client Network Utility for a SQL Server reporting or content store database.

Cannot Access IBM Cognos Series 7 Reports from IBM Cognos Connection

After configuring IBM Cognos software to use a Cognos Series 7 namespace and modifying the system.xml file, the Upfront content is not available in Public Folders, and the personal content is not available in My Folders.

To solve this problem, ensure that the Data encoding parameter specified for the Cognos Series 7 namespace in IBM Cognos Configuration uses the Series 7 character encoding value. This value can be obtained from IBM Cognos Series 7 Configuration Manager. It is shown in the Explorer pane when clicking Locale under IBM Cognos Shared.

Steps to Modify the Character Encoding Value

1. Open the system.xml file located in the installation_location\templates\ps directory.

2. In the following section, type the correct value for the encoding element:
3. Restart IBM Cognos service.

Series 7 Namespaces Do not Initialize When Services Are Started

To address an issue related to Series 7 namespaces, a new setting called Series7NamespacesAreUnicode has been added to IBM Cognos Configuration. This setting instructs the IBM Cognos BI Series 7 provider to enable UTF-8 processing on the namespace data. UTF-8 processing is only available with Series 7 namespaces of version 16.0 and above.

For namespace versions lower than 16.0, this setting should be disabled or the server may fail in a multi-code page environment. If the system finds a 15.2 namespace version and the Series7NamespacesAreUnicode setting is enabled, IBM Cognos BI reverts to disabled behavior.

If you have a mixed namespace environment, for example, a directory server with both namespace version 16.0 and namespace version 15.2, the version 15.2 namespace may not initialize. In this case, you must disable the Series7NamespacesAreUnicode setting.

Content Manager Connection Problem in Oracle (Error CM-CFG-5036)

Starting the IBM Cognos Service does not create the tables in an Oracle Content Manager. One of the following error messages is generated:

CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.

CM-CFG-5036 Content Manager failed to connect to the content store.

CM-SYS-5007 Content Manager failed to start. Review the Content Manager log files and then contact your system administrator or customer support.

When you create a new database in Oracle, the SID name that is created has no underscore in it. You must use this SID with no underscore as the Service Name in IBM Cognos Configuration.

Steps to Configure the Oracle Content Manager

1. Ensure that you can contact the Oracle instance through tnsping <SID> where the <SID> does not contain an underscore.

2. Configure the Oracle Content Manager connection in IBM Cognos Configuration so that the Service Name is the same as the <SID> in step 1.
Cannot Connect to an OLAP Data Source

You cannot connect to an OLAP source, such as SAP BW, Essbase, or DB2 OLAP.

Confirm the following:

- You can open the OLAP server from Microsoft Excel. Most OLAP vendors have a plug-in which allows connectivity through Excel.
- You have the correct client software installed on the relevant IBM Cognos servers. Any IBM Cognos computer which retrieves data from the OLAP source must have the appropriate client software.
- For MSAS, check that Pivot Table service is installed and the correct service pack is applied.
- You can open the OLAP source through IBM Cognos Series 7.
- You can open either the OLAP vendor samples or the IBM Cognos samples. The problem may be specific to one model, outline, or cube.
- The user making the request from IBM Cognos software is a Domain user with the appropriate access rights.

Error When Creating a Data Source Connection to a PowerCube

When you create a data source connection to a PowerCube where both the PowerCube and all report servers are on UNIX or Linux computers, the following error may appear:

The field "Windows location:" is mandatory

To solve the problem, type any characters in the Windows location field. The UNIX or Linux location must be correct.

Not Yet Optimized IBM Cognos PowerCubes May Open Slowly in IBM Cognos BI

If PowerCubes created with previous versions of Transformer take too long to open in the IBM Cognos studios, we recommend that you run a command line utility named pcoptimizer, supplied with IBM Cognos BI, to improve run-time performance. This optimization utility is suitable for older PowerCubes when the model no longer exists or the data used to build the PowerCube is no longer available. It is not necessary to run this command line utility for cubes created in Transformer version 8.x. and later versions.

Steps

1. Back up your target PowerCube, then navigate to the c10_location/bin directory.
2. On Windows, open a command line window and run PCOptimizer.exe.
3. On UNIX/Linux, enter the following line to run the optimization command line utility:

   pcoptimizer [-t] [-v] [-h] cubename

   where cubename is the fully qualified PowerCube or time-based partitioned control cube name with the .mdc extension, if the PowerCube resides in the same location as pcoptimizer. Otherwise, cubename is the full path with the .mdc extension.
Note: This method only supports metadata extraction. To set up user-configurable drill-through, you must use Transformer. Wildcard character support is not currently available. You must therefore invoke the utility once per PowerCube. If `cubename` is not provided, the program enters an interactive mode, prompting you for a PowerCube name and accepting keyboard input. The optional parameters are as follows:

- `-t` or `test mode`; it tests whether the metadata was extracted and loaded into the PowerCube. The return code indicates the status.
  - 0 if the metadata was extracted and loaded
  - 10 if the metadata was not loaded
  - 20 if an error occurred while accessing the PowerCube

- `-v` or `verbose mode`; text is output to standard output (stdout), indicating what was done, including any error messages. If running in interactive mode, `-v` is assumed. All text is output in English only.

- `-h` for `command-line help`; if `cubename` is not provided, it prints the usage and options to the screen.

Other Administration Problems

The topics in this section document problems you may encounter when administering IBM Cognos software.

Restarting Servers After Solving Content Store Problems

If the content store becomes unavailable, after resolving the problem, you must stop and restart IBM Cognos services to resume processing.

For information about stopping and starting IBM Cognos services, see the *IBM Cognos Configuration User Guide*.

An Update or Delete Request Fails

When any property of an object changes, the version property associated with the object changes. If you try to update or delete an object, the request fails if the value of the version property changed after you retrieved the object from the data store.

For example, if two administrators read the properties of the same object at the same time, they both have the same version of the object. If they both try to update, the first update request succeeds. However, the second update request fails because the version of the object no longer matches the version retrieved from the data store.

If this happens when you submit an update request, you must read the data again to get the current version of the object and then resubmit your update request.
BI Bus Server Processes Remain in Memory After a Shutdown

On rare occasions, the processes for the BI Bus server, BIBusTKServerMain, may stay in memory after you perform a normal shutdown. If this occurs, terminate the processes manually.

**Steps to Terminate Processes in Windows**
1. In the **Windows Task Manager** dialog box, click the **Processes** tab.
2. Click the **BIBusTKServerMain** processes.
3. Click **End Process**.

**Steps to Terminate Processes in UNIX**
1. Use the **ps** command to find the orphan processes.
   For example, type
   ```
   ps -ef grep | BIBus
   ```
2. Use the **kill -9** command to terminate the processes.
   For example, type
   ```
   kill -9 [BIBus process-id]
   ```

Higher Logging Levels Negatively Affect Performance

All the IBM Cognos services send events to the log server, which directs messages to a log file. After an error or problem occurs, you can review the log messages to obtain clues as to what happened. Log messages also provide the status of components and a high-level view of important events, such as successful completions and fatal errors.

In the server administration tool, five levels of logging are available. They range from minimal, which logs the least amount of detail and is intended for less frequent events, to full, which logs more detail and is intended for more frequent events and detailed troubleshooting purposes.

Increasing the logging level may negatively affect the performance of IBM Cognos software. The higher the level of detail logged, the more resources that are used. If performance is slow, you can try lowering the logging levels.

To access the server administration tool, you must have execute permissions for the Administration secured function.

**Steps to Change Logging Levels**
1. In IBM Cognos Connection, click **Launch, IBM Cognos Administration**.
2. On the **Configuration** tab, click **Dispatchers and Services**.
3. In the **Actions** column, click the set properties button for the dispatcher or configuration folder you want.
4. Click the **Settings** tab to view all the configuration settings.
5. In the **Value** column, click a new value for the following settings, each of which represents a logging category:
   - Audit logging level
   - Audit run-time usage logging level
   - Audit administration logging level
   - Audit other logging level

   **Tip:** If you want to reset a configuration setting to its default value, select its check box and click **Reset to parent value**.

6. Click **OK**.

### Problems Accessing Cognos Portlets

When you attempt to access Cognos portlets through your portal, you may see an error message similar to one of the following:

*Failed to process the request.*

- CPS-WSR-1042 Failed to send the request to target "http://MyServer:9300/p2pd/servlet/dispatch/cps2/nav".
  
  Connection refused: connect

  A more detailed description of the error that occurred can be found in the log.

- CPS-CCM-1200 The WSRP operation "getMarkup" failed

- CPS-WSF-2008 Normal execution of the operation failed

- PRS-TPR-0352 Failed to open template file "/cps2/portlets/nav2/navigator/getMarkup.xts"

  A more detailed description of the error that occurred can be found in the log

- CPS-WSR-1049 The request failed the server returned the HTTP error code "404" for the target "http://wottbouillom-2k:9300/p2pd/servlet/gateway/cps2/nav"

  A more detailed description of the error that occurred can be found in the log

- CPS-WSR-1043 Failed to read the response from target "http://sottcps3:9300/p2pd/servlet/dispatch/cps2/nav"

  Stream closed

  A more detailed description of the error that occurred can be found in the log

These messages indicate that there is a problem connecting to the IBM Cognos server. This problem can be caused by one of the following:

- The IBM Cognos server is not running or is still initializing.
Ensure that the IBM Cognos server is started properly, and test it by accessing IBM Cognos Connection through a Web browser.

- The portal server does not have network access to IBM Cognos server.

  To test connectivity to the IBM Cognos server, use the portal server computer to ping the IBM Cognos server. Use the server name and address that appear in the error message. If the ping is successful, ensure that there is no firewall blocking the port used by Portal Services, which is 9300 by default.

- The URL for connecting to IBM Cognos software is incorrect.

  For IBM Websphere, locate and modify the CPS Endpoint parameter in each portlet application as required.

  For SAP EP, locate and modify the _cpsserver: CPS Connection Server field in each iView as required.

- Java Virtual Machine conflicts exist on the IBM Cognos server.

  IBM Cognos software includes a version of Java Runtime Environment (JRE). Ensure that no other version of the Java Virtual Machine or Java SDK is installed.

  For information about configuring IBM Cognos software to work with Portal Services, see the IBM Cognos Installation and Configuration Guide.

Unable to Edit Object Properties in Oracle WebCenter Interaction Portal 10.3

When you import the Portal Services package into Oracle WebCentre Interaction portal and try to edit the properties of IBM Cognos objects, such as the remote server, or the portlets, an error may occur that indicates that certain property values are missing. As a result, you cannot apply your property changes.

The missing values refer to global WCI properties, such as URL, and can be used in searches for objects or documents. Because the global properties are not used by Portal Services, the portlet package file for Oracle WebCentre Interaction portal do not include default values for them. If the Global Object Properties Map in the WCI portal has a property assigned to a certain type of object, such as the remote server type, when you try to edit this type of IBM Cognos object, you are prompted to specify a value for this property.

To solve this problem, you can perform one of the following tasks:

- Remove the problematic property from the Oracle WebCenter Global Object Properties Map.
  Please note that changing the global property settings for one object may affect other objects.

- Specify any value, for example a space, for the problematic property.
  The property is not used by Cognos portlets so the value is irrelevant.

Steps to Edit the Global Object Properties Map

1. In an WCI portal, click Administration.

2. In the Select Utility drop-down list, click Global Object Property Map.
3. For the object you want to edit, click the edit icon.
4. Clear the check box next to the property you want to remove.
5. Click OK.

**Steps to Specify a Value for a Global Property**
1. In an WCI portal, click Administration.
2. Locate the IBM Cognos object whose properties you want to edit.
3. Click the object.
5. Type any value for the property.
6. Click Finish.

**Only the Administrator Can See Cognos Portlets**
When using Portal Services with a WebSphere portal, you may find that only the administrator can see the Cognos portlets.

This problem can be caused by portlet access rights that are improperly set.

To fix this problem, log on to the portal as an administrator and grant your users Edit or View rights for each portlet as required.

**Locale Mismatch in IBM Cognos Navigator Portlet**
If you use the IBM Cognos Navigator portlet to view a report, the language used in the report may not match the language used in the browser.

This problem can occur if the locale selected for the portal is different than the default locale of the browser.

To fix this problem, set the locale selection for the portal to nothing selected. If no locale is selected, the portal uses the default locale for the browser.

**Properties Pages in Cognos Portlets Are not Displayed Properly**
In portals other than Cognos Connection, the properties pages in Cognos portlets may not be displayed properly. The properties are pushed to the left side and there is no indentation.

To avoid this problem, add the IBM Cognos server domain and the portal domain to the list of trusted sites in the browser.

**Steps for Internet Explorer**
1. From the Tools menu, click Internet Options.
2. On the Security tab, add the domain name to the Trusted sites Web content zone.
Problems Displaying HTML Reports in a Multi-tab Dashboard

If your reports contain HTML items with unsupported Java Script, the reports may not be displayed in a multi-tab dashboard. Instead, the following error may appear:

*The report cannot be displayed because it contains unsupported javascript code. Please use the Safe Mode Viewer portlet or contact your system administrator.*

To avoid this problem, use the Safe Mode Viewer portlet to display the reports that you want to add to the dashboard. The Safe Mode Viewer portlet is the version of the IBM Cognos Viewer portlet shipped with IBM Cognos 8.3.

**Note:** The Safe Mode Viewer portlet has some limitations. For example, it is slower and does not support all communication options available in the IBM Cognos 8.4 portlets.

**Steps to Import Safe Mode Viewer**

1. In IBM Cognos Administration, on the Configuration tab, click Portlets.

2. Click the import portlets button.

   The Specify a producer page appears.

3. Click the Web Services for Remote Portlets (WSRP) interfaces option.

4. In the Markup, Service description, Registration, and Portlet Management boxes, type
   interface://wsrp/cps4/portlets/nav

5. Click Next.

6. In the import portlets wizard, type a name for the portlet group that will contain Safe Mode Viewer.

7. Make sure IBM Cognos Viewer is selected.

   If you want, you can also select IBM Cognos Navigator and IBM Cognos Search.

8. Click Finish.

Unable to Identify SAP BW Version and Corrections

You must use supported versions and patch levels of SAP BW, so you must be able to see a list of patches (correction notes) that have been applied. For more information about supported versions, see the IBM Cognos Center Web site ([http://www.ibm.com/software/data/cognos/customercenter/](http://www.ibm.com/software/data/cognos/customercenter/)). To see a list of correction notes that have been applied, you can run one of two transactions in R/3: SE95, or SNOTE. In all cases, you must be authorized to run these transactions. In some cases, you may need to run the transactions using the same account that was used to apply the correction notes.

**Steps**

1. In SAP R/3, type /SE95 in the command window.

2. Enter an asterisk (*) in the Last Changed By field, to view all notes.
3. Select the type of modification in the Modifications tab.

**SBW-ERR-0020 Error When Running Reports Based on SAP BW Data Sources**

Occasionally, when you run reports based on an SAP BW data source, the following error message may appear:

*Querying the SAP BW cube’s failed. SAP error code: BAP-ERR-0002 A BAPI error has occurred in the function module BAPI_MDDATASET_GET_AXIS_DATA. &INCLUDE INCL_INSTALLATION_ERROR*

This message means that SAP BW has run out of resources.

In this situation, we recommend contacting your system administrator.

**Links to Referenced Content Objects are Broken Following Deployment**

After you import a deployment archive to a new location, some links for objects associated with reports do not work.

When you import content objects which contain references to other objects that are not in the target environment, these references are removed. For example, if you deploy an archive containing reports based on a metadata package that is not in the deployment archive or the target environment, then the links will remain broken even if the referenced object is subsequently created.

To solve this problem, do one of the following:

- Reimport your deployment package after the target objects have been created. The objects will be automatically linked.
- Manually reconnect the links to an object.

**Table or View Does not Exist for Sample Database**

The schema property in each of the Framework Manager models is synchronized to run against the schemas defined in the sample databases. If you change any of the database schemas, you receive an error connected to the Framework Manager model that says the table or view does not exist.

To solve the problem, open the model in Framework Manager and update the schema name and then re-publish all packages.

**CNC-ASV-0007 Error When Calling a Report Trigger From a Web Service Task**

When calling a report trigger from a Web service task, the following error message may appear:

*CNC-ASV-0007 An error occurred with the agent Web service task. The operation failed. org.apache.wsif.WSIFException: CloneNotSupportedException cloning context.*

This problem is related to the replacement of the Sun Java Runtime Environment (JRE) by IBM Java Runtime Environment (JRE).

To avoid this problem, modify the bootstrap_win32.xml file in the *installation_location*\bin directory by adding the following line of code for the *spawn* element under `<process name="catalina">`:
Java Virtual Machine Fails Under Load When Multiple Users Run IBM Cognos Business Insight Dashboards

Using JRE 1.6 SR6 for Windows, the following occurs:

- the Java PID disappears
- the Java core is not generated
- the Java.exe disappears
- there is no sign of a memory leak or high CPU utilization
- when the java.exe fails, the following error is reported in the Windows Event Viewer:
  Faulting application java.exe, version 6.0.0.0, faulting module j9jit24.dll, version 2.4.0.42924, fault address 0x002ec4c2.
- both the cgsLauncher and BIBus processes become orphans and a new Java process is launched
- no errors are written to IBM Cognos BI, version 10.1, log files

The workaround is to set the TR_DisableEBPasGPR environment variable to TR_DisableEBPasGPR = 1, before starting the Java™ Virtual Machine (JVM).

Cognos Portlets Stop After SAP Server Is Restarted

Cognos portlets can stop after the SAP Server is restarted. To restart the CognosPortlets, start all instances of the epa and iview applications.

Steps

1. On your SAP NetWeaver Application Server Java, click SAP NetWeaver Administrator.
2. From the Operations Management tab, click Systems.
3. From the Systems tab, click Start and Stop.
4. Located at the left side of the screen, click Java EE Applications.
5. To sort by vendor, click the Vendor column.
6. From the Name column, highlight com.cognos.epa
7. At the bottom of the screen, in the Application Instance Details pane, click Start Service and then select On All Instances.
8. Repeat steps 6 and 7 for the com.cognos.pct.iview application.
Chapter 41: Problems When Using Framework Manager

You may encounter problems when working in Framework Manager.

Unable to Compare Two CLOBs in Oracle

If you are using Oracle and ask IBM® Cognos® BI to compare two CLOBs, such as where C2 = C3, you will see an Oracle runtime error.

To avoid this problem, use the DBMS_LOB.compare method:
where 0 = dmbs_lob.compare (c1, c2)

An Out of Memory Error with ERWin Imported Metadata

When you test query subjects based on a View table, an Out of Memory error may occur while performing the sqlPrepareWithOptions operation.

The solution is to create a data source query subject using the same Content Manager connection as the ERWin model.

Framework Manager Cannot Access the Gateway URI

You create a new project in Framework Manager and the following message appears:

Unable to access service at URL:
http://hostname:80/ibmcognos/cgi-bin/cognos.cgi/
b_acton=xts.run&m=portal/close.xts

Please check that your gateway URI information is configured correctly and that the service is available.

For further information please contact your service administrator.

This message appears if the gateway is not properly configured. The gateway URI must be set to the computer name where IBM® Cognos® BI is installed and reflect the type of gateway you are using. You must log on as an administrator to configure the gateway URI.

Steps to Configure the Gateway URI

1. Close Framework Manager.

2. In IBM Cognos Configuration, in the Explorer window, click Environment.

3. In the Properties window, in the Gateway URI box, type the appropriate value:
   - To use ISAPI, replace cognos.cgi with cognosisapi.dll.
To use apache_mod, replace cognos.cgi with mod_cognos.dll.

To use a servlet gateway, type the following:

```
http[s]://host:port/context_name/servlet/Gateway
```

Note: `context_name` is the name you assigned to the ServletGateway Web application when you deployed the ServletGateway WAR file.

If you are not using a Web server, to use the dispatcher as the gateway, type the following:

```
http[s]://host:port/p2pd/servlet/dispatch
```

4. If required, change the host name portion of the Gateway URI from localhost to either the IP address of the computer or the computer name.

5. From the File menu, click Save.

6. From the Actions menu, click Restart.

### Object Names Appear in the Wrong Language

When you import multiple languages from an SAP BW Query to a Framework Manager model, not all the object names retrieved from SAP BW appear in the correct language.

To avoid this problem, save the SAP BW Query again in each of the logon languages in Business Explorer Query Designer. The correct language texts will then show correctly in Framework Manager.

### Full Outer Joins in Oracle Return Incorrect Results

When using an Oracle data source prior to version 10.2, full outer joins return incorrect data results.

To avoid this problem, IBM Cognos BI processes these as local operations.

As a result of this processing, you must set the query processing to limitedLocal for any projects that expect explicit or implicit outer joins.

### Error When Testing Query Subjects in a Model Imported from Teradata

You are using a model imported from Teradata. When you test some query subjects that contain graphic items, you see this error:

QE-DEF-0177 An error occurred while performing operation 'sqlOpenResult' status=' -28'.
UDA-SQL-0114 The cursor supplied to the operation "sqlOpenResult" is inactive.
UDA-SQL-0107 A general exception has occurred during the operation "SgiCursor::doOpenResult ()".
[NCR][ODBC Teradata Driver][Teradata RDBMS] An unknown character string translation was requested.
The reason is that the GRAPHIC and VARGRAPHIC data types are not supported.

**Error for Type-In SQL Query Subject**

You define the following in DB2:

```sql
create type address as (  
  number character (6),  
  street varchar(35),  
  city varchar(35)  
)  
MODE DB2SQL;
create table emp ( emp_no int, emp_address address);
Select e.emp_no, e.emp_address..street from emp e
```

When you define a type-in SQL query subject, an error appears because of the name assigned for the attribute reference in the structured type.

To resolve this problem, you have two options:

- assign a simple correlation name to the column in the original query subject, such as
  ```sql
  Select e.emp_no, e.emp_address..street as "ABC" from emp e
  ```

- use pass-through notation for the query subject by surrounding the column with double curly brackets `{{ }}`

**QE-DEF-0259 Error**

This error occurs if you use braces `{}` in the wrong position in an expression. IBM® Cognos® BI expects anything between the braces `{}` to be at the same level as a function. If you have used braces elsewhere in an expression, you will see the following error message:

QE-DEF-0259 There was a parsing error

You can also use braces to send unique syntax to the data source. For example, your database uses a keyword for a function, but this keyword is not used in IBM Cognos BI.

IBM Cognos BI does not validate the syntax you enter between braces. The syntax is simply sent to the data source.

The solution is to make sure that braces are not used in the wrong positions.

For example, you type the following in an expression:

```sql
[ss_ole_both].[authors_lith].[au_id] = [ss_ole_both].[authors_latin].[au_id]  
{ collate Lithuanian_CI_AI}
```

You see the following error message:

QE-DEF-0259 There was a parsing error before or near position: 75, text starting at position: 5

"le_both].[authors_lith].[au_id]=[ss_ole_both].[authors_latin].[au_id]"

Meanwhile the following expression is valid:

```sql
{ Q3.au_id } = { Q4.au_id collate lithuanian_CI_AI }
```
Externalized Key Figures Dimension Retains Old Prompt Value

You have a key figures dimension (SAP BW) that contains an optional prompt. If you externalize this dimension as a csv or tab file, the externalized file does not contain all the rows of data. This is because the prompt value is retained.

For example, you set the prompt value for the dimension when testing the dimension in Framework Manager. The prompt value is kept in the cache. Even if you clear the value of the prompt in the Prompt dialog box, externalizing the key figures dimension results in a file containing data that is filtered by the most recently used prompt.

To avoid this problem, do one of the following:

- Do not test the key figures dimension before you externalize it.
- Close the model, open it again, and externalize the key figures dimension.

Older Models Display Level Object Security

If you are using a previously-created IBM® Cognos® model, object security on a level may have been defined. Object security on a level is not supported.

The solution is to verify and repair the older model before publishing it.

Steps

1. From the Project menu, click Verify Model.
2. Select the security view that references a level and click Repair.

Exporting a Framework Manager Model to a CWM File Fails With Error MILOG.TXT was not found

Exporting a Framework model to a CWM file fails with error MILOG.TXT was not found when the path contains Japanese characters.

Do one of the following to solve this problem:

- Specify an export path that does not use Japanese characters.
- Change the system default language on your computer to Japanese. You can set the system default language in the Control Panel, under Regional and Language Options -> Advanced.
  
  For more information on how to do this, refer to the Windows® operating system help.

Difference in SQL for Inner Joins After Upgrading to IBM Cognos BI, Version 8.3 and Later

If you migrated from a version of the product earlier than 8.3, there can be differences in the generation of SQL used for the INNER JOIN syntax.
You can control the SQL syntax used for inner joins by configuring the setting for the SQL Join Syntax governor. The SQL join syntax generated in all versions of IBM Cognos BI produces the same result.

If you are using RDBMS materialization technology which can be implemented using either implicit or explicit syntax, you must ensure that you select the same syntax setting for the SQL Join Syntax governor in your model.

**Full Outer Joins Not Sent to Oracle 9i and 10GR1**

By default, IBM® Cognos® BI will not send full outer joins to ORACLE 9i and 10GR1 due to Oracle bug #2874433. This requires using limited local processing in IBM Cognos BI.

To enable full outer joins with Oracle, you must

- ensure that you have the required patch sets, which include the fix for bug#2874433
- modify the cogdmor.ini file to turn on full outer joins (Full_outer_join=T)

Because any manual edits to the ini settings are overwritten by the next installation, you must manually replicate them on all machines where you installed IBM Cognos BI or Framework Manager.
Chapter 42: Problems When Using Transformer

This document describes issues and limitations that may be encountered by IBM® Cognos® Transformer users, with suggested workarounds.

The information is organized into the following sections:

- "Known Issues When Modeling in IBM Cognos Transformer" (p. 759)
- "Known Issues When Using PowerCubes in the IBM Cognos Studios" (p. 762)

Known Issues When Modeling in IBM Cognos Transformer

Documented in this section are known issues and limitations when modeling in IBM® Cognos® Transformer.

BAPI Error Occurs After the Prompt Specification File Edited Manually

In Transformer, you create a prompt specification for a SAP-based package. You edit the prompt specification file, prompt.xml, manually and save your changes. After editing the file, you attempt to generate a PowerCube using the command line options, for example,

```
cogtr -fpromptspecfilename -n cubename.mdl
```

but the PowerCube is not generated and you receive a BAPI error.

The error is caused by an invalid member unique name (MUN). Because editing the prompt.xml file manually is error prone, we recommend that you do not edit the prompt.xml file manually but create an alternate prompt specification instead.

Unable to Access an IQD Data Source Using a Sybase Database Connection

In Framework Manager, you use an IQD file to externalize a model using a Sybase database connection. When you attempt to import the data source file into Transformer, you receive the following error message:

```
[TR1907] Transformer cannot gain access to database database_name with signon information <user ID, password>.
```

The database connection fails because quotes are added to the SQL query when the data source is created in Framework Manager.

To successfully connect to the IQD data source and import the model, you must first edit certain configuration files in the CS7Gateways\bin directory.

Steps

1. Open the cs7g.ini file and ensure the database type in the connection string is CT, not CT15.
   Cs7g.ini is located in the installation_location\CS7Gateways\bin directory.

2. In the [Services] section, include the following:
CTDBA=ctdba, ctdba15

3. Save your changes.

4. Open the cogdmct.ini file and in the [UDA USER OPTIONS] section, specify the following:
   Attach=SET QUOTED_IDENTIFIER ON

   Cogdmct.ini is located in the installation_location\CS7Gateways\bin directory.

5. Save your changes.

6. Open Transformer and import the data source.

Unable to Use an IQD Created in Framework Manager That Contains an Oracle Stored Procedure

In Transformer, when trying to open an IQD created in Framework Manager that contains an Oracle stored procedure, you may receive a message similar to the following:

(TR0118) Transformer can't read the database [datasource] defined in <Lan location>\<datasource><iqd_name>.iqd.

DMS-E_General A general exception has occurred during operation 'execute'
The native SQL generated in an IQD created in Framework Manager is wrong. The IQD cannot be used in Transformer.

To resolve this problem, execute the stored procedure in Framework Manager and set the Externalize Method to IQD. Create a model query subject from the executed stored procedure, then publish the package and open it in Transformer.

Preventing Errors When Model Calculations Use Double Quotation Marks

If you try to open an .mdl-format model containing calculations that include double quotation marks, as might be used to create concatenated categories, you may get an error, even if you followed the recommended practice of wrapping these calculations in single quotation marks.

This is because .mdl-format models do not support the use of single and double quotation marks together, if the ObjectIDOutput flag is set to True, which is the default model creation setting.

To avoid this problem, you have two choices:

- You can open the cogtr.xml.sample file in a text editor, search for the string ObjectIDOutput, and change the setting to 0. Save the cogtr.xml.sample file as cogtr.xml. Restart Transformer, and resave the model.

- You can use your RDBMS or a tool such as Framework Manager to perform the required calculations, and then import the data into your model.

Whichever strategy you choose, you can then open the .mdl or py?-format model without error.
Framework Manager and Transformer May Display Different Locale Session Parameters for Some Languages

Transformer may not return data in the expected locale during test or cube build when the following conditions are encountered:

- The locale shown in the File/Session information in Transformer is not included in the Framework Manager parameter map for session parameters.
- The modeler attempts to create a data source in Transformer using a query subject from the package where the locale does not exist.

When this is encountered, the locale of the modeler’s session parameter does not exist in the Framework Manager parameter map. As a result, the data returned will not be the locale of the Session information shown in Transformer.

To avoid this problem, add the locale string that is displayed in the Transformer File/Session information to the Framework Manager parameter list so that Transformer can retrieve the expected data when accessing the data source. However, the model metadata will still be shown in English, or in the Framework Manager design language.

Regular Columns Cannot Be Converted to Calculated Columns and Vice Versa

When you attempt to convert a regular column to a calculated column by opening the Column property sheet, the Calculated button is unavailable.

In Transformer version 10.1.0, you can no longer convert an existing regular column to a calculated column by changing the column properties. Similarly, existing calculated columns cannot be converted into regular columns by changing the column properties.

You can only create calculated columns using the Insert Column feature. For more information, see "Define a Calculated Column" in the Transformer User Guide.

This does not affect how calculated columns are imported from an IBM Cognos® Series 7 model into Transformer. Existing calculated columns originally created in IBM Cognos Series 7 will be imported correctly.

Transformer Takes a Long Time to Retrieve Data from an SAP-based Data Source

You are attempting to retrieve data from an SAP-based data source in Transformer with null suppression turned off. The retrieval takes a long time to complete.

Ensure that the machine where Transformer is installed has sufficient memory to perform the import. If physical memory is limited, Transformer may perform the operation very slowly. In this situation, you can end the task using Task Manager.

Categories Missing When Creating a Transformer Model Based on an SAP Query Containing a Manually Created SAP Structure

The stream extract interface that reads the fact data doesn’t handle certain features of the SAP queries. A manually created structure in the query will look like a dimension when Transformer completes the import from the Framework Manager package, but incomplete data is returned.
dimension added to the SAP query as a characteristic will look like a dimension but no data is returned.

If you must use a BEx query with these limitations, consider turning off the stream extract and rely on an MDX query. Note that if the MDX query is large, it may fail.

**Error Occurs When Creating a PowerCube Containing an SAP Unbalanced Hierarchy**

You import an SAP package into Transformer that contains an unbalanced, ragged hierarchy and you receive a TR2317 error when you create a PowerCube.

To avoid this error, before generating categories for the dimension, do the following steps.

**Steps**

1. In the Dimension Map, right-click the lowest level in the ragged unbalanced hierarchy that is marked unique.
2. Click Properties and on the Source tab, click Move.
3. From the Run menu, click Generate Categories.
4. From the Run menu, click Create PowerCubes.

**Rebuilding a PowerCube Soon After Publishing Produces a TR0787 Error**

After publishing a PowerCube using the Publish wizard in Transformer, the PowerCube file is locked for a few minutes by the IBM® Cognos® server. If you attempt to rebuild the cube during this time, the cube build may fail, with Transformer error TR0787 indicating that the cube is being used by another application.

To avoid this situation, do one of the following:

- Do not use the Publish wizard to publish the cube.
- Wait for the file lock to be released, and then rebuild the cube.
- Build the cube in a location that is different from the location where the cube is published.

**Known Issues When Using PowerCubes in the IBM Cognos Studios**

Using Transformer, you can publish PowerCubes and their data sources directly to IBM® Cognos® Connection, without using Framework Manager as an intermediary.

Documented in this section are known issues and limitations associated with using PowerCubes in the IBM Cognos studios, such as Analysis Studio and Report Studio.
Not Yet Optimized IBM Cognos PowerCubes May Open Slowly in IBM Cognos BI

If PowerCubes created with previous versions of Transformer take too long to open in the IBM Cognos studios, we recommend that you run a command line utility named pcoptimizer, supplied with IBM Cognos BI, to improve run-time performance. This optimization utility is suitable for older PowerCubes when the model no longer exists or the data used to build the PowerCube is no longer available. It is not necessary to run this command line utility for cubes created in Transformer version 8.x. and later versions.

Steps
1. Back up your target PowerCube, then navigate to the c10_location/bin directory.
2. On Windows, open a command line window and run PCOptimizer.exe.
3. On UNIX/Linux, enter the following line to run the optimization command line utility:
   
   ```bash
   pcoptimizer [-t] [-v] [-h] cubename
   ```
   
   where `cubename` is the fully qualified PowerCube or time-based partitioned control cube name with the .mdc extension, if the PowerCube resides in the same location as pcoptimizer. Otherwise, `cubename` is the full path with the .mdc extension.

   **Note:** This method only supports metadata extraction. To set up user-configurable drill-through, you must use Transformer. Wildcard character support is not currently available. You must therefore invoke the utility once per PowerCube. If `cubename` is not provided, the program enters an interactive mode, prompting you for a PowerCube name and accepting keyboard input. The optional parameters are as follows:

   - `-t` or test mode; it tests whether the metadata was extracted and loaded into the PowerCube. The return code indicates the status.
     - 0 if the metadata was extracted and loaded
     - 10 if the metadata was not loaded
     - 20 if an error occurred while accessing the PowerCube
   - `-v` or verbose mode; text is output to standard output (stdout), indicating what was done, including any error messages. If running in interactive mode, `-v` is assumed. All text is output in English only.
   - `-h` for command-line help; if `cubename` is not provided, it prints the usage and options to the screen.

Analysis Studio Shows the Wrong Currency Symbol

When published to IBM® Cognos® Analysis Studio, PowerCubes show a default currency rather than the currency associated with the locale of your servers and PCs. For example, GBP (£) is shown as $.

To resolve this problem, you can do one of the following:
Create a currency table when you prepare your model in Transformer and embed a default currency symbol into the resulting PowerCubes, based on the system locale used by your Transformer computer.

For PowerCubes that do not contain an embedded currency table, set the `fallbackCurrency` parameter as the default currency.

**Steps to Create a Currency Table in Transformer**

1. In Transformer, from the **File** menu, click **Currency Table** and click **OK**.
2. Right-click each currency measure and click **Allow currency conversion**.

   This default currency table does not include currency information for any locales other than your running locale. Also, you cannot convert to a different currency while working in Analysis Studio.

**Step to Set `fallbackCurrency` as the Default Currency**

- Define a default currency by setting the `fallbackCurrency` parameter in the installation_location/configuration/qfs_config.xml file to GBP (Great Britain Pounds) or to an alternative currency code as listed in the installation_location/bin\ccli18nrescr_xx.xml file.

Here is an example.

```xml
<provider name="PowerCubeODP" libraryName="pcodp" connectionCode="PC">
  ...
  <providerDetails>
    <parameters>
      <!-- Max depth of nested calculated members within a query. -->
      <parameter name="maxCalculatedMemberNestingDepth" value="30"/>
      <!-- Normalize yen/won currency symbols - set to "false" to disable -->
      <parameter name="normalizeYenWon" value="true"/>
      <!-- Fallback currency for cubes with no default currency specified - set to USD, EUR etc. -->
      <parameter name="fallbackCurrency" value="USD"/>
    </parameters>
  </providerDetails>
</provider>
```

**Changes to Decimals in Currency Formats**

When you open a PowerCube in an IBM® Cognos® studio or in IBM Cognos Business Intelligence Mobile Analysis version 8.3, you may notice changes in the number of default decimal places shown in currency formats.

This behavior is due to the following changes:
● The default decimal formatting in currency formats is now determined by the measure format selected in the cube, instead of from the data source currency table definition. For example, if the Actual Revenue measure format specifies two decimal places and the USD currency in the currency table specifies no decimal places, two decimal places will appear in the USD currency value.

● Calculations that include a division operator and at least one currency operand will now show a resulting value with three decimal places only when
  ● neither of the currency values includes decimals
  ● two currency operands have different numbers of decimal places

In all other calculations of this type, the number of decimals in the resulting value is determined by the number of decimals in the currency value. The following examples illustrate this new behavior:

  ● $4.00 / $2.00 = $2.00
  ● $4 / $3.0000 = $1.3333
  ● $4 / $3 = $1.333
  ● $4.0 / $3.00 = $1.333

Ragged or Unbalanced Hierarchies Result in Unexpected Behavior

In ragged or unbalanced hierarchies, some members that are not at the lowest level of the hierarchy may have no descendants at one or more lower levels. Support for these hierarchy gaps in relational sources is limited. For OLAP sources, more complete support is provided, but some reports may result in unexpected behavior:

● Groups corresponding to missing members may appear or disappear when grouped list reports are pivoted to a crosstab. This happens with set expressions using the filter function, and detail filters on members.

● Ragged and unbalanced sections of the hierarchy are suppressed when set expressions in that hierarchy are used on an edge.

● When a crosstab is sectioned or is split into a master-detail report, sections corresponding to missing members become empty.

Some of these behaviors may be corrected in a future release, while others may be codified as supported behavior. To prevent these behaviors, avoid the scenarios above.

The following scenarios are believed to be safe:

● one or more nested level references on an edge, with no modifying expression.

● a hierarchy reference on only one level of one edge.

● one or more explicit members or sets of explicit members as siblings on only one level of one edge.
summarizes of the previous three scenarios.

In all cases, reports based on ragged and unbalanced hierarchies should be tested to confirm that hierarchy gaps are handled correctly.

Unable to Open the Great Outdoors Sales.mdl Sample Model and Generate Cubes

If your setup information for the Great Outdoors Sales.mdl is incorrect, you will be unable to open the sample model for Transformer, Great Outdoors Sales.mdl, or generate cubes.

To avoid this problem, set up Great Outdoors Sales.mdl using the following steps:

Steps
1. Modify the Cs7g.ini to contain [Databases] connections.
   The Cs7g.ini file is located in the installation_location/c10/cs7Gateways/bin directory.
2. Open ODBC Data Source Administrator and create a new ODBC data source named great_outdoors_warehouse to connect to the SQL server database, GOSALES_DW, which is provided with the sample installation.
3. Connect using a valid user ID and password for SQL Server authentication.
4. Open the model.

Unable to Publish a PowerCube

If you try to publish a PowerCube and the publish action fails, check that the Windows® data source location for the PowerCube is correct.

If the location is not specified correctly, as is the case with the English version of the sample Sales and Marketing PowerCube, you cannot publish the PowerCube.

Steps
1. Right-click the PowerCube and click Properties.
2. On the Data Source tab, in the Windows location property, ensure that the data source location specified for the PowerCube is entered correctly.
   For example, the location for the English version of the sample sales_and_marketing.mdc file should be installation_location\webcontent\samples\datasources\cubes\PowerCubes\EN
3. To publish the PowerCube, right-click the PowerCube and click Publish PowerCube as Data Source and Package.
   Note that because the sample PowerCubes have already been published, it is not recommended that you republish them. Republishing a sample PowerCube may cause the reports that are based on the PowerCube to fail. If you want to republish a sample PowerCube, republish it using a different name.
IBM® Cognos® Report Studio can be used to create different types of reports, including lists, crosstab reports, charts, and user-designed reports.

You may encounter problems when authoring reports in Report Studio or IBM Cognos Query Studio.

For information about using Report Studio, see the Report Studio User Guide. For information about using Query Studio, see the Query Studio User Guide.

Problems Creating Reports

Planned, professional reports are created in IBM® Cognos® Report Studio, and ad hoc reports are created in IBM Cognos Query Studio.

The topics in this section document problems you may encounter when creating reports.

Chart Labels Overwrite One Another

In Report Studio and Query Studio, if you define a chart and render it in HTML or PDF format using the default sizes, the axis labels of the chart may overwrite each other.

To avoid this problem, make the chart wider or taller by modifying the height and width properties of the chart or enable the Allow Skip property.

Chart Shows Only Every Second Label

You create a report that includes a chart. The Allow Skip option is set to false, but when you run the report, labels are skipped.

This can occur if there is not enough room for all labels and the options Allow 45 Degree Rotation, Allow 90 Degree Rotation, and Allow Stagger are also set to false. IBM Cognos BI has no options for making the labels fit, so it skips every second label.

The solution is to select either Allow 45 Degree Rotation, Allow 90 Degree Rotation, or Allow Stagger.

Chart Gradient Backgrounds Appear Gray in Internet Explorer

In Report Studio, you can define a custom palette for a chart that includes a gradient. When the chart is rendered in HTML format in Microsoft® Internet Explorer, the chart background appears gray. This is an Internet Explorer issue.

To avoid this problem, select the chart and define the color white as the chart background.

For more information, see the Microsoft Knowledge Base article # 294714 at http://support.microsoft.com.
Division by Zero Operation Appears Differently in Lists and Crosstabs

If you have a list that accesses a relational data source, a calculation containing a division by zero operation appears as a null value, such as an empty cell. In a crosstab, the division by zero operation appears as /0. This happens when the **Avoid Division by Zero** property is set to **Yes**, which is the default.

To have a consistent display of null values in lists and crosstabs, define an if-then-else statement in the expression in the crosstab cell that changes the value /0 to the value null.

Application Error Appears When Upgrading a Report

When upgrading a report, the following error appears if the report contains data items in the page layout that are not in a data container:

`RSV-SRV-0040 An application error has occurred. Please contact your Administrator.`

This error occurs when IBM® Cognos® BI cannot determine the query reference for a data item. Such data items are identified by a small red circle with a white x icon that appears in the lower left corner.

To correct the error, drag the data items into a container. If the container is a list, we recommend that you drag the data items into the list page header or footer, or the overall header or footer. If you want to see the first row of the item on each page or in the overall report, drag the item to the list page header or overall header. If you want to see the item’s last row on each page or in the overall report, drag the item to the list page footer or overall footer.

**Tip:** If a header or footer does not exist, create it.

Nested List Report Containing a Data Item That is Grouped More Than Once Does Not Run After Upgrade

When you upgrade a nested list report that contains a data item that is grouped in both lists, the report does not run and an error such as the following appears:

`OP-ERR-0199: The query is not supported. The dimensions on the edge are inconsistent. The dataItems from dimension="[Product line]" must be adjacent.`

This error occurs when the report is run against a dimensional data source and both lists are using the same query. This error does not occur if the report is run against a relational data source.

For example, you have a list that contains the grouped items Product line and Product type and a nested list that contains the data items Year, Quarter, and Unit sale price. Year, Quarter, and Product line are grouped items in the nested list.

To resolve the issue, delete the data item that is grouped in both lists from the inner list.

**Steps to Delete a Grouped Data Item From an Inner List**

1. Click anywhere in the report.

2. In the **Properties** pane, click the select ancestor button and click the **List** link that represents the inner list.

3. Double-click the **Grouping & Sorting** property.
4. In the **Groups** pane, select the data item that you want and click the delete button.

**Background Color in Template Does not Appear**

When creating a Query Studio template in Report Studio, if you add a list object and change its background color, the color change does not appear when you apply the template to a Query Studio report.

To work around this issue, do one of the following:

- Edit the style sheet (CSS) classes for lists in Report Studio.
- Do not add any objects to the page body when you are creating a Query Studio template.
- Leave the page body blank.

**Subtotals in Grouped Lists**

When using an IBM Cognos PowerCube that contains a ragged hierarchy, if you group on the first level in the hierarchy, subtotals may appear in the wrong place or show wrong values.

To resolve the issue, group on the second level.

**Metadata Change in Oracle Essbase Not Reflected in Reports and in the Studios**

When there is a metadata change on the Oracle Essbase server, the change is not immediately reflected in the metadata tree in the studios. In addition, when a report is run, the report does not pick up the republished changes.

To view the new structure, you must restart the IBM Cognos® Content Manager server.

**Relationships Not Maintained in a Report With Overlapping Set Levels**

In a report, the relationship between nested or parallel member sets at overlapping levels in the same dimension may not always be maintained.

For example, a named set in the data source that contains members from both a Year and Month member is nested under Year, but is not properly grouped by year.

In another example, an error message such as this appears:

```
OP-ERR-0201 Values cannot be computed correctly in the presence of multiple hierarchies ([Product].[B1], [Product].[Product]) that each have a level based on the same attribute (Product).
```

This problem occurs in the following scenarios involving non-measure data items X and Y, which overlap in the same dimension:

- X and Y together as ungrouped report details
- Y nested under X
- Y appended as an attribute of a group based on X

When using named sets, or sets that cover more than one level of a hierarchy, do not use sets from the same dimension in more than one place in the same report. They should appear on only one level of one edge.
Creating Sections on Reports That Access SAP BW Data Sources

SAP BW data sources may have problems with sections in reports under different circumstances:

If a section in a report uses the lowest-level query item in a ragged hierarchy, such as the children of the not assigned node, the following BAPI error may appear:

_BAPI error occurred in function module BAPI_MDDATASET_SELECT_DATA. Value <value-Name> for characteristic <cubeName> unknown_

For more information about working with ragged or unbalanced hierarchies, see the Report Studio User Guide.

Lowest-level Query Item in a Ragged Hierarchy

The solution is to remove the section from the lowest-level query item.

Several Multicubes with SAP Variables

The solution is to use one SAP multicube when creating sections in reports.

Error Characters (--) Appear in Reports

When you run a report, you see two dash (--) characters in your report instead of values.

These characters may appear if you use an OLAP data sources other than PowerCube and Microsoft® SQL Server 2005 Analysis Services (SSAS), and you apply aggregation to calculations and measures that use rollups other than Sum (Total), Maximum, Minimum, First, Last, and Count.

All other types of rollup either fail or return error cells, which typically display as two dash characters (--).

This problem occurs in, but is not limited to, the following:

- footers
- aggregate function
- summary filters and detail filters that use a summary
- detail, summary, and context filters that select more than one member of a hierarchy that is used elsewhere on the report

If you are working with a SSAS 2005 data source, these characters may also appear in summary cells if you use an OR filter in the summary. To avoid this problem, do not use OR filters in summaries.

Function Unreliable with Sets

If you create an expression that uses the _descendants_ function with sets, you may encounter unpredictable results. Some expected members may be missing or may have blank captions or labels.

This problem occurs if the _descendants_ function uses a set as its first parameter instead of a single member and if the _descendants_ function is nested under another data item from the same hierarchy.
To avoid this problem, replace the first parameter in the `descendants` function with the function `currentmember(H)`, where `H` is the hierarchy of the desired set and under which the expression is nested. For example, use `descendants(currentmember(H))`.

**Columns, Rows, or Data Disappear With SSAS 2005 Cubes**

Microsoft® SQL Server 2005 Analysis Services (SSAS) has a feature called AutoExists that removes tuples that have no facts at the intersection of two hierarchies of the same dimension.

Columns, rows, or data can disappear if you set the default member of a hierarchy to a member that does not exist with every other member in the dimension. To avoid this problem, change the default member that caused the disappearance to a member that exists with all other members in the dimension.

Columns, rows, or data can also disappear if members are specified that result in one or more nonexistent tuples. There is currently no workaround for this scenario. For more information, see Microsoft Knowledge Base article #944527 at http://support.microsoft.com.

You may also encounter unexpected results if the default member of a hierarchy is a member that doesn’t also exist in all other hierarchies in the dimension, and if you query members from different hierarchies in the same dimension.

For example a crosstab includes the following (using the Adventure Works cube):

- **Rows**: `Generate([Adventure_Works].[Account].[Accounts], set([Balance Sheet],[Units])) nested with children([Adventure_Works].[Department].[Departments] ->: [YK].[Department].[Departments].&[1]])`
- **Column**: `[Adventure_Works].[Account].[Account Number].[Account Number]`
- **Measure**: `[Adventure_Works].[Measures].[Amount]`

You run the report and notice that the query renders with some blanks cells. You then apply the simple detail filter `[Amount]>1` and run the report. Only row labels are displayed and all data and columns are missing.

In the Adventure Works cube, the `[Account].[Accounts]` attribute has a default member set to `[Net Income]`. When evaluating the GENERATE set expression, SSAS looks in the entire cube space and looks at all coordinates for the `[Account]` dimension. These coordinates include both `[Account][Account Type].&[]` and `[Account].[Accounts].[Net Income]`. Because these two coordinates don’t exist within the same hierarchy, SSAS returns an empty set.

To avoid this problem the SSAS administrator must set the default member in the cube to a member that exists in all other hierarchies.

**Unexpected Cell Formatting in Reports**

When using data sources other than OLAP and you run a report, cell formatting may not appear as expected. For example, some cells may appear very small. This could be caused by null values returned from the query.
To specify what appears for a data container when there are null values in a query, refer to the Report Studio User Guide.

You may also see an Invalid Dates message in some cells. This issue is specific to IBM Cognos Transformer and occurs when cubes are constructed with unknown date values. For more information, see the Transformer User Guide.

**Report Differences Between TM1 Executive Viewer and IBM Cognos BI with TM1 Data Sources**

When using an IBM® Cognos® TM1® data source, comparable reports created in an IBM Cognos BI studio and in TM1 Executive Viewer may contain different cell values. This occurs because the TM1 Executive Viewer product uses an algorithm for selecting default members for non-projected dimensions that differs slightly from traditional OLAP clients.

To avoid this problem, when filtering your reports in the IBM Cognos BI studios, use context filters that match the default selections shown in the Executive Viewer user interface. This ensures that the cell values in IBM Cognos BI match the values in Executive Viewer.

**Order of Metadata Tree Differs for TM1 Data Sources**

When using an IBM® Cognos® TM1® data source, the order of members in the metadata tree of the Insertable Objects pane of an IBM Cognos BI studio may differ from the order shown in TM1 Architect.

By default, TM1 Architect renders members of hierarchies using a slightly different algorithm than does IBM Cognos BI. IBM Cognos BI automatically renders member metadata from TM1 data sources in hierarchical order.

From within TM1 Architect, if you want to see how an IBM Cognos BI studio will render a hierarchy, click the Hierarchy Sort button.

**Problems Calculating Data**

The topics in this section document problems you may encounter when using expressions to calculate data or when aggregating data in your reports.

**Summaries in Query Calculations Include Nulls with SAP BW Data Sources**

When using a SAP BW data source in IBM® Cognos® Report Studio, null values in the database are returned in the result set and the count summary function includes the empty cells in the following scenarios:

- A query calculation includes an arithmetic calculation where one or more NULL operands and an aggregation is performed on the calculation.
- The result of a query calculation is a constant, such as current_time and current_date.

The count summary function should normally exclude null values.
To avoid this problem, for the first scenario, ensure that both operands do not return null values. For example, the original expression is \([\text{num1}]+[\text{num2}]\). Instead, use the following expression:

\[
\begin{align*}
\text{if} & \quad ([\text{num1}] \text{ is null}) \quad \text{then} \quad (0) \quad \text{else} \quad ([\text{num1}]) \\
\text{if} & \quad ([\text{num2}] \text{ is null}) \quad \text{then} \quad (0) \quad \text{else} \quad ([\text{num2}])
\end{align*}
\]

There is no workaround for the second scenario.

**Null Results for Calculations Using SAP BW Data Sources**

When using a SAP BW data source, the expression you use in your calculation is evaluated as a null value if your expression contains a null item. For example, in the calculation some_expression = result, the result is null if a row or column that the expression references includes a null value.

To avoid obtaining null values as the result of your calculations, suppress null values before you create the calculation.

**Unexpected Summary Values in Nested Sets**

If a report contains nested sets, summaries other than the inner set summaries may contain unexpected values. For example, you insert a summary in a crosstab that contains a set with years in the rows.

![Table](https://example.com/table.png)

You then nest a product line set within years.

![Table](https://example.com/table.png)

Notice that the summary value does not change to represent the total of the new values. This occurs because the within set aggregation used with dimensional packages does not take into account sets that are nested below the set that is summarized.

To show the correct summary values, if the inner and outer sets do not belong to the same dimension, you can nest a copy of the inner summary item under the outer summary item, as follows.

![Table](https://example.com/table.png)
Incorrect Results in Summaries When Using OLAP Data Sources

When using an OLAP data source, summaries that use `for` clauses give incorrect results.

This occurs because `for` clauses require access to the detail rows of the fact table. OLAP data sources do not have detail rows.

For example, this report uses a dimensionally-modeled relational (DMR) data source and contains the following summaries:

- **mx**: maximum ([Revenue] for [Year (ship date)])
- **mx2**: maximum (Aggregate([Revenue]) for [Year (ship date)])

<table>
<thead>
<tr>
<th>Year</th>
<th>Quarter</th>
<th>Revenue</th>
<th>mx</th>
<th>mx2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Q1</td>
<td>221,704,705.31</td>
<td>252,408.9</td>
<td>225,759,316.25</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>222,143,384.57</td>
<td>252,408.9</td>
<td>225,759,316.25</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>235,750,316.25</td>
<td>252,408.9</td>
<td>225,759,316.25</td>
</tr>
<tr>
<td></td>
<td>Q4</td>
<td>234,754,297.59</td>
<td>252,408.9</td>
<td>225,759,316.25</td>
</tr>
<tr>
<td>2004 - Summary</td>
<td></td>
<td>914,362,803.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Q1</td>
<td>293,228,690.53</td>
<td>292,402.7</td>
<td>306,706,702.72</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>278,180,759.95</td>
<td>292,402.7</td>
<td>306,706,702.72</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>281,079,666.95</td>
<td>292,402.7</td>
<td>306,706,702.72</td>
</tr>
<tr>
<td></td>
<td>Q4</td>
<td>306,706,702.72</td>
<td>292,402.7</td>
<td>306,706,702.72</td>
</tr>
<tr>
<td>2005 - Summary</td>
<td></td>
<td>1,169,196,690.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Q1</td>
<td>344,134,267.97</td>
<td>383,575.08</td>
<td>391,874,482.51</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>391,874,482.51</td>
<td>383,575.08</td>
<td>391,874,482.51</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>378,118,612.54</td>
<td>383,575.08</td>
<td>391,874,482.51</td>
</tr>
<tr>
<td></td>
<td>Q4</td>
<td>381,774,558.75</td>
<td>383,575.08</td>
<td>391,874,482.51</td>
</tr>
<tr>
<td>2006 - Summary</td>
<td></td>
<td>1,495,281,100.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Q1</td>
<td>471,624,367.69</td>
<td>349,132.3</td>
<td>479,269,923.02</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>479,269,923.02</td>
<td>349,132.3</td>
<td>479,269,923.02</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>160,441,582.50</td>
<td>349,132.3</td>
<td>479,269,923.02</td>
</tr>
<tr>
<td>2007 - Summary</td>
<td></td>
<td>1,117,336,274.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall - Summary</td>
<td></td>
<td>4,686,775,763.85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notice that the mx and mx2 values are different, where mx2 is based on visible data, but mx is not. This result is correct.

The following report uses an OLAP data source and contains the same summaries.
Notice that mx and mx2 values are now the same. Both summaries are based on visible data. The mx value is incorrect.

Incorrect results also appear for footer summaries.

To avoid this problem, when using OLAP data sources, ensure that the parameter that precedes the for clause is an aggregate function.

**Incorrect Results with IBM Cognos PowerCubes and Time Measures**

If a report uses an IBM® Cognos® PowerCube data source and the following combination of data items, you will encounter incorrect results:

- a measure with a Time State Rollup set to Average or Weighted Average
- an aggregate (members from time dimension) expression
- an intersection with a member in a relative time hierarchy

To avoid incorrect results, do not use this combination in your reports.

**Report Differences Between TM1 Executive Viewer and IBM Cognos BI with TM1 Data Sources**

When using an IBM® Cognos® TM1® data source, comparable reports created in an IBM Cognos BI studio and in TM1 Executive Viewer may contain different cell values. This occurs because the TM1 Executive Viewer product uses an algorithm for selecting default members for non-projected dimensions that differs slightly from traditional OLAP clients.
To avoid this problem, when filtering your reports in the IBM Cognos BI studios, use context filters that match the default selections shown in the Executive Viewer user interface. This ensures that the cell values in IBM Cognos BI match the values in Executive Viewer.

**Unexplained Discrepancies in Number Calculations**

You might find unexplained discrepancies in number calculations due to round-off errors. For example:

- You run regression tests and find differences in numbers. They are different only because of the rounding off of decimal places.
- You choose not display zeros in reports, but the zeros are displayed anyway because there are decimal places (0.00000000000000426, for example) that are rounded off to zero in reports.

Round-off problems are not specific to IBM® Cognos® software. They can occur in any environment where rounding off occurs.

**Binary Round-Off Errors**

Discrepancies in calculations might occur due to binary round-off errors. For example, if the number 1.1 is represented as a binary floating point number and your report format includes a large number of decimal places, the number 1.1 might actually be something like 1.09999999999997.

If your report is formatted to use only one decimal point, decimal round-off takes place, compensating for the binary round-off. So the number appears to be 1.1 when it is really 1.09999999999997. When the number is used in calculations, you might get round-off errors. For example, Microsoft® Excel calculations use binary numbers (without rounding off decimal places) but formatting in reports shows rounded off decimal places, which can create small discrepancies.

**Division Round-Off Errors**

Calculations that involve division typically incur round-off errors, regardless of how the numbers are represented. Examples of such calculations are Average and Percent of Base.

**Design Guidelines to Minimize Round-Off Effect**

The best solution is to change the underlying database schema or cube model but that may not always be possible. Another solution is to minimize the round-off effect by following these guidelines when authoring reports and creating models in FrameWork Manager and external OLAP cubes:

- Avoid storing data in floating point format whenever possible. This is especially true for currency values, which should be stored as either fixed-point decimals or as integers with a scale value such as 2.

For example, in a cube, the Revenue for Camping Equipment in 2004 is $20,471,328.88. If revenue details are stored as floating point numbers, round-off errors might occur when revenue is calculated.

The round up errors might have slight differences, depending on the order of calculation. If revenue for Products is calculated first and revenue for Time is calculated second, you might get a different round-off error than if Time is calculated first and Products is calculated second.
Total revenue might be calculated as the number above. Or there might be slight discrepancies, for example, $20,471,328.8800001 as opposed to $20,471,328.88. The internal number might be slightly different than what is displayed. The number might even be for different runs of the same report, depending on the order that the OLAP engine uses for calculation.

- In reports, avoid division whenever possible. When division is unavoidable, try to do it as late as possible in the calculation process. For example, instead of Total([Revenue]/1000), use Total ([Revenue])/1000.

- When doing comparisons, add a margin to allow for round-off. For example, you may want [Profit %] to be a fractional value formatted as a percentage with no decimals. However, the filter [Profit %]<0 (or [Profit %] NOT BETWEEN 0 and 0) rejects zero values and may still return values that appear to be 0% after formatting.

To avoid this, filter in one of these two ways:

- [Profit %] NOT BETWEEN -0.005 and 0.005
- ([Profit %] < - 0.005) OR ([Profit %] > 0.005)

Note that 0.005 is equivalent to 0.5%, which displays as either 0% or 1%, depending on floating point precision losses.

In come cases, you may prefer control round-off errors by rounding values explicitly. For example, instead of [Profit %], use round([Profit %],2).

- Recalculate numbers every time instead of reusing calculations that might contain rounded off decimals.

There might be additional considerations for Microsoft® Analysis Services 2005/2008, especially when comparing report results from different runs (as happens in Lifecycle Manager). Refer to Microsoft documentation for more information.

**HRESULT= DB_E_CANTCONVERTVALUE Error When Filtering on a _make_timestamp Column**

You cannot filter on a _make_timestamp column, and the following error messages appear:

UDA-SQL-0114 The cursor supplied to the operation "sqlOpenResult" is inactive

UDA-SQL-0206 The OLEDB driver returned the following value: HRESULT= DB_E_CANTCONVERTVALUE

RSV-SRV-0025 Unable to execute this request

The solution is to apply the filter after aggregation and not before.

**Problems Distributing Reports**

The topics in this section document problems you may encounter when distributing reports.
A Report Link in an Email Notification Does Not Work

If a report link in an email notification does not work, the Gateway URI may not be configured correctly.

You must change the host name portion of the Gateway URI from localhost to either the IP address of the computer or the computer name. If the URL in the email contains localhost, remote users cannot open the report.

Report Contains No Data

In IBM® Cognos® Event Studio, if an agent running against a dimensionally-modeled data source passes values to a report based upon a relational source, the report may contain no data.

When the source is dimensional, the agent passes member unique names (MUNs) to the target report. If the target report is based upon the same dimensional source, the report runs correctly. However, if the report is based upon a relational source, the agent must pass values (not MUNs) for the report to run correctly.

Steps to Convert the MUN to a Value

1. Drag the data item from the Insertable Objects tree to the Value field in the report task page.
2. Click in the field.
3. From the Insert menu, click Caption.

Hyperlinks in Email Messages Are Stripped Out When the Agent is Saved

In Event Studio, hyperlinks are stripped out when the agent is saved. The administrator must allow email links to ensure that the links remain in emails created by agents.

Steps to Allow Links in Email

1. Add the following line to templates/ps/portal/system.xml:
   
   <param name="allow-email-links">true</param>

2. Restart the server.

Note: Adding this setting does not fix existing agents.

Steps to Insert a Link in an Email

1. Highlight some text in the email.
2. Press Ctrl-K.
3. Enter a URL into the box that appears.

Errors When Running Web Service Tasks

When running a Web service task, you may encounter one of the following errors:

CNC-ASV-0001 The Following Agent Service General Error Occurred: java.lang.StackOverflowError
CNC-ASV-0007 An error occurred with the agent Web service task.

To prevent this error, modify the file bootstrap_win32.xml in the bin folder to add the ThreadStack-Size (Xss) parameter:

**Steps**

1. Open the `c10_location\bin\bootstrap_win32.xml` file in an XML editor.

2. Add the following parameter to the file:
   ```xml
   <process name="catalina">
   ...
   <param condName="${java_vendor}" condValue="Sun">-XX:MaxPermSize=128m</param>
   <param condName="${java_vendor}" condValue="IBM">-Xss128m</param>
   ```

**Cannot Call the SDK from Event Studio**

Even though IBM® Cognos® Event Studio has a feature to insert a web service as a task, it is not possible to call the IBM Cognos SDK web service. Due to the complexity of the SDK and complex data types and options, the web service feature in Event Studio does not handle the IBM Cognos SDK.

The exception to this rule is the trigger command that can be called from Event Studio.

**Saving a Report Takes a Long Time**

When you save a report, the Save As dialog box appears with a Loading message. The report will not be saved until it has finished loading, and this can take a long time.

This issue will be resolved in the next version of IBM® Cognos® BI.
Chapter 44: Problems Running, Viewing, or Printing Reports and Analyses

You may encounter problems when running, viewing, or printing reports. For information about reports, see the IBM® Cognos® Connection User Guide.

Problems Running Reports and Analyses

The topics in this section document problems you may encounter when running reports.

Summaries in Report Do not Correspond to the Visible Members

If a crosstab or chart created in IBM® Cognos® Report Studio using a dimensional data source has a context-dependent set function such as filter or topCount on an edge, summaries do not correspond to the visible members. This occurs when the summaries use the within set aggregation mode.

This problem occurs because a summary that uses the within set aggregation mode uses a set that is dependent on the members that it intersects with on the opposite edge. For example, the following crosstab has the top three products returned as columns. The expression used to generate the columns is

topCount ([Product],3,[Return quantity])

where [Product] is the level.

<table>
<thead>
<tr>
<th>Return quantity</th>
<th>BugShield 89110</th>
<th>BugShield 90110</th>
<th>SunSh 94110</th>
<th>Total(ReturnProducts)</th>
<th>Min(ReturnProducts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>25,219</td>
<td>19,870</td>
<td>12,018</td>
<td>62,392</td>
<td>17,303</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>22,827</td>
<td>14,171</td>
<td>6,389</td>
<td>54,785</td>
<td>13,765</td>
</tr>
<tr>
<td>Northern Europe</td>
<td>8,225</td>
<td>14,679</td>
<td>4,085</td>
<td>32,986</td>
<td>8,325</td>
</tr>
<tr>
<td>Central Europe</td>
<td>17,627</td>
<td>13,059</td>
<td>14,089</td>
<td>45,762</td>
<td>13,084</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>7,196</td>
<td>4,726</td>
<td>4,401</td>
<td>20,321</td>
<td>5,790</td>
</tr>
<tr>
<td>Total(Region)</td>
<td>81,189</td>
<td>72,255</td>
<td>42,158</td>
<td>215,592</td>
<td>50,831</td>
</tr>
<tr>
<td>Minimum(Region)</td>
<td>7,196</td>
<td>4,726</td>
<td>4,401</td>
<td>20,321</td>
<td>5,790</td>
</tr>
</tbody>
</table>

The summary values for Total(ReturnedProducts) and Minimum(ReturnedProducts) for all rows except Central Europe do not correspond to the member values in the crosstab. This means that the top three products returned in all regions except for Central Europe are not Bug Shield Lotion 89110, Bug Shield Extreme 90110, and Sun Shelter 30 94110. Note that the summary values for Total(Region) and Minimum(Region) do correspond to the visible member values. That is because those summary values represent the total and minimum quantities returned for those three products in each region.

You can see what the top three products returned in each region are by dragging the columns to the right of the rows, creating the following single-edge crosstab.
To obtain summary values that reflect the visible members, modify the expression of the data item containing the context-dependent set function so that it includes a tuple that is locked to the default member of every hierarchy that appears on the opposite edge. For this example, modify the expression to the following:

\[
\text{topCount}([\text{Product}], 3, \text{tuple}([\text{Return quantity}], \text{defaultMember}([\text{Retailer site}])))
\]

where [Product] is the level and [Retailer site] is the hierarchy.

When you run the report, all summary values reflect the visible members in the crosstab.

To obtain summary values that reflect the visible members, modify the expression of the data item containing the context-dependent set function so that it includes a tuple that is locked to the default member of every hierarchy that appears on the opposite edge. For this example, modify the expression to the following:

\[
\text{topCount}([\text{Product}], 3, \text{tuple}([\text{Return quantity}], \text{defaultMember}([\text{Retailer site}])))
\]

where [Product] is the level and [Retailer site] is the hierarchy.

When you run the report, all summary values reflect the visible members in the crosstab.

### Unexpected Results for Analysis Studio Reports Using Suppression and Nested Rows

In IBM Cognos Viewer, you run an IBM Cognos Analysis Studio report for which page breaks have been set. Detail items appear only on the page that contains the item for which suppression is applied, and only summary items appear on all other pages.

This may occur because of the following combined conditions:

- The report contains nested levels.
Suppression is applied to an item nested inside the outermost group.

In the report options, the page breaks setting is applied to the outermost groups on rows.

To avoid this result, in Analysis Studio you can do one of the following:

- In the report options, clear the page breaks setting.
- Move the outermost group to the context filter area before applying suppression.
- Remove all suppression.

You can also run the report as is. To prevent this message from appearing, from the Run menu, click Report Options. On the Display tab, clear the checkbox under Warning page.

If you do not have access to Analysis Studio, contact your administrator.

**Defining Languages for OLAP Data Sources**

The first time you publish a cube definition to IBM Cognos Connection, you must identify all the languages that represent the data contained in the cube. If you add a language to the model after the cube is published, users with locales that match the added language locale may find that Analysis Studio does not recognize references to the member unique names. There is no impact on users whose locale matches the original language list.

**Crosstab Shows Percentage But Chart Shows Values**

When the crosstab calculates the percentage of the total for an item, the chart does not show the values as a percentage.

**Cannot Drill when Caption Represents a Blank or a Zero-length String**

A dimensional model over relational data may return a zero length ” or blank ’ ’ caption in the row or column in Analysis Studio. When it does, you cannot drill up or down from the set because no link appears.

If this occurs, you can right-click the caption and select Drill Up or Drill Down in the shortcut menu.

**DPR-ERR-2082 The Complete Error Has Been Logged by CAF With SecureErrorID**

You cannot run a report in IBM Cognos Connection, and the following error messages appear:

- DPR-ERR-2082 An error has occurred. Please contact your administrator. The complete error has been logged by CAF with SecureErrorID: timestamp-#number.
- RSV-DR-0002 Unable to execute this request.

These error messages do not indicate an IBM Cognos Application Firewall problem.
You can view a more detailed error message, in the c8server.log file that resides in the logs directory on the IBM Cognos Business Intelligence server.

**Steps to View a Detailed Error Message**

1. Open the cogserver.log file, which is in the $c10_location/logs directory on the IBM Cognos Business Intelligence server.
2. Search for SecureError or the timestamp-error number combination shown in the error message, such as 2004-06-29-15:15:03.796-#8.
3. The error message is under the SecureErrorID heading.

**Query Studio Does Not Generate a SELECT DISTINCT statement if a Column is Aliased Without Using the Actual Column Name**

When filtering on a column name, the query does not generate a SELECT DISTINCT statement if the referenced column is aliased by manually typing the alias in the SQL of the query subject.

To avoid this situation, do not manually type the alias. Instead, in IBM Cognos Framework Manager, rename the column by right-clicking on it and selecting the **Rename** option.

**Cannot Find the Database in the Content Store (Error QE-DEF-0288)**

You cannot retrieve data from the selected database when running a report from IBM Cognos Query Studio, IBM Cognos Connection, or Report Studio.

The following error message appears:

*QE-DEF-0288 Unable to find the database...*

If this error does not occur when you are logged on as an administrator, then to solve the problem, ensure that the user has permissions to the signon embedded. If this error always occurs, the data source has not been created. Create the data source with the name mentioned in the error message.

**Parse Errors When Opening or Running an Upgraded Report**

Earlier versions of ReportNet® and IBM Cognos Business Intelligence included the `cast_Date` function for reports that run on an Oracle database. This function does not exist for Oracle in IBM Cognos 8.1.2 MR1 and later versions. If a report that uses an Oracle database includes the `cast_Date` function, parse errors will be received when you try to open or run the report.

**Overflow Error Occurs When a Value in a Crosstab Is More Than 19 Characters**

In a crosstab report, values support a maximum of 19 characters, including the decimal point. If a value exceeds 19 digits, an overflow error occurs. By default, the decimal precision is set to 7 digits, which restricts the number of integers to 11 digits.

To use more than 11 integers, you must edit the qfs_config.xml file in the $c10_location/configuration directory.
IBM Cognos BI Runs Out of TEMP Space

By default, IBM Cognos Business Intelligence stores temporary files in the $c8\_location/temp$ directory. The amount of space required by the temporary files directory depends upon several factors, including the number and type of reports created.

The following error message indicates that the temporary files directory ran out of space:

QE-DEF-0177 *An error occurred while performing operation 'sqlOpenResult'.*

UDA-SQL-0114 *The cursor supplied to the operation "sqlOpenResult" is inactive.*

UDA-TBL-0004 *There was a Write error while processing a temporary file.*

If this error occurs, ensure that the disk on which the temporary files directory is located has adequate space. You should also periodically delete unwanted files from this directory.

A Report Does Not Run as Expected

A report may not run as expected if the model contains errors or the wrong governor settings.

**Steps to Check the Model**

1. Open the model in Framework Manager.
2. Ensure governors are set to disallow.
3. In the diagram view, ensure that there are no cross-join errors or ambiguous joins.
4. Check the package for a missing query subject.
5. Run the Verify Model function, and correct any errors detected.

Performance Issues when Showing Multiple Attributes Using Dimensionally-modeled Relational Data Sources

If you display multiple attributes for the items in a set on the crosstab, you can only select one attribute at a time, so Analysis Studio executes a query for each attribute selection.

The performance of this approach is an expensive one to execute against a relational data source because of the query necessary to retrieve the attribute and its value.

You can select multiple attributes for a selected crosstab set in Analysis Studio by using the Properties pane. By selecting multiple attributes before clicking OK or Apply in the dialog box, only a single query for all selected attributes is executed, instead of one per attribute. Multiple selection in the UI is the preferred approach for enabling the display of more than one attribute for dimensionally modeled relational data source packages, because of the reduced performance impact on the relational data source.

Error Occurs in Japanese Internet Explorer 7 When Running an Excel Report in Analysis Studio

An error may occur when you close Japanese Microsoft® Internet Explorer 7 installed on Windows® XP SP2 while it is running an Analysis Studio report in Excel format.
To solve this problem, Microsoft recommends that you unregister the msctf.dll file using the following command:

```
Regsvr32/U Msctf.dll
```

This .dll file is part of the ctfmon.exe speech recognition application. You may turn off any speech recognition application installed on your computer before unregistering the .dll file.

For more information about turning off speech recognition, see Microsoft Knowledge Base article 313176.

### The ORA-00907 Error Appears When Running a Report

When using an Oracle 9.2 data source, under certain circumstances, multiple or nested join operations may fail and produce the following error:

**ORA-00907: missing right parenthesis**

A query that uses both a left outer join and an ON clause condition returns zero values instead of null values.

### Scheduled Reports Fail

You schedule reports that previously ran successfully, but now fail. The following error message appears:

**CAM.AAA Error authenticating user**

This may happen because a user changed a password. IBM®Cognos® Business Intelligence uses a copy of the user ID and password to run the scheduled report.

The solution is for the user to renew their credentials.

#### Steps to Renew Credentials

1. Ask the user who scheduled the report to log on to IBM Cognos Connection.
2. In IBM Cognos Connection, click the my area options button and click **My Preferences**.
3. On the **Personal** tab, scroll to the **Credentials** section.
4. Click **Renew the credentials**.

   Note that this does not apply to users from an IBM Cognos Series 7 namespace.

### The Table or View Was Not Found in the Dictionary

When you run a report, the following error message appears:

*The table or view "xxx" was not found in the dictionary.*

This may occur if permissions were not properly set.

Ensure that the user defined in the data source has SELECT privileges for the affected table.
Mixed Languages Are Displayed in IBM Cognos Connection When Using Samples

When you restore the Cognos_samples.zip file in the webcontent/samples/content folder it contains multilingual content. When you change the locale setting on your computer, reports appear in the language specified for your computer. This is not true for sample IBM Cognos PowerCubes. When you restore Cognos_PowerCube.zip, a different folder is set up for each language. If you select a PowerCube from a language folder that is different than the language specified by the locale setting on your computer, a mixture of languages is displayed in IBM Cognos Connection.

There are two options for solving this problem:

- Re-install Cognos_PowerCube.zip. First ensure that your computer is set to the locale that is consistent with the language of the PowerCube package you are installing. Then, install only the package from the language folder that matches the locale setting.

- Or, in IBM Cognos Connection, open each PowerCube package, click the Set Properties button, and in the Language box, select the language of the IBM Cognos PowerCube.

Unable to Select Multiple Report Formats When Running a Report

When running a report with options, you cannot select multiple formats when the delivery option is to view the report.

Before selecting multiple formats on the Run with advanced options page, you must first change the Delivery option to Save the report, print it, or send an email.

A Report Does Not Run as Scheduled

A scheduled report may fail, or an administrator may cancel it.

To view the run history and status of a report you scheduled and to view detailed information about why a scheduled report failed, do the following:

Steps

1. In IBM Cognos Connection, click the my area options button, and click My Activities and Schedules, Schedules.

2. Click the arrow next to the item to view the Actions menu, and then click View run history. The View run history page appears.

3. To view the run history details, in the Actions column, click the view run history details button.

A Report or Analysis Does Not Run Because of Missing Items

You attempt to run a report or analysis and a message indicates that one or more items are missing or changed. Each missing item is listed by its MUN (member unique name). The MUN includes the complete path within the hierarchy for the item. When you place your cursor on an item in the Insertable Objects pane, the MUN for that item is displayed in a tooltip. This situation may occur if members have been removed from or changed in the data source. It may also occur when you attempt to run a report that uses items to which you do not have access. For example, an adminis-
The report or analysis will then run.

**Cannot View Burst Report**

When you burst a report, each burst output is sent to the associated list of recipients. If a list of recipients contains invalid entries, the following occurs:

- The burst output is not saved to IBM Cognos Content Manager. Consequently, you cannot view the burst output in IBM Cognos Connection.

- If you choose to send the output by email, only valid recipients will receive an email. Although the output is sent as an attachment if you select the Attach the report check box, no link is generated if you select the Include a link to the report check box.

- The following error message appears in the run history for the report, where parameter 1 is the burst key, parameter 2 is the list of recipients, and parameter 3 contains the error messages returned by Content Manager:

  ```plaintext
  An error occurred while saving the output for the burst instance <param type="string" index="1"/> with the recipients <param type="string" index="2"/>. Here are the details: <param type="string" index="3"/>
  
  Note: The list of recipients includes both the valid and invalid recipients.
  
  For example, a report is set up to burst on Country, and the recipients are managers. Running the report produces the following countries and recipients:
  
  - Canada: John, Mary
  - US: Peter, Frank
  - France: Danielle, Maryse
  
  Frank is an invalid recipient. The burst outputs for Canada and France are saved to Content Manager, but not the U.S. output. If you choose to send an email to each recipient and you selected the Include a link to the report check box, the email to Peter will not contain a link to the output for US. The error message that is generated will contain Peter and Frank as values for parameter 2 with no indication as to which is invalid.

  **Steps to Correct or Remove Burst Recipients**

  1. View the error message in the run history for the report.

  2. From the list of recipients, determine which recipients are invalid.

     You may need to consult with your administrator to find out which recipients are invalid.

  3. Correct or remove the invalid recipients.

     Correcting or removing invalid recipients will depend on how the list of recipients was defined, such as through a calculated field or a burst table.
4. Run the report again.

**PCA-ERR-0057 Recursive Evaluation Error**

You run a report and encounter the following error:

*PCA-ERR-0057 Recursive evaluation has exceeded limit. Calculated member trace: COG_OQP_USR_Aggregate(Retailer Type): COG_OQP_INT_m2: COG_OQP_INT_m1: COG_OQP_USR_Aggregate(Retailer Type): COG_OQP_INT_m2: COG_OQP_INT_m1: COG_OQP_USR_Aggregate(Retailer Type): COG_OQP_INT_m2: COG_OQP_Int_m1: COG_OQP_USR_Aggregate(Retailer Type): COG_OQP_INT_m2: COG_OQP_INT_m1*  

You may encounter this error when two or more data items form a recursive evaluation. For example, in the above error, the calculation of Aggregate(Retailer Type) is dependent on a column expression while at the same time the column expression is dependent on Aggregate(Retailer Type). Therefore, the cyclic relationship cannot be resolved.

To avoid this problem, ensure that calculations do not have cyclic relationships.

**Arithmetic Overflow Error When Running a Report in PDF Format**

If you use a Microsoft SQL Server 2005 data source and your report includes aggregations, you may encounter the following error when you run your report in PDF format:

*RQP-DEF-0177 An error occurred while performing operation 'sqlOpenResult' status='-28'. UDA-SQL-0114 The cursor supplied to the operation "sqlOpenResult" is inactive. UDA-SQL-0564 [Microsoft OLE DB Provider for SQL Server] Arithmetic overflow error converting expression to data type int. (SQLSTATE=22003, SQLERRORCODE=8115)*

This error occurs because the action is performed in the database, and the database data type is too small.

This error did not occur in IBM Cognos Business Intelligence version 8.3 or earlier because aggregation was processed locally, by the Business Intelligence server. In version 8.4 or later, aggregation is processed at the database level.

To avoid this problem, increase the size of the database data type.

**RQP-DEF-0177 An error occurred while performing operation 'sqlPrepareWithOptions' status='-69' UDA-SQL-0043 Error**

You cannot run a report in Report Studio or Query Studio, and the following error messages appear:

*RQP-DEF-0177 An error occurred while performing operation 'sqlPrepareWithOptions' status='-69' UDA-SQL-0043 The underlying database detected an error during processing the SQL request.[NCR][ODBC Teradata Driver][Teradata Database] Partial string matching requires character operands*

These error messages do not indicate an IBM Cognos Application Firewall problem.

There is a problem with your data source not converting numeric data items. Ask your administrator to consult the topic *Enable Conversion of Numeric Search Keys to Strings in Queries* in the IBM Cognos Business Intelligence Administration and Security Guide.
Performance Problems When Running Reports

The topics in this section document performance problems you may encounter when running reports in IBM® Cognos® Connection.

CGI Timeout Error While Transferring Data to IBM Cognos BI Components

When performing operations through your Web browser, you receive the following error message:

*CGI Timeout, process will be deleted from server.*

The error occurs when you use Windows Internet Information Services (IIS) as your Web server and the gateway is configured to use CGI. IIS has a default timeout for CGI applications.

To resolve this problem, you can configure the gateway to use ISAPI. IIS does not have a default timeout for ISAPI applications. Or, if you want to keep using a CGI gateway, you can increase the CGI timeout in IIS.

Steps to Change the Gateway to ISAPI

1. On the gateway computer, start IBM Cognos Configuration.

2. Under Environment, for the Gateway URI property, change the cognos.cgi portion of the URI to cognosisapi.dll.

3. In your Web browser, specify the ISAPI URI:

   `http://computer_name(ibmcognos/isapi`

Steps to Increase the CGI Timeout

1. In the Microsoft® Windows® administrative tools, open Internet Information Services.

2. Under the local computer node, right-click Websites and select Properties.

3. In the Home Directory tab, click Configuration.

4. In the Process Options tab, click Configuration.

The BAP-ERR-0002 BAPI Error

When using IBM Cognos Business Intelligence with an SAP BW data source, the following error message may appear:

*BAP-ERR-0002 BAPI error occurred in function module BAPI_MDDATASET_CHECK_SYNTAX. Error occurred when starting the parser.*

This error usually occurs because the SAP BW server is overloaded.

To resolve this problem, restart the IBM Cognos Business Intelligence server or close all open connections from the SAP BW Administrator Workbench.

The Out of Memory Error Appears in HP-UX

In HP-UX, the default setting for the threads per process is too low for most Java™ applications.
To avoid out of memory errors, increase the value for the following kernel parameters:

- `max_thread_proc`
- `nkthread`.

**Note:** The `nkthread` parameter should be double the value of the `max_thread_proc` parameter. For more information, see the HP Web site.

**A Query Is Slow When Filtering Non-ASCII Text**

When using an SAP BW data source, and range filters are defined on non-ASCII text values, such as city names that contain accented characters, the query may take longer to run. This occurs because the filter must be performed on the application server and not on the SAP BW server because SAP BW 3.0B supports queries only if they use ASCII values.

To avoid this problem, do not filter non-ASCII values.

**Report Output Takes a Long Time to Run**

In IBM Cognos Connection, you click **Run with Options** and select the **Save the report** delivery option. This action returns all data, renders the report, and stores it in the content store, which can take a long time.

It is quicker to run the report manually, using the **Run** command, which generates the report a page at a time.

**Report Runs Slowly**

The following is a list of questions that will help you to troubleshoot a slow report.

- Does your IBM Cognos environment conform with the supported environments?
  Supported environments can be found at [www.ibm.com](http://www.ibm.com).

- Has the report always been slow or did it recently become slow?
  If it recently became slow, can you identify an event that occurred just before the report began to run slowly? Events could include changes to configuration settings, changes to tuning settings, a recent upgrade where your previous settings have not been applied, an introduction of firewalls or proxies, changes to existing firewalls or proxies, changes to virus scans on temp directories, or temporary table space restrictions on the database. This event could have caused the change in report performance.

- Is the performance slow for all reports or just one report?
  If all reports are slow, the issue may be due to your environment or database. If all reports from a specific package are slow, the issue may due to the model design. If just one report is slow, the issue may be due to a specific report element.

- How many queries does your report contain?
  The number of queries on the report will proportionally affect the report execution time.

- Does the report run slowly for everyone, or just for one user?
If the report runs slowly for just one user, the issue may be due to something in that user’s environment, such as virus scanning, page file size or location settings, or their location on the network.

- Is the report burst or run often by many people?

If many people are running the same report at the same time, you may need to scale your environment or consider using dispatcher routing rules to direct all requests for a specific package or group of users to a specific server or server group. For more information, see the IBM Cognos Business Intelligence Administration and Security Guide.

- Do your queries require local processing?

The following report elements require local processing: crosstabs and charts, master relationships, unions or joins, multiple fact queries, bursting, and non-vendor specific functions. Local processing requires the IBM Cognos server to compute operations on the result set returned by the database, which can impact the SQL execution time.

- Does your environment use a Custom Authentication Provider?

Using a Custom Authentication Provider could cause a memory leak if the code is not destroying objects correctly.

- Have you reviewed the logs in the c10_location/logs directory and the audit logs?

They may help you identify the source of the problem. Monitoring your processes, such as the Java™ and Business Intelligence bus processes could also identify excessive memory use.

- Is your environment tuned correctly?

For more information, see the Performance Tuning Settings for IBM Cognos 8 Business Intelligence and the IBM Cognos 8 Business Intelligence Performance Tuning Cheat Sheet documents available online at www.ibm.com.

- Have you recently upgraded?

Ensure that any tuning settings that were applied to your previous installation are applied to the new environment. Ensure that your models have been verified, upgraded, and republished. Verify that the IBM Cognos Framework Manager governor that allows enhanced model portability at runtime is not enabled. Depending on your upgrade method, you may also need to open and save the reports again after upgrading.

The following are Proven Practices documents on www.ibm.com that may help you improve your report performance.

- Performance Tuning Settings for IBM Cognos 8 Business Intelligence
- IBM Cognos 8 Business Intelligence Performance Tuning Cheat Sheet
- Writing Efficient OLAP Queries
- Cognos 8 Business Intelligence (Business Intelligence) on IBM AIX best practices
- IBM Cognos ReportNet® and Java Heap

The Installation and Configuration Guide also includes a section on performance maintenance.
Problems Viewing Reports

The topics in this section document problems you may encounter when viewing reports.

A Report Upgraded from ReportNet Does Not Retain its Original Look

When you upgrade a report to IBM® Cognos® Business Intelligence, a new style sheet is applied that changes the look of the report.

To preserve the formatting that was used in the original report, you can select a different style sheet. This retains the original look of the report and specifies that any new items added to the report, such as list columns or crosstab levels, have the original formatting applied to them.

Steps

2. Click Report styles and select 1.x styles.

Measure Format Disappears in SSAS 2005

Microsoft® SQL Server 2005 Analysis Services (SSAS) does not propagate formatting through calculations. IBM® Cognos® compensates for this whenever possible, but cannot guarantee to do so in all cases. As a result, if you are working with a Microsoft SSAS cube, any calculation (other than a non-count summary) that is based on or intersects with a formatted measure, such as a currency, may lose the measure format. This may also happen if you use a detail filter or context filter (slicer).

For example, a crosstab includes members on one edge and a measure with formatting, such as a currency symbol and decimal places, applied on the other edge. When you run the report, you see the formatting for each cell. However, if you add a detail filter, such as measure > 1 and run the report, all the formatting disappears.

Additionally, because the SSAS behavior depends on the fine details of the MDX generated by Cognos Business Intelligence, whether the format is lost in a report can change from release to release.

To avoid this problem, specify explicit formatting for the affected row, column, or cell.

A Running Total in Grouped Reports Gives Unexpected Results

You have a running total calculation in a grouped report that returns unexpected values.

Because tabulation of the running total calculation depends on the order in which the grouping is executed, you must ensure that the grouped totals are tabulated before applying the running total.

To ensure that the grouping is executed in correct order, define a running total calculation as a freestanding calculation outside the query subject in IBM Cognos Framework Manager, and ensure that the Regular Aggregate property is set to Automatic.

This may also be an issue with other running, moving, and ranking aggregations.
The Page Cannot Be Found Error Appears When Viewing Report Outputs from Email Links

When a report is distributed by email, no error message appears if the report output from the email link is not available. This can occur when the output is deleted or when the user does not have permissions to the report. Instead, the error The Page Cannot Be Found appears.

You are unable to view the report output from the email link when Allow Anonymous Access is set to True and when the Anonymous user does not have access to the report output.

When you run a secured report from an email link and when Allow Anonymous Access is set to True, a passport is automatically issued to the Anonymous user. The Anonymous user is not prompted to log on and is unable to view the report output.

Non-English Characters Appear as Placeholders

IBM Cognos Business Intelligence and Framework Manager are Unicode applications. A Unicode application permits handling of content in any language, or any combination of languages. However, if your database contains non-English characters, and if the database client is not configured to receive these characters, some characters may appear as placeholder characters, such as boxes or inverted question marks.

To avoid this problem, ensure that your database clients are properly configured. For more information, see your database vendor documentation.

For Oracle 9, you can force the use of Unicode on the client by ensuring that the system environment variable NLS_LANG is set to "xxx.UTF8", where xxx is whatever is needed for other applications on that computer. If there are none, the value can be simply .UTF8.

While enforcing the use of Unicode on the database client guarantees that it can handle multilingual data, some characters in some character sets may still appear incorrectly, such as Japanese Shift-JIS.

Charts Do Not Appear in HTML reports

In IBM Cognos Business Intelligence, HTML output reports are displayed in Microsoft Internet Explorer 6.x with 24-bit transparency to ensure that the appropriate color depth is displayed, typically for charts.

If you operate in an environment that requires the Internet Explorer 6.x security level to be set to high, charts may not appear. If you cannot lower the security setting for security reasons, you may want to disable chart transparency. Charts are displayed in Internet Explorer with transparencies displayed in white.

You must have the required permissions to access IBM Cognos Administration functionality. See "Secured Functions and Features" (p. 283).

Steps

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.

4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, Report Data.

5. Click the arrow next to the service to display the Actions menu, and then click Set Properties.

6. Click the Settings tab.

7. For the Environment category, next to Advanced settings, click the Edit link.

8. If it appears, select the Override the settings acquired from the parent entry check box. Otherwise, proceed to the next step.

9. In the Parameter column, type EnableChartTransparencyIE.

10. In the Value column, type False to disable chart transparency in Internet Explorer.

11. Click OK.

12. Click OK again.

**Portal Problems**

The topics in this section document problems you may encounter with a portal when viewing reports.

**Cannot Connect to a SQL Server Database Using an ODBC Driver**

The connection works in IBM® Cognos® Framework Manager, and metadata can be imported. When testing the database connection in the IBM Cognos Connection portal, the following error messages appear:

*QE-DEF-0285 Logon failure*

*QE-DEF-0325 The cause of the logon failure is:*

*QE-DEF-0068 Unable to connect to at least one database during a multi-database attach to 1 database(s) in: testDataSourceConnection*

*UDA-SQL-0031 Unable to access the "testDataSourceConnection" database.*

*UDA-SQL-0129 Invalid login information was detected by the underlying database.*

[Microsoft][ODBC SQL Server Driver] [SQL Server] Login failed for user '(null)'. Reason Not associated with a trusted SQL.

The solution is to change the Network Library Configuration for SQL Server to use TCP/IP instead of Named Pipes.

**Steps to Set TCP/IP as the Network Library Configuration**

1. Open ODBC Data Source Administrator.

   Tip: In Microsoft® Windows® 2000 you can do this by clicking Start, Settings, Control Panel, Administrative Tools, Data Sources (ODBC).
2. Select the data source name defined for SQL Server on the System or User DSN tab.

3. Click Configure.

4. On the Microsoft SQL Server DSN Configuration page, click Next.

5. Click Client Configuration.

6. Ensure that TCP/IP is selected for the Network library entry.

The My Folders Tab Does Not Appear After Logging On to IBM Cognos Connection

A user is a member of a new group, and this group is a member of the Query Users group. When this user logs on, the My Folders and the personalized pages tabs do not appear in IBM Cognos Connection. Also, the user name does not appear in the upper-left corner of IBM Cognos Connection.

To avoid these problems, the namespace to which the user belongs must have traverse permission to the Query Users group.

Steps to Specify Traverse Permission

1. Log on to IBM Cognos Connection as an administrator.

2. From the Launch menu, click IBM Cognos Administration.


4. Click the set properties button next to the namespace.

5. Click the Permissions tab.

6. Ensure that the Query Users group appears in the namespace.

7. Select the Query User Traverse check box.

8. Click Apply and then click OK.

9. Test with a user.

Icon Graphics Are Not Working in Portlets

When you access IBM Cognos portlets in SAP EP or IBM WebSphere®, icons and pagination graphics may appear as empty rectangles.

This problem can be caused by improper settings in IBM Cognos Configuration.

Steps to Change Settings

1. Start IBM Cognos Configuration.

2. In the Explorer window, under Environment, click Portal Services.

3. Ensure that all URIs use absolute server names instead of localhost.
Styles Used in the Previous Installation Still Appear

You can customize the styles (previously called skins) used by IBM Cognos Business Intelligence. The styles are applied when users access IBM Cognos Connection.

If you reinstall IBM Cognos Business Intelligence, styles from the previous installation may still appear when users access IBM Cognos Connection. The styles are cached by the browser.

If you do not want to apply customized styles, ensure that users delete the temporary files from the browser cache.

Unable to Click Links

Links in IBM® Cognos® Connection will not work if your browser is not properly configured. Consequently, you cannot perform operations such as running a report or starting Report Studio. For all Web browsers, cookies and JavaScript™ must be enabled.

For more information, see your browser help.

For Microsoft® Internet Explorer Web browser only, the following must be enabled:

- Run ActiveX controls and plug-ins
- Script ActiveX controls marked safe for scripting
- Active scripting

IBM Cognos software does not provide or download ActiveX controls as part of IBM Cognos Business Intelligence. IBM Cognos Report Studio uses the native Internet Explorer XML support, which is an integral component of the browser. Because Microsoft implements XML using ActiveX, you must enable ActiveX support for Report Studio.

Steps to Enable Internet Explorer Options

1. In Internet Explorer, from the Tools menu, click Internet Options.
2. On the Security tab, click Custom Level.
3. In the Security Settings dialog box, scroll to the Activex controls and plug-ins settings and enable Run Activex controls and plug-ins and Script Activex controls marked safe for scripting.
4. Scroll to the Scripting settings and enable Active scripting.
5. Click OK.

Missing Images in a PDF Report

Images that appear in reports rendered as HTML are missing in reports rendered as PDF. The embedded GIF, JPG, and BMP images do not appear. Only the borders of the missing images appear.

If you use Microsoft Internet Information Services (IIS), go to the properties sheet of the Web site and ensure that the Enable the HTTP Keep Alives option is selected.

Ensure that the virtual directory where the images are stored has anonymous access enabled. Open IIS and open the properties sheet for the virtual directory for your images. Select the Anonymous Access check box.
If you do not want to open up anonymous access to all users, ensure that the account that is running
the dispatcher has access to the virtual directory where the images are stored.

**Charts in PDF Output Show Unexpected Results**

Charts, when viewed in PDF output, have different levels of interaction support, depending on the
version of Adobe® Acrobat Reader and the style of chart element.

Adobe Reader version 5 does not support tooltips. Drill up and down and Go to links have limited
support, due to technical limitations. Only rectangular areas in charts, such as bars, columns, horizon-
tal labels on the axis, or legend labels can be enabled for drill or Go to interaction. Non-rect-
angular areas, such as pie slices in pie charts, cannot be enabled for drill or Go to interactions.

Adobe Reader version 6 and 7 supports tooltips, drill up and down, and Go to links for all chart
types. When chart elements overlap or are separated by only a few pixels, the interactive region
may be smaller than the area shown.

**Problems Printing Reports**

The topics in this section document problems you may encounter when printing reports.

**Unable to Print PDF Reports**

When you try to print a PDF report from IBM® Cognos® Connection and IBM Cognos Report
Studio, you may be unable to print or an error message such as the following may appear:

*CNC-GEN-2107: An unexpected error has occurred.*

There may be no error messages and the status of the print job is Succeeded.

To correct the problem, try the following:

- Ensure that Adobe® Reader version 5.0.5 or later is installed on each computer where IBM
  Cognos Business Intelligence servers are installed.

- Ensure that the IBM Cognos Business Intelligence server is started using an account that has
  access to the network printer. Sometimes, system accounts may not have access to network
  printers.

- If IBM Cognos Business Intelligence is installed on UNIX®, ensure that Adobe Reader is installed
  in the path of the user that starts IBM Cognos Business Intelligence.

- If IBM Cognos Business Intelligence is installed on UNIX, ensure that the lpstat -v command
  returns a configured printer and that a printer variable is defined.

- When you define the network address for the printer in IBM Cognos Connection, use the fol-
  lowing syntax:
  - For Windows®: `\server_name\printer_name`
  - For UNIX: `printer_name`
- When you define the network address for the printer, try using the IP address of the printer instead of the computer name.

- Ensure that IBM Cognos Business Intelligence users have the correct access permissions for the printer.

  **Tip:** In IBM Cognos Connection, from the Launch menu, click IBM Cognos Administration. On the Configuration tab, click Printers. Click the arrow next to the printer to view the Actions menu, and then click Set properties. Click the Permissions tab.

- Ensure that the Directory Administrators group has all the access permissions granted and that the group Everyone has Read, Execute, and Traverse access permissions granted.

- Ensure that you can print a test page on the printer.

- If Tomcat is used as an application server, the crn_ROOT environment variable must not be defined.

- Ensure that users have read, execute, and traverse permissions for the printer object in IBM Cognos Connection.

- The printer name consists of only the first 127 ASCII characters.

**A Printed HTML Report is Unsatisfactory**

Printing HTML may produce unsatisfactory results.

For best results, use the View in PDF Format command, and then print the PDF. This alternative gives you more control over such things as pagination than the browser does.

**Understanding Drill-Through Results**

The topics in this section document unexpected results that you may encounter when using drill-through.

**Filters Are Not Correct When Users Drill Through to Upgraded Targets in Analysis Studio**

If the target of a drill-through definition is an IBM® Cognos® Analysis Studio report with a drill-through filter (defined by setting a context filter as a Go To parameter), and the application has been upgraded from IBM Cognos Business Intelligence, version 8.3, to IBM Cognos Business Intelligence, version 10.1, filters may not be correctly passed from the source to the target. Instead, the Analysis Studio report appears as it did in its last saved state without any filtering occurring from the source report, or users may be prompted to select a context.

This is true for authored drill-through definitions (created in an IBM Cognos Report Studio report) and package drill-through definitions (created in IBM Cognos Connection) that use parameterized drill through.
This problem occurs because of changes in how parameters are automatically named in Analysis Studio. To correct the problem, recreate the mapping in the drill-through definition, and save the definition.

**Steps for Authored Drill Through**

1. In Report Studio, open the source report.
2. Select the report item that contains the drill-through definition.
3. From the Properties pane, open the drill-through definition (Data, Drill-Through Definitions).
4. From the Drill-Through Definitions window, open the Parameters table, and re-select the target parameter(s).
5. Save the drill-through definition settings and then save the report.
6. Test the drill through to confirm that the problem is resolved.

For more information, see the Report Studio User Guide.

**Steps for Package Drill Through**

1. In IBM Cognos Connection, launch Drill-through Definitions.
2. Navigate to the root of the source package, locate the drill-through definition to be updated, and click Set Properties.
3. In the Target tab, under Parameter mapping, re-select the target parameters.
4. Save the drill-through definition.
5. Test the drill through to confirm that the problem is resolved.

**Drill-through Links are Not Active in the Safari Browser**

When viewing a PDF report in the Macintosh Safari browser, you cannot open hyperlinks. This is because the Macintosh Safari browser does not have the necessary Adobe® Acrobat plug-in.

To avoid this problem, use the HTML format when creating drill-through reports that may be viewed in Safari.

**Unexpected or Empty Results When Drilling Through**

When you drill from a source report to a target report, there might be no data returned. This might be the correct result if there is no data that corresponds to the drill-through selections or if you do not have permission to view the data.

In other cases, if no data or the wrong data appears, the source item might not be mapped to the target correctly or the values in the data sources might not be conformed (the values do not match in both data sources).

If you have the necessary permissions, you can debug drill-through definitions by using the drill-through assistant from the Go To page (right-click the selection in the source report and select Go
To). You can view the passed source values and the mapping to the target report parameters. You can use this tool for both authored and package drill-through definitions.

You might be able to correct the problem by modifying the parameter mapping in the drill-through definition. For example, when you drill from a cube to a relational data source, sometimes no data is returned or the wrong data is returned because the business key values in the two data sources do not match. You can change the drill-through definition to pass the caption of the IBM Cognos PowerCube member instead of the business key, but you must also change the target report to filter on the corresponding string value and not the business key value.

However, it is best to ensure the data sources are conformed. In this example, the business keys in the cube should match the business keys in the relational source. Filtering on a key is more efficient than filtering on a larger string that may or may not be indexed in the database. For more information on data source conformance, search for "conformed dimensions" and "business keys" in the IBM Cognos Transformer User Guide and the Report Studio User Guide.

**Steps to Pass the Caption from a PowerCube to a Relational Source**

1. Ensure that the target report filters on a string value that matches the caption being passed from the PowerCube.

2. Edit the drill-through definition as follows:
   - If the drill-through definition was created in Report Studio, open the report, and go to the drill-through definition associated with the drill-through source object. On the parameter mapping page, select Member Caption in the Property to pass column.
   - If the drill-through definition was created in the source package, go to IBM Cognos Connection, Drill-Through Definitions, and open the package drill-through definition. On the Target tab of the drill-through definition, select Member Caption in the Property to pass column for the appropriate parameter.

When you drill through, instead of the business key, the caption is passed to the target.

**Cannot Drill Through From a Relational Source to a Cube**

By default, you cannot drill through from a relational data source to a cube. This is because a cube expects a Member Unique Name (MUN) as a parameter value and relational sources do not use MUNs.

Members have properties which include a business key and a caption. If either of these match data items within the relational source, drilling through can be performed as long as the cube target report is authored in Report Studio.

If the source data source has a query item, for example display name, that corresponds to a member property in the target cube, for example caption, you must create the parameter on the caption in the target report.

To pass the data item to the cube target, do the following:
   - In the cube target report, create a parameter that accepts the caption of the member. This parameter should be created in a Query Calculation object from the Toolbox tab with the following syntax. Type the following
filter([Hierarchy or Level], caption([Hierarchy of Level]) = ?Parameter?)

For example:

filter([sales_and_marketing],[Products],[Products],[Product line], caption([sales_and_marketing].[Products],[Products],[Product line]) = ?Product Line?)

Cannot Drill Through Between PowerCubes Because MUNs Do Not Match

We recommend that business keys be unique throughout the dimension for PowerCubes. These keys are used as the source value for levels in a hierarchy of a dimension. If the values are not unique throughout the dimension, the corresponding Category Code values may be generated with tildes.

For example, if a category for the Product Line level has a source value of 101 and a category in the Product Type level has a source value of 101, the Category Code value for the Product Type level is automatically generated with a unique value such as 101~245. The Category Code values are used in the Member Unique Name (MUN) for each member, for example, [Sales and Marketing].[Products].[Products].[Product type]->:[PC].[@MEMBER].[101~245].

Because these values are generated automatically, they cannot be guaranteed from one cube build to the next or in a build for another cube with the same dimension structure using the same source values. Therefore, drilling from one PowerCube to another on what appears to be the same member might not work since the MUNs might not match.

If the MUNs do not match, consult the cube modellers to see if the business keys can be made unique throughout the dimension. If this is not likely, or might take some time to resolve, you can use calculations to pass the source value from one PowerCube to another for drill-through.

Steps to pass the business key (source value) from the source report to the target report

1. In the target report, create a filter with the following syntax:

   filter([Hierarchy or Level], roleValue('_businessKey', [Hierarchy or Level]) = ?Parameter?)

   For example:

   filter([Sales Cube],[Products],[Products],[Product type], roleValue('_businessKey',[Sales Cube].[Products],[Products],[Product type]) = ?Prod Type?)

2. In the source report, create a Query Calculation which is used to pass the business key (source value) to the target report by mapping it to the target parameter in the drill-through definition. Use the following syntax:

   roleValue('_businessKey', [Hierarchy or Level])

   For example:

   roleValue('_businessKey', [sales_and_marketing].[Products],[Products].[Product type])

Drilling Through to IBM Cognos BI from an IBM Cognos Series 7 Product Results in a Firewall Error

You use an IBM Cognos Series 7 product that is configured to use a proxy server. When you drill through to IBM Cognos Business Intelligence, the following error message appears:
DPR-ERR-2079 Firewall Security Rejection. Your request was rejected by the security firewall. Please try again or contact your administrator.

This is because the IBM Cognos Business Intelligence Web server does not recognize the proxy server name and rejects the entry.

To correct this problem, add the proxy server name in IBM Cognos Configuration.

**Steps to Add a Proxy Server Name**

1. Start IBM Cognos Configuration.
2. In the Explorer window, click Security, and then click IBM Cognos Application Firewall.
3. In the Valid domains or hosts box, add the proxy server name.
4. From the File menu, click Save.
5. From the Action menu, click Start.

**Detail Cells are Not Displayed for Excluded Items When Drilling Through to PowerPlay Studio**

In IBM Cognos PowerPlay® Studio, you can use the Hide/Show feature to hide items in a report. If you drill through to a PowerPlay Studio target report to an item that is hidden in the source report, the target has no detail cells for the hidden item.

For example, the year 2005 is hidden on the row edge in a PowerPlay Studio target report. You drill-through to the target report on 2005 in a PowerPlay Studio, Analysis Studio, or Report Studio source report. The target report shows no detail cells for 2005 they are hidden.

However, if the Show Summaries option is selected for the hidden categories in the target report, then the summary row will display the total values for 2005.

To correct this problem, do not exclude items in the source report if you want to see the details cells in the target report. For more information and examples, see Understanding Drill-Through Behavior in IBM Cognos 8 at http://www.ibm.com/developerworks/.

**Drill-Through Parameter is Ignored in PowerPlay Studio Due to a Custom Set**

When a target PowerPlay Studio report contains a custom subset, you may not see the results you expect when you drill through from a source report in Analysis Studio, PowerPlay Studio, or Report Studio. For example, the target PowerPlay Studio report contains a custom subset for the year 2006.

If you drill through from the source report in Analysis Studio, PowerPlay Studio, or Report Studio, the year 2006 is displayed. But, since the custom subset does not include the year 2004, the drill-through parameter for 2004 is ignored and items for 2004 are not displayed.

To avoid this problem, ensure that the target report has custom subsets that include the items you want to display during drill-through from source reports. For more information and examples, see Understanding Drill-Through Behavior in IBM Cognos 8 at http://www.ibm.com/developerworks/.
Drill-Through Definition is Not Available

When a drill-through definition is created in IBM Cognos Connection, there is an option to specify the scope for the drill-through definition. The specified item can be a query subject, query item, measure, dimension, or level. The item must be present and selected in the source report when drilling through to a target report for the drill-through definition to work. It must also be available in the list of drill-through target links on the Go To page. If the scope item is not included in the source report when it is created in Analysis Studio, Report Studio, or PowerPlay Studio, the drill-through target link does not appear on the Go To page.

To fix the problem, add the scope item to the source report. For more information and examples, see Understanding Drill-Through Behavior in IBM Cognos 8 at http://www.ibm.com/developerworks/.

Calculations Do Not Appear in the Target Report

If you drill through to PowerPlay Studio from a report in Report Studio, Analysis Studio, or PowerPlay Studio, calculations on the edges in the target report might not appear.

For example, you have a target report with the calculation Personal Accessories+100 as a column in a crosstab report. When you drill through from a source report to the target report, if Personal Accessories is filtered out of the target report (Personal Accessories is not one of the items that is returned on the column edge), then the Personal Accessories+100 calculation does not appear. Personal Accessories has been filtered out of the target report and is not available to fulfill the calculation.

To see the calculations in the target report, ensure the items used in the calculations are returned in the result set (not filtered out). For more information and examples, see Understanding Drill-Through Behavior in IBM Cognos 8 at http://www.ibm.com/developerworks/.

Target Report Does Not Filter Properly Without "Go-To" Parameters

In Analysis Studio, you can multi-select two or more items from a dimension and add them to the Context Filter area to create a list of items (a set of members from one dimension) that the analysis is filtered on. For example, Telephone, Web, Sales Visit and Special are multi-selected from Order method type and dropped onto the Context Filter area of an Analysis Studio target report.

If a drill-through definition is created for this target report, when you drill through from a source Report Studio, PowerPlay Studio, or Analysis Studio report, all context filter items are returned even though they are not part of the intersection selected for drill-through. This is because Analysis Studio does not dynamically filter from source reports.

Enable Go To parameters on the context filter in order to drill through and filter the reports as expected. In the drop down menu for the Context Filter, select Use as "Go To" Parameter. For any items that you wish to filter on in an Analysis Studio target report drill-through, a context filter must be created and set as a Go To parameter.

For more information and examples, see Understanding Drill-Through Behavior in IBM Cognos 8 at http://www.ibm.com/developerworks/.
Empty Cells Returned in a Target Report with Excluded Items

In IBM Cognos Business Intelligence, to filter an Analysis Studio target report on a drill through, context filters must be created and set as Go To parameters. Each context filter must contain all the items from the dimension that you wish to filter on, for example, a context filter might contain the years 2004, 2005, 2006, 2007. For example, an Analysis Studio target report has context filter for years, but excludes the year 2005 on the row edge. If you drill through to this target report on 2005 from a PowerPlay Studio, Report Studio, or Analysis Studio report, the report displays empty cells.

This is an accurate result since the target report has filtered out the years displayed in the report layout (for example, 2004, 2006, 2007). The report has been filtered on the excluded item, 2005. However, the summary total row shows values for 2005 since it provides the overall total for included and excluded items of the report.

For more information and examples, see Understanding Drill-Through Behavior in IBM Cognos 8 at http://www.ibm.com/developerworks/.

Nested Crosstab Only Filters on Some Items

If you perform a parameter-based drill-through from a source report to a Report Studio target report with two or more dimensions nested on a row or column, you may encounter unexpected results depending on the filters applied to the target report.

For example, a target Report Studio report has the following two filters:

- [sales_and_marketing_mdc].[Order method].[Order method].[Order method type]=?Order Method Type?
- [sales_and_marketing_mdc].[Retailers].[Retailers].[Region]=?Region?

Order method type and Region both have filters, but Product line does not. A drill-through definition mapped to the appropriate parameters, in this case Order method type and Region, is created.

When the source report is run and the intersection of Outdoor protection, Northern Europe, and Telephone is selected to drill through to the target report, the order method type and region display as expected, but all product lines are returned. This is because there are filters on Order method type and Region but not Product line.

Add another filter for Product line or edit the drill-through definition to allow dynamic drill-through, which would dynamically filter Product line at run time. For more information and examples, see Understanding Drill-Through Behavior in IBM Cognos 8 at http://www.ibm.com/developerworks/.

Data Does Not Appear in a Target Report or the Wrong Data Appears

If no data appears when you drill through to a target report or if the wrong data appears, the problem might be data source conformance. The business keys might be different or might be mismatched.

For example, the business key for Camping Equipment might be 100 in the data source for the source report and 1 in the data source for the target report, in which case no data appears in the target report. Another example might be that the business key for Camping Equipment is 100 in
the data source for the source report but, in the data source for the target report, 100 is the business key for Golf Equipment, in which case the wrong data appears in the target report.

To solve the problem, ensure that business keys have the same value in both data sources. If there are cases where data does not appear to match, contact your database administrator or data modeler. For more information about data source conformance, search for "conformed dimensions" and "business keys" in the Transformer User Guide and the Report Studio User Guide.

You might also want to see "Unexpected or Empty Results When Drilling Through" (p. 800).

**Data is Not Filtered in the Target Report After Drill-Through**

You drill through to a target report, but no filtering occurs in the target report. For example, you drill through on a crosstab intersection of Computer Equipment and 2006 and expect to see only data for Computer Equipment for 2006 in the target report. Instead you see all products for all years. This occurs because the target report has no filters for the parameters that were passed.

To solve the problem, ensure that the target report has the correct filters. In the above example, the correct filters in the target report are Product line and Year. Alternatively, you can enable Dynamic Drill-Through in a package-based drill-through definition.
This section provides solutions for problems you may encounter when using IBM Cognos Map Manager. For information about Map Manager, see the IBM Cognos Map Manager Installation and User Guide.

Problems Importing Files

You may encounter problems when you try to import a map file or text file.

Error Importing Translated Text File

When you import a TXT or CSV file that has been translated, you receive an error message similar to the following:

Unable to save the file.

An error occurred while importing the map file.

Unable to import. The translation file contains no useful content.

The problem may be caused by one of the following:

- The map file that is open is not the map from which you created the export translation file.
- Features were added or deleted in the file.
- Columns (extra tabs or commas) were added to the file.
- The data was sorted and is now in a different sequence than when it was first exported.

To resolve the problem, first ensure that the correct map file is open. If it is, then resend the original exported file for translation and specify that the contents must not be sorted, deleted, added to, or modified except to add translated features. If required, export the translation features and languages again.
Chapter 46: Problems With Metrics

This section provides solutions for problems you may encounter when using IBM® Cognos® Metric Studio or IBM Cognos Metric Designer.

The information is organized into the following sections:

- "Known Issues" (p. 810)
- "Known Issues When Using Metric Designer" (p. 814)

Also, log files (p. 809) can help you troubleshoot problems by recording the activities that take place when you work with Metric Studio.

If you must contact customer support for assistance with a Metric Studio issue, attaching the support bundle (p. 810) will help expedite your case.

**Metric Studio Log Files**

Operations performed in IBM® Cognos® Metric Studio are recorded in various log files for tracking purposes. For example, if you experienced problems loading data into Metric Studio, consult the debug_info.log file to learn what activities were performed during the load.

You can find the log files at the following locations:

- `installation_location/logs/MetricMaintenance/databasename-timestamp/Metaloader`
  
  The metaloader log file contains information about
  
  - when the load started
  - how many and what types of objects were loaded
  - the amount of time taken to apply the business rules
  - steps in the loading process
  - how long the load took to run

  The load_summary.log file contains the number of loading and the associated error codes.

  The sql_history.log file is useful when tuning performance. It is a tab-delimited file that you can open using Microsoft® Excel spreadsheet software. It contains SQL commands, the rows affected, and the time elapsed for each SQL statement.

  The debug_info.log file is a tab-delimited file and contains debugging information. The amount of information in this file depends on the level of logging detail selected. For information about setting the level of logging, see "Logging Settings" in the Metric Studio User Guide.

- `installation_location/logs/MetricStoreInstall/databasename-timestamp`
Metric Studio Support Bundle

If you must contact customer support for assistance with an IBM® Cognos® Metric Studio issue, attaching the support bundle will help expedite your case.

This support bundle is a zip file generated by a tool called cmm_support_bundle. The command is located in installation_location/bin and is invoked as follows:

cmm_support_bundle databaseServer databaseName databaseUser databasePassword databaseType output_filename

where

- **databaseServer** is the hostname of the database server (default: localhost)
  - For Oracle, you can add an optional port by appending ':port' to the hostname (default: 1521). For example, localhost:1234.
  - The **databaseServer** parameter is ignored for database type 'db2'.
- **databaseName** is the name of the database (default: cmm)
  - This is the 'database file' entry for database type 'db2'.
- **databaseUser** is the database user name (default: sa)
- **databasePassword** is the database password (default: cmm)
- **databaseType** is the database type (default: sqlserver; values can include sqlserver, oracle, db2)
- **output_filename** is the fully qualified name of the zip file to create (defaults to the _SUPPORT_FILES directory)

For example, if a SQL Server database contains your metric store, issue a command such as

cmm_support_bundle dbserver1 prod_db sa topsecret sqlserver

or on a UNIX® operating system

sh cmm_support_bundle.sh dbserver1 prod_db sa topsecret sqlserver

By default, this will create output in the installation_location/_SUPPORT_FILES directory.

Known Issues

The information in this section will help you resolve issues that you encounter when working with IBM® Cognos® Metric Studio.
IBM Cognos Business Insight Users Cannot Expand Metrics

IBM® Cognos® Business Insight users will not be able to expand the Metrics folder when viewing a strategy in Business Insight if you do not choose the option to expand all elements for your strategy.

In IBM Cognos Metric Studio, select the Expand Elements check box in the strategy details.

Metric Studio Reports Fail Because of an Oracle Internal Error

Some reports that are included with IBM® Cognos® Metric Studio fail to run because of an Oracle internal error. This occurs when you are using 10.2.0.x releases of Oracle.

The reference bug for Oracle is 5864217.

If you encounter this error, you can resolve it by installing Oracle 10.2.0.3, Patch 5, which is officially named 5946186. You can obtain this patch from the Oracle Support's Metalink site which is available through your existing support agreement.

Apply the patch as directed by the instructions included with the download from Oracle Support.

Metric Studio Errors Occur When Loading Data into an Oracle Database

The application is disconnected from Oracle with ORA-07445 and ORA-3113 errors. You can see these errors in the database alert log. The database errors then cause errors in IBM® Cognos® Metric Studio.

This is a known issue with Oracle (Bug 5026836 - Ora-7445 [Kxccres()+3052] Updating View With Instead Of Trigger).

The workaround is for the database administrator to run the following command while logged in as SYS:

If an SPFILE is in use, ALTER SYSTEM SET optimizer_features_enable='10.1.0' SCOPE=BOTH.
If an SPFILE is not in use, ALTER SYSTEM SET optimizer_features_enable='10.1.0'.

If an SPFILE is not in use, the database administrator should also add this setting to the init.ora file for the database instance.

Error When Attempting to Run Metric Studio on SQL Server 2005

When clicking a scorecard, a SQL Server error appears:

Msg 169, Level 15, State 1, Line 3 - A column has been specified more than once in the order by list. Columns in the order by list must be unique.

This has been identified by Microsoft® as bug #484681 and occurs in Microsoft SQL Server 2005 RTM (Build 9.00.1399). The problem was resolved by Microsoft in Microsoft SQL Server SP1.

If you encounter this error, you can resolve it by installing Service Pack 1 for SQL Server 2005 (or later).
Data from a Relational Database Source or a Flat File Data Source Does Not Appear

You use IBM® Cognos® Connection to load data into the metric store.

If IBM Cognos Connection encounters a problem while loading data from a relational database source or a flat file import source, the data will not appear. Typical problems include

- text fields that are too long
- required fields are missing
- duplicate rows
- references to non-existent objects

To find the error, run the batch file or shell script from the command line and check the status of each step. Alternatively, you can repeat the loading process in two stages through the user interface and check the success of each stage.

Steps to Separate the Loading Process into Stages

1. In IBM Cognos Connection, under the Metric Maintenance folder for your package, click Import data from files into staging area.

2. Use an SQL query tool to check whether the data was loaded.

   If not, ensure that you have
   - defined the data source correctly and that the files are in the correct location
   - formatted the flat file with tab-delimited columns
   - included the correct number of columns
   - used the correct data formats, such as yyyy-mm-dd for dates and a period for the decimal separator

   The logs from the attempt to load each tab-delimited file can be found at installation_location/logs/Metric Maintenance/databasename-timestamp/BulkLoad, and may contain more descriptive error messages than are available from the user interface.

3. If you find errors, correct them and repeat steps 1 and 2.

4. After the data appears in the staging tables, in IBM Cognos Connection, under the Metric Maintenance folder for your package, click Transfer data from the staging area into the metric store.

5. Check whether the data appears in IBM Cognos Metric Studio.

   If it does not, check the last three columns of the kpi_value_stage_rejects table for error information.
A Metric Maintenance Task Fails to Run

If you manually run a metric maintenance task and it fails, IBM® Cognos® Metric Studio displays an error message. If you run a scheduled metric maintenance task, you should check the run history to verify if the task was successful or not.

To determine the cause of a failed task, check the logs located in \installation_location\logs\DIS\package_date_time. The logs for each metric maintenance task are kept in a folder named with the task’s package name, date, and time.

You Do Not Have Permission to Access This Metric Package. Contact Your System Administrator

You must have Read, Execute, and Traverse permissions to open IBM® Cognos® Metric Studio using the link on the Welcome page or in IBM Cognos Connection.

Ask your system administrator to check your access permissions.

Failed to Check the Metrics Store Install Status Error When Using DB2 8.2.3

When you try to create a metric package using DB2® 8.2.3 as the data source, you may receive the following error message:

Failed to check the metrics store install status.

If the version of the DB2 client on the IBM Cognos Metric Studio computer is not the same version as the DB2 server, or you upgraded your DB2 instance, you must run commands to bind the DB2 client to the database. Run the commands on the Metric Studio computer.

On the Microsoft® Windows® operating system, run the commands in a db2cmd window from DB2InstallDir\sqllib\bnd.

On the UNIX® operating system, run the commands from DB2InstanceDir/sqllib/bnd.

Type the following commands:

db2 connect to database user userName

db2 bind @db2ubind.lst blocking all grant public

db2 bind @db2cli.lst blocking all grant public

db2 bind db2schema.bnd blocking all grant public sqlerror continue

db2 terminate

Errors Occur When Importing Tab-delimited Files into a DB2 Metric Store

When IBM® Cognos® Metric Studio is installed on the Microsoft® Windows® operating system, and the DB2® metric store is installed on the UNIX® operating system, errors occur when you run metric maintenance tasks to import tab-delimited files into the staging tables or into the metric store.

There are two possible situations:
The run history indicates that there were problems loading some of the tab-delimited files. The individual log files for the tab-delimited files indicate that the last column of the tab-delimited file data was truncated because it exceeded the target column width.

The **Transfer data into metric store** task fails when the data to load includes a flat file of type .ccq and the error in the log file indicates DB2 SQL error: SQLCODE: -180, SQLSTATE: 22007.

The solution in both cases is to ensure that the tab-delimited files use end-of-line characters that are suitable for UNIX, such as a linefeed character and not the carriage return and linefeed character combination that is typically used by Windows.

**Required User Permissions for the Metric Store Database (MS SQL Server)**

The user account for the metric store database must be the database owner. You must use the owner user-account to log on to the IBM® Cognos® Business Intelligence data source used in the metric package.

For information about setting user permissions, see the Microsoft® SQL Server documentation for the sp_changedbowner utility.

**Oracle 9.2 Package Initialization Error if NLS_LANG Environment Variable is Not Set Appropriately Before Starting Up IBM Cognos BI Tomcat Server**

You will encounter an exception error when trying to initialize an IBM® Cognos® Metric Studio package if the Oracle specific environment variable NLS_LANG is not set correctly.

Workaround: IBM Cognos Business Intelligence requires that the Oracle specific environment variable NLS_LANG be set appropriately before starting up IBM Cognos BI Tomcat server. Please ensure that the character set portion of this variable is set to UTF8. For example, in the United States, this may be something like AMERICAN_AMERICA.UTF8.

**Known Issues When Using Metric Designer**

The information in this section will help you resolve issues encountered when working with IBM® Cognos® Metric Designer.

**CCLAssert Message Encountered When Running an Extract Against an SAP Data Source**

When an extract is run against an SAP data source, you encounter a CCLAssert message. This error typically occurs if the extract is being run against a ragged hierarchy and a level filter is being used.

To resolve this issue, avoid using a filter.

**Report From OLAP Data Source Is Not Displayed and Error Processing Template Is Encountered**

When you drill down on a metric sourced from an OLAP data source and navigate to the report tab, the report is not displayed. The following error is displayed:
Error processing template.

This error occurs when you execute the extract directly into staging tables from the Metric Designer UI or by running a published extract from IBM® Cognos® Connection.

Workaround: Execute the extracts to flat files and then load these files using the metrics maintenance task Import and transfer data from files into metric store.

No Rollups Are Generated for Some Calculated Measures in an SAP Info Query Data Source

IBM® Cognos® Metric Designer may not generate any rollups for an extract that references a calculated member of an SAP Info Query data source. The affected measures will appear in the IBM Cognos Framework Manager model as having a Regular Aggregate attribute value of unknown. There is no workaround.

Adding Multiple IQD Files to an Import Source

When you add multiple IQD files to an import source, IBM® Cognos® Metric Designer creates an outer join between the first pair of non-numeric, non-date columns with matching names. The join approach is designed to work with a single fact IQD file and with multiple dimension IQD files.

Metric Designer does not recognize joins where more than one column is required for a join condition. In this case, enter the IQD files into Metric Designer as separate import sources or combine them into a single IQD using IBM Cognos Impromptu®.

Previewed Scorecard Hierarchy Shows Blanks

If you use if () then () else () statements in an expression for level attributes, you will see blank entries when you preview the scorecard hierarchy.

The workaround is to change the expression to cast the query item to VARCHAR. For example:

```
if (cast([great_outdoors].[Locations].[Locations].[Country].[PPDS_CODE],VARCHAR(1000)) = 'Canada') then ('Craig') else ('George')
```

To eliminate duplicates for items other than ‘Canada’, you can add a level filter expression. For example:

```
[great_outdoors].[Locations].[Locations].[Country].[Country] = 'Canada' or [great_outdoors].[Locations].[Locations].[Country].[Country] = 'China'
```
Chapter 47: IBM Cognos Business Insight Administration Problems

Use this troubleshooting information to help solve problems you may encounter during or after the installation of IBM® Cognos® Business Insight.

Secure Connection Failed error when accessing IBM Lotus Connections

You have enabled collaboration using IBM Lotus® Connections, and you receive the following error in your Mozilla Firefox Web browser when you access IBM Lotus Connections:

Secure Connection Failed An error occurred during a connection to server_name.

Cannot communicate securely with peer: no common encryption algorithm(s).

This error can occur if you are using secure socket layer (SSL) protocol when the SSL algorithms do not match between the browser and your application. To resolve the error, update your ssl3 settings in your Web browser.

Steps

1. Open your Mozilla Firefox Web browser.
2. In the URL box, type about:config, and press Enter.
3. In the Filter box, type ssl3.
4. Change any attributes marked False in the Value field to True.
5. Restart your Web browser, and try to access IBM Lotus Connections again.
Chapter 48: Troubleshooting IBM Cognos Office and the Report Data Service

Use this troubleshooting information to help solve problems you may encounter during or after the installation of IBM® Cognos® Office, IBM Cognos for Microsoft® Office, IBM Cognos Analysis for Microsoft Excel®, and Report Data Service (RDS) components.

For more troubleshooting information, search the IBM Cognos Customer Center Web site at (www.ibm.com/software/data/cognos/customercenter).

Configuration Issues

The following issues are related to configuration and setup.

The IBM Cognos Office Interface Fails to Initialize in Microsoft Office

IBM® Cognos® Office may not initialize when the Microsoft® .NET Framework is not installed or the version is not correct. The required Microsoft .NET Framework version is 2.0 or later. Another possible reason for this condition is that the IBM Cognos Office COM add-in is either not installed or not registered.

If you are running the wrong version of Microsoft .NET Framework, uninstall it and then reinstall Microsoft .NET Framework version 2.0 or later.

To install the IBM Cognos Office COM add-in, run the .msi program that is found on the installation CD. For more information, see the installation guide.

Before you attempt to install Microsoft .NET Programmability Support, you must have installed Microsoft .NET Framework version 2.0 or later.

IBM Cognos for Microsoft Office Does Not Start in Microsoft Word

You open an IBM Cognos for Microsoft Office session in Microsoft Word, but nothing appears to happen.

This can occur if Microsoft Outlook has opened a session of Microsoft Word to edit email messages. To check whether you are using Word to edit email messages, in Microsoft Outlook, click Tools, Options, Mail Format. In the Message format section of the dialog box, verify the options for editing your email messages.

To resolve this problem, close Microsoft Outlook before opening the Microsoft Word document configured for IBM Cognos for Microsoft Office.
IBM Cognos Office Fails to Initialize in Microsoft Internet Explorer

If you use Internet Explorer to browse IBM Cognos Business Intelligence and open a workbook, document, or presentation published by IBM Cognos Office, the document launches in Microsoft Office, but without full functionality.

To configure Internet Explorer to open Microsoft Office files in Microsoft Office instead of in Internet Explorer, you must use the Folder Options tool to update browse options. It is also possible to do this in Windows Registry.

Steps to Configure Internet Explorer to Open Microsoft Office Documents in Microsoft Office Applications

1. Open My Computer.
2. From the Tools menu, click Folder Options.
3. On the File Types tab, under Registered file types, click Microsoft Excel Worksheet, and then click Advanced.
   
The Edit File Type dialog box appears.
4. Clear the Browse in same window check box and click OK.
5. Complete the same steps for Microsoft Office PowerPoint presentations and Microsoft Office Word documents.

bo:heap Buffer Overflow Error

After long sessions, Microsoft Office may stop responding by generating a bo:heap Buffer Overflow error.

This error may be falsely identified as a potential virus by some virus-monitoring programs.

Microsoft Office Does Not Open a Microsoft Office Document Published from IBM Cognos Office

If you observe Microsoft Office trying to open a published document twice when you double-click the workbook, document, or presentation from Windows Explorer, the file association is either corrupted or not installed properly.

There are two options to resolve this issue. You can start the Microsoft Office application first, and then open the document using the Open command from the File menu, or you can reregister the file type.

Steps to Reregister Workbook File Types for Microsoft Office Excel

1. From the Start menu, click Run.
2. Type the following command and click OK.
   
   "C:\Program Files\Microsoft Office\Office\Excel.Exe" /regserver
You can adapt this command to your environment by providing the proper local drive and location.

**Steps to Reregister Presentation File Types for Microsoft Office PowerPoint**
1. From the Start menu, click Run.
2. Type the following command and click OK.
   
   "C:\Program Files\Microsoft Office\Office\Powerpnt.exe" /regserver

   You can adapt this command to your environment by providing the proper local drive and location.

**Steps to Reregister Document File Types for Microsoft Office Word**
1. From the Start menu, click Run.
2. Type the following command and click OK.
   
   "C:\Program Files\Microsoft Office\Office\winword.exe" /regserver

   You can adapt this command to your environment by providing the proper local drive and location.

**Unable to Open Published Microsoft Office Documents from IBM Cognos Connection**

If the browser does not prompt you to open or save the workbook, document, or presentation, it may mean that the option to prompt before opening was cleared. Reset this option.

You must enable the File Download and Automatic prompting for file downloads in Internet Explorer.

**Steps to Confirm Opening of Documents**
1. Start the Windows Control Panel.
2. Double-click Folder Options.
3. From the Folder Types tab, in the Registered file types list, click Microsoft Excel Worksheet, and then click Advanced.
4. Ensure that the Confirm open after download check box is selected and click OK.
5. Repeat steps 3 and 4 for other Microsoft Office documents that are supported in IBM Cognos Office, such as Microsoft Office Excel Template, Microsoft PowerPoint Presentation, Microsoft Office PowerPoint Template, Microsoft Word Document, and Microsoft Office Word Template.
6. Click Close.

**Steps to Reset Internet Security Options**
1. Start Internet Explorer.
2. From the Tools menu, click Internet Options.
3. From the **Security** tab, click the Web content zone for which you are updating these options, and then click **Custom Level**.

4. Scroll down to the **Downloads** section and click Enable for the **File download** and **Automatic prompting for file downloads** options.

5. Click **OK** twice.

### Unable to import PowerPlay Studio reports

The request to import a PowerPlay Studio report fails.

When using single signon with Microsoft® Internet Information Services (IIS), anonymous access must be enabled for users to access IBM® Cognos® for Microsoft Office documents that are based on PowerPlay reports. If necessary, a second PowerPlay gateway can be used to provide anonymous access for IBM Cognos for Microsoft Office. For more information, see the topic about specifying gateway mappings in the IBM Cognos BI Administration and Security Guide.

The administrator must follow these steps to enable Anonymous Access in IIS.

**Steps**

1. On each computer where Content Manager is installed, start IBM Cognos Configuration.

2. In the **Explorer** window, under **Security, Authentication**, click **Cognos**.

3. In the **Properties** window, click the box next to the **Allow anonymous access** property and then click **True**.

4. From the **File** menu, click **Save**.

### Error Messages, the .NET shortcut, or the .NET Console Are Not in the Language of the .NET Framework 2.0 That Was Installed

When you install a non-English version of .NET Framework in a non-English operating system, you will notice that the error messages, .NET shortcut and .NET Console are in English.

To solve this issue, you must apply the .NET Framework Language Pack for your language.

The subkey numbers relate to the language as follows: 1033=en-en, 1036=fr-fr, 1031=de-de, and 1041=ja.

If you are missing the language pack subkeys, you must install the .NET language pack, which is available from the Microsoft support Web site.

### Workbook Closes Unexpectedly

If you install the COM add-in and your Microsoft Excel workbook name contains a square bracket, Excel stops responding or closes unexpectedly after opening.

To resolve this problem, rename the workbook so that it does not contain square brackets.
The server committed a protocol violation

The EXCEL.EXE.config file is required and is missing. Section=ResponseHeader Detail=CR must be followed by LF.

You must create the EXCEL.EXE.config file, copy it to the same location as IBM Cognos Analysis for Microsoft Excel® and add the following lines:

```xml
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <system.net>
    <settings>
      <httpWebRequest useUnsafeHeaderParsing="true" />
    </settings>
  </system.net>
</configuration>
```

Reports Unavailable in IBM Cognos Connection Jobs after Using Save As Command in IBM Cognos Report Studio

After opening a report in IBM Cognos Report Studio and saving a copy using the Save As command, you may find that if the report is included in a job, it is not available in the IBM Cognos Connection portal.

Do not use the Save As command in IBM Cognos Report Studio to save changes when a report is included in a job. Instead, make a copy of the report, make changes to the copy, and then copy the updated report to the IBM Cognos Connection portal. Use this method to overwrite the report in the job without breaking the report links.

Unable to Correctly Display East Asian Characters

Your locale is set to one of the East Asian languages and odd characters or question marks appear in the user interface, dialog boxes, and menus.

IBM Cognos Office products support GB18030, which is a Chinese National Standard for encoding characters. To display Simplified Chinese characters properly on Windows XP or earlier, you must add GB18030 support for Windows core fonts and then enable font linking.

To resolve this issue, after installing the language support for Simplified Chinese, ensure that you have linked the SimSun18030.ttc font collection to the following core fonts:

- Tahoma
- Arial
- Microsoft Sans Serif
- SimSun

For more information, see the installation guide for the specific product.
The Content of the Cell-based Report Shows #NAME?

When building a cell-based report in IBM Cognos Analysis for Microsoft Excel®, the content of the cells shows #NAME? When you drag items from the source tree directly to a cell of a worksheet, you are creating a COGNAME or COGVAL formula that references the item in the database. This functionality is available only when the CognosOfficeUDF.Connect automation add-in is loaded.

If #NAME? appears in the contents of the cell, it means that the add-in was not loaded and the CognosOfficeUDF.Connect check box in the Add-in dialog box (Tools, Add-Ins) is not selected. To resolve this issue and ensure that the add-in is always properly loaded, you must verify that the value of the OPEN registry key is set to /A "CognosOfficeUDF.Connect".

Steps
1. From the Windows Start menu, click Run.
2. In the Open box, type Regedit, and then click OK.
3. In the Registry Editor, go to the Registry branch:
   HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\version\Excel\Options
4. In the right pane, under Name, right-click OPEN, and then click Modify.
5. In the Value Data box, type
   /A "CognosOfficeUDF.Connect"
6. Click OK, and then close the Registry Editor.

Processing Issues

The following issues are related to processing and rendering reports.

Processing time out

Processing stopped because the server took too long to respond to your request for data.

Increase the processing time.

Steps
1. From the IBM Cognos tool bar, click Options.
2. In the Processing time limit (milliseconds) box, type the number of milliseconds to wait for processing requests and click OK.

Cannot Render this Report

The Report Data Service (RDS) cannot bring report elements into a Microsoft Office document. Some combinations of text and images are beyond the scope of the target application.
To resolve this problem, evaluate the report and attempt to simplify the content requirements so that IBM® Cognos® for Microsoft® Office can render the report.

**RDS Data Limit Exceeded When Importing from Large Report Outputs**

While attempting to import all or part of a large report, the application attempts to open the entire report. A provisional governor limit restricts the size of report output allowed and might result in an error (even if you are trying to import only part of a report).

To resolve this problem, you can adjust the size limit for report data by changing the Governor limit setting.

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change view menu. Click Services, and then click Report Data.
5. Click the arrow next to ReportDataService to view the Action menu, and then click Set Properties.
6. Click the Settings tab.
7. In the Value column, change the number for Governor limit (MB), and then click OK.

**RDS Server Unavailable**

The IBM Cognos Report Data Service (RDS) manages the transfer of report data between IBM Cognos Business Intelligence and applications that consume the data, such as IBM Cognos for Microsoft Office.

To resolve this problem, restart Report Data Server. Report Data Service restarts when the IBM Cognos service is restarted.

**Steps to Restart the Report Data Service Server**

1. In a browser, connect to IBM Cognos BI as an administrator.
2. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Status tab, click System.
4. In the upper-left corner of the Scorecard pane, click the arrow to view the Change View menu. Click Services, and then Report Data.
5. With the Report Data service displayed, click the arrow to view the Actions menu next to the service, and then click Start.
6. If Report Data Service fails to start, or if IBM Cognos BI is not responding, start IBM Cognos Configuration.

7. Choose whether to start or restart IBM Cognos BI.
   - If IBM Cognos BI is not running, click Start.
   - If IBM Cognos BI is running, click Restart.

**Imported Reports Are Missing Charts or Images**

IBM Cognos for Microsoft Office is functioning normally, but charts and images are missing. The client machine, which is running IBM Cognos for Microsoft Office, cannot connect to the gateway URL as configured in IBM Cognos Business Intelligence. This may be because it is behind a firewall, the hostname/DNS is not known to this client machine, or the client machine has proxy issues.

To resolve the connectivity issues, work with your system administrator.

**Report Objects are missing after opening a saved Microsoft Word 2007 document**

When you open a local document that was saved in Microsoft Word 2007, you may notice that the report objects that were originally imported are missing. Additionally, you are unable to properly refresh the report.

Microsoft Word 2007 has problems processing document variables contained in files that are saved in new file formats, such as .docx. The problem occurs in the Word 2007 hotfix package as described in KB 969604 on Word 2007 SP2. This update is automatically applied if you turned on the Windows Automatic Updates. When installed, the version of Word 2007 with SP1 or SP2, including this update, is 12.0.6504.5000.

In general, imported IBM Cognos Business Intelligence reports that are saved as Microsoft Word documents include document variables that store hidden metadata. When you save a document in the Word 2007 format, the document variables may change unexpectedly and become corrupted if the Microsoft Word application was at the hotfix level as described in KB 969604. When the document variables are corrupted, you are not able to refresh the report data.

To resolve this issue, you must download and install Microsoft Word hotfix package that is dated June 30, 2009 (KB 970942). When installed, the version of Word 2007, after the new hotfix, is 12.0.6510.5001.

This hotfix is not available through the Windows Automatic Updates; you must request and download it from the Microsoft Web site. After downloading this hotfix version, re-import the report to successfully refresh it.

**RSV-CM-0005 Content Manager did not return an object**

When refreshing a prompted report in IBM Cognos for Microsoft Office, the following error appears if the Prompt parameter was set to Always Prompt:

*RSV-CM-0005 Content Manager did not return an object for the requested search path storeID <store_ID>*
You are refreshing a report that was saved with the same file name as an existing report. You cannot replace the existing report by creating a new report with the same name because the new report has a different internal ID. The fully qualified location of the report entry in the content store is represented by the the search path, ID and URL. Entries are assigned a unique identification (ID) number. If the Prompt parameter in IBM Cognos for Microsoft Office is set to **Always Prompt**, the application uses the content store ID to load the report, not the search path.

Another cause for this error might be that you are refreshing an imported report from a full deployment in which you have moved the entire content store from a source environment to a target environment. References to deployment objects are based on search paths, not IDs. For a specific IBM Cognos Connection page, the page ID of an object remains valid until the application's deployment mechanism transfers the original object to another IBM Cognos Business Intelligence server. In the target environment, all IDs are different.

To resolve these issues, in IBM Cognos for Microsoft Office, you must change the value of the **System** report property.

**Steps**

1. In IBM Cognos for Microsoft Office, click the **Manage Data** tab.
2. Expand the hierarchical list and click the report.
3. In the **Properties** pane, expand the **Report** group.
4. Change the **System** property by adding a forward slash "/" at the end of the system gateway URI.
   
   For example, http://server_name/ibmcognos/cgi-bin/cognos.cgi/

5. On the IBM Cognos toolbar, click the refresh all data button 🔍.
   The prompt value that was saved with the report is discarded and you are prompted for a new value.

6. Close the **Prompt** window.

7. Change the **System** property by removing the forward slash "/" that you added in step 4.
   For example, http://server_name/ibmcognos/cgi-bin/cognos.cgi.

8. On the IBM Cognos toolbar, click the refresh all data button 🔍.
   The properties for the updated prompt now have default values. If you want to prompt users each time the report is refreshed, you must set the **Prompt** property value to **Always Prompt**.

**Note:** The URI that was modified in step 4 was automatically added to the list of system gateway URIs in the **Options** dialog box. You must manually remove this invalid URI.

If the invalid URI is retained, the saved prompt values are ignored and the application will always prompt you for a value.

---

**#ERROR Appears in Cells that Contain Multiple Images (Excel Only)**

Multiple images in a cell cannot be rendered.
To resolve this issue, the report author must change the design of the report by moving each image to its own cell. When this is accomplished, you can reimport the report.

The Dispatcher Is Unable to Process the Request

A message indicates that the request is directed to an unknown service name: `<content>`. The IBM Cognos Report Data Service (REDS) cannot bring report elements into a Microsoft Office document. Some combinations of text and images are beyond the scope of the target application.

To resolve this problem, evaluate the report and attempt to simplify the content requirements so that IBM Cognos for Microsoft Office can render the report.

Report Content is Not Imported

When importing a report, Microsoft Excel does not render the report and the worksheet remains blank.

If the report name has a single quotation mark and the Create new worksheets for report pages option is selected, the report content is not imported.

To resolve this problem, you must rename the report without the single quotation mark.

Incorrect Format for the Prompt Value in Prompted Reports

When you refresh a prompted report using the Specified Value type, the prompt value does not display properly in the Use Value field.

Not all prompt values are affected. Some of the prompt properties appear as expected while others may look like this:

```plaintext
[great_outdoors_company].[Products].[Products].[Product line]->:[PC].[@MEMBER].[5~236]
```

In this example, the selected prompt value is "Golf Equipment" which is displayed properly in the Display Value prompt property.

In cases where this occurs, you must know that the equivalent format in the Specified Value is the value with which you want to refresh the report. In the example, `[great_outdoors_company].[Products].[Products].[Product line] => [PC].[@MEMBER].[5~236]` is equivalent to Golf Equipment.

To refresh the report, we recommend that you use the Always Prompt option. That way, users can select the value from the report’s own prompt dialog box.

Steps to Select the Always Prompt Option

1. To view the report properties, from the Manage Data tab, click the report.

2. Expand the prompt properties.

3. In the Type box, click Always Prompt.

4. Refresh the report.

The report refreshes with the requested parameters.

Note: This does not affect the import of prompted reports.
**DPR-ERR-2079 Firewall Security Rejection**

If you run a report after your session has expired and then try to navigate away from the first page of the report, you encounter the following error message:

*DPR-ERR-2079 Firewall Security Rejection. Your request was rejected by the security firewall. CAF rejection details are available in the log. Please contact your administrator.*

To resolve this problem, after an expired session, you must log on again.

**Steps to Log On**

1. In the report list, right-click the top node item.
2. Click **Log On**.
3. Provide your authentication credentials as prompted and click **OK**.

**Item cannot be expanded**

Microsoft Excel has reached the maximum number of rows or columns for this worksheet. The number of rows and columns is limited in Microsoft Excel. Expanding the current item is not possible because it would shift rows or columns beyond this worksheet limit. Microsoft Office Excel cannot shift nonblank cells off the worksheet.

Manually move items so that the row or column item can expand without reaching the limit, or move your exploration or analysis to another worksheet. Or, you can move the data to a new location and try again.

**Error refreshing exploration saved in earlier version of Microsoft Excel**

This workbook may have been created with an older version of Microsoft Excel that has a set maximum number of rows or columns. For example, an earlier version of Microsoft Excel, such as Office 10 or Office 11, columns that go beyond the 256 maximum limit are truncated.

Although you are no longer using that version, the application is working within the limits of the older version of Excel. You may encounter this situation when you are expanding items or when you are refreshing items that have grown in size since the workbook was created.

To correct the problem, you must save the exploration with the .xlsx extension. Opening the exploration in Office 12 does not convert it to Office 12 format. Saving the exploration with the .xlsx extension converts the workbook to the 2007 format that supports columns exceeding the 256 column limit set in earlier versions of Excel.

**Prompted to Log on for Each Imported Report**

When refreshing all data in a document before logging on to the required servers, you are automatically prompted to log on for each report in the document even if the reports originate from the same server.

To log on only once to each server, use the Log On toolbar button to log on to the required servers before refreshing report data.
Object reference not set to an instance of an object

An internal processing error occurred. Initialization of a critical process failed.

Contact IBM Cognos Resource Center. Be ready to supply all relevant logs and details related to this error.

Error 0: RSV-BBP-0027 The Secondary Request Failed

When you create a list report and you use the More or All option to view members, you get the following error:

Error 0: RSV-BBP-0027 The secondary request failed. The requested session does not exist and failover has been disabled. Contact your Administrator.

To resolve this issue, increase the number of rows that you can display on the worksheet.

Steps
1. On the IBM Cognos toolbar, click the Options button.
2. In the left navigation pane, click IBM Cognos Analysis.
3. Under Exploration Settings, in the Data Display Row Limit box, increase the number of rows so that you can display more or all of the remaining members in the list, and then click OK.

Security Issues

The following issues are related to security setup.

IBM Cognos Office Unable to Create Trust Relationship

If you are using HTTPS to Report Data Service and you receive an error in IBM® Cognos® Office about being unable to trust the relationship, the Certificate Authority (CA) certificate that was issued by the Web server is not trusted on the client workstation.

To resolve this problem, you must ensure that the Certificate Authority (CA) that issued the Web server certificate is also trusted on the client workstation. If the certificate is not from an authority that is already trusted on the client, such as Verisign, you must install the CA certificate in the trust store on the client.

Steps to Ensure that the CA Certificate is Trusted on the Client Workstation
1. Retrieve the CA certificate from the issuing authority.
   The file has a .cer extension. This is not the same certificate as the one used by the Web server. It is the certificate for the issuing authority itself.
2. Double-click the .cer file, click Install Certificate, and then click Next.
3. Click Place all certificates in the following store.
4. Click Browse, click Trusted Root Certification Authorities, and then click Next.
5. Click Finish.
Unable to View Reports After Clicking View Report

IBM Cognos for Microsoft Office is functioning normally, but you cannot use the View Report option to view reports. The client machine, running IBM Cognos for Microsoft Office, cannot connect to the gateway URL as configured in IBM Cognos Business Intelligence. This may be because it is behind a firewall, the hostname/DNS is not known to this client machine, or the client machine has proxy issues.

To resolve the connectivity issues, work with your system administrator.

Report Data Service (RDS) Numbered Error Messages

The following error messages may appear in a dialog box and are recorded in the server log, which is located at <IBM Cognos BI installation location>/logs/cogserver.log.

RDS-ERR-1000 Report Data Service Could Not Process the Response from the Content Provider

This error may occur for the following reasons:

- In WebSphere®, this error occurs if another XML parser, such as Xalan is colliding with the one Report Data Service uses.

- In BEA WebLogic, this error occurs if the JAVA_OPTIONS variable has not been set with the correct parser information.

- This error can also occur if a package from a previous version of IBM® Cognos® BI (or ReportNet®) was deployed to IBM Cognos BI without the report specifications being upgraded.

- Another possible reason for this error message is that Report Data Service cannot handle the report. For example, this error occurs if a IBM Cognos Report Studio report contains a block with either of the following:
  - a repeater or repeater table inside a block or a table
  - a layout object, such as a list, crosstab, chart, or text object in a conditional block inside another block or a table

Set the Class Loader Policy in WebSphere

For WebSphere, the best solution is to set the Class loader policy to PARENT_LAST. The WebSphere documentation tells the administrator how to do this.

Set the JAVA_OPTIONS Variable in WebLogic

If you are accessing IBM Cognos for Microsoft® Office through IBM Cognos BI on a BEA WebLogic Application Server add the following to the JAVA_OPTIONS variable of the startManagedWebLogic.cmd (Windows) or startManagedWebLogic.sh (UNIX®) script file:

-Dorg.xml.sax.driver=org.apache.xerces.parsers.SAXParser
Upgrade Report Specifications

Follow the steps for "Upgrading Report Specifications" in the IBM Cognos BI Administration and Security Guide.

Edit the Report

To avoid problems with report layout, you must modify the report by performing one of the following:

- Take the repeater or repeater table out of the block or table.
- Cut the layout object from the conditional block into a new conditional block, block, or table.

RDS-ERR-1001 The PowerPlay Report Name Could Not Be Run. The Expected Response Was Not Returned by PowerPlay

PowerPlay failed while running the report or Report Data Service cannot understand the output.

To resolve this problem, ensure that PowerPlay is functioning properly. The user should check to see that the PowerPlay server is running, or check the PowerPlay logs for errors. If IIS is being used for the Web server, ensure that Anonymous Access is enabled. For more information, see the IBM Cognos BI Installation and Configuration Guide.

RDS-ERR-1003 The file could not be read

Cognos Content service could not read the system files. One cause is that one or more of the system files was accidentally deleted from the installation directory, corrupting the installation of IBM Cognos Business Intelligence.

For example, you may get an error that is similar to the following:

c10_installation\templates\ccs\xslt\ppes\pptrans.xslt could not be read

To resolve this problem, reinstall IBM Cognos BI. For more information, see the IBM Cognos BI Installation and Configuration Guide.

RDS-ERR-1004 A Connection Could Not Be Established with IBM Cognos BI

IBM Cognos Business Intelligence is not responding.

Check the IBM Cognos BI logs. Ensure that IBM Cognos BI is functioning properly.

RDS-ERR-1005 The Logon Requirements for IBM Cognos BI Could Not Be Obtained

A message indicates that you may already be logged into this namespace, or the target namespace does not exist. Generally, this error occurs when trying to log on to the same namespace twice. In some cases, it may indicate a problem with a security setup such as SiteMinder.

Ensure that you are not already logged in.
RDS-ERR-1011 Report Data Service was unable to retrieve the locale

At system startup, IBM Cognos Content service makes a request for the locale of the system and the request fails.

Contact customer support, and be prepared to provide the cogserver.log file.

RDS-ERR-1012 IBM Cognos Content Service was Unable to Discover the Content Providers

This error usually appears in conjunction with RDS-ERR-1028 and means that Report Data Service could not communicate with any PowerPlay providers. (RDS-ERR-1028 can occur separately if there is more than one PowerPlay server, and only one has failed).

Check that all instances of PowerPlay Enterprise Server are running properly.

RDS-ERR-1013 Report Data Service Was Unable to Query Content Manager

Content Manager is not responding.

Ensure that Content Manager is running. Check the server log for error messages related to Content Manager.

RDS-ERR-1014 Report Data Service Was Unable to Create the Document Object

Object Name

Content Manager is not responding.

Ensure that Content Manager is running. Check the server log for error messages related to Content Manager.

RDS-ERR-1015 Report Data Service Was Unable to Create a New Document Version

Content Manager is not responding.

Ensure that Content Manager is running. Check the server log for error messages related to Content Manager.

RDS-ERR-1016 Report Data Service Was Unable to Create a New Document Content Object

Content Manager is not responding.

Ensure that Content Manager is running. Check the server log for error messages related to Content Manager.

RDS-ERR-1018 The IBM Cognos BI Report Name Could Not Be Run

A message indicates that the expected response was not returned by IBM Cognos Business Intelligence. An error was returned by IBM Cognos BI when the report was run or refreshed. One of the following may be the cause:
• PowerPoint does not contain the necessary facilities to recreate the rich formatting and layout of this report.

Check the IBM Cognos BI error log for troubleshooting information. If the report in question was not able to be rendered, adjust the report to remove the formatting and layout to expose the data in PowerPoint, where you can modify formatting and layout.

• You tried to refresh a Series 7 PowerPoint report that was migrated to IBM Cognos BI. Series 7 content is no longer accessed from the Series 7 PowerPlay Enterprise Server, and the IBM Cognos Report Data Service (RDS) is attempting to resolve the path of the PowerCube data source.

In IBM Cognos for Microsoft Office, ensure that the value of the Search Path property of the report matches the search path of the same report that was migrated to IBM Cognos BI and published to IBM Cognos Connection.

For more information, see the IBM Cognos for Microsoft Office User Guide.

• For prompted reports in IBM Cognos for Microsoft Office using Microsoft Excel, if you have set, in the Properties pane, prompt values to be retrieved from a cell reference and the value in the cell reference is invalid for the prompt, you receive this error message.

We recommend that you select Always Prompt as this is the best practice for prompted reports.

For more information, and to determine if this is the exact cause for this error message, see the IBM Cognos BI server log file.

Search for this error message, RDS-ERR-1018 and then look for error messages similar to the following:

Failure QFS-ERR-0139 The request has multiple errors. RQP-DEF-0354 The query contains one or more unresolved prompts. QE-DEF-0385 Invalid format for prompt 'Parameter1'.

Expected format is unknown.

RDS-ERR-1019 IBM Cognos Content Service Was Unable to Retrieve the Portal Information from IBM Cognos Connection

IBM Cognos Business Intelligence may have stopped processing.

Ensure that IBM Cognos BI is started.

RDS-ERR-1020 The Currently Provided Credentials are Invalid

A message indicates that you provide the logon credentials. Your user name and password are not correct.

Ensure that you type a valid user name and password.

RDS-ERR-1021 The IBM Cognos BI Report Name Could Not be Run Because it Contains Unanswered Prompts.

A message indicates that you provide the prompt answers, and run the report again. The report has prompts that have not been set.
You must open the report and then save a version of the report with the desired prompt answers before importing the content into IBM Cognos for Microsoft Office.

**RDS-ERR-1022 The Request Received by Report Data Service Is Not Valid**
This error message may indicate that someone is trying to externally access the Report Data Service. Stop and restart the Report Data service.

**RDS-ERR-1023 The Report Name Could Not Be Run Because It Exceeds the Report Data Service Data Size Limit Set by the Administrator**
A report fails because it exceeds the data size limit set by the administrator. The default limit for IBM Cognos for Microsoft Office is 10 MB.
Increase the size limit for report data by changing the Governor limit setting. For more information, see the IBM Cognos BI Administration and Security Guide.

**RDS-ERR-1027 The Encoding for the PowerPlay Server Name Could Not Be Determined**
A message indicates that ISO-8859-1 will be used as the encoding. This error message may be displayed if PowerPlay is not responding.
Ensure that PowerPlay is started and functioning properly.

**RDS-ERR-1030 A Security Error Occurred While Trying to Establish a Connection**
The CA certificate was not installed into Report Data service.
Install the CA certificate.

**RDS-ERR-1031 Report Data Service was unable to retrieve the metadata for Report Name**
The provider, such as IBM Cognos Business Intelligence or PowerPlay is not responding.
Ensure that IBM Cognos BI or PowerPlay is running. Check the server log for error messages related to these providers.

**RDS-ERR-1033 Report Data Service Was Unable to Create the Report View Name**
Content Manager is not responding.
Ensure that Content Manager is running. Check the server log for error messages related to Content Manager.

**RDS-ERR-1034 The Report Specification for Report Name Could Not Be Retrieved From IBM Cognos BI**
This message occurs if the metadata could not be retrieved from IBM Cognos Business Intelligence.
Ensure that IBM Cognos BI is running. Check the server log for error messages related to IBM Cognos BI.

**RDS-ERR-1037 The Configuration for Report Data Service could not be updated**
Communication with Content Manager failed.
Ensure that Content Manager is running and that other services are able to communicate with Content Manager.

**RDS-ERR-1038 The server locale could not be determined**
The attempt to identify the server locale failed.
Contact customer support.

**RDS-ERR-1039 The Request Could Not Be Cancelled**
A message indicates that the request is no longer running. This error occurs if a user (or administrator) tries to cancel an Report Data Service request, but the request no longer exists. This can happen if the user clicks Cancel after the administrator has already restarted Report Data Service.
Wait for Report Data Service to restart.

**RDS-ERR-1040 The Conversation With Request ID Has Been Cancelled**
This message appears in the audit log if a request is cancelled by either the user or the administrator. Users can cancel their own requests. Administrators cannot cancel specific requests, but can cancel all requests by stopping and restarting the service.

Stop the service and abandon all running requests.

**Steps**
1. In IBM Cognos Connection, in the upper-right corner, click Launch, IBM Cognos Administration.
2. On the Status tab, click System.
3. In the upper-left corner of the Scorecard pane, click the arrow to view the Change View menu. Click Services, and then Report Data.
4. With the Report data service displayed, click the arrow to view the Actions menu next to the service, and then click Stop immediately.

By using this method, you can cancel long running requests, such as running a report.

**RDS-ERR-1041 The object [object ID] could not be deleted**
A session object could not be deleted because it does not exist. Another service may have removed the object as IBM Cognos Content service tries to cleanup other objects.
**RDS-ERR-1042 Prompt answers could not be found**

Answers to prompts in a report that were saved do not exist.

The probable cause is that the session may have timed out or a server failover occurred during the time the Prompt dialog box closed and the data was retrieved from the IBM Cognos Business Intelligence server.

Run the report again and provide answers to all the prompts in the report.

**RDS-ERR-1043 Unable to parse style definition**

The server is unable to parse a report style that is defined in the report specification.

Ensure that the report specification is valid. If the report specification is valid, and this error message appears, contact IBM support.

**RDS-ERR-1044 The Output for the Requested Version for Object Object ID Could Not be Retrieved**

The report output version that you want to run cannot be retrieved from the content store.

This problem can be caused by one or more of the following:

- the requested report version name, specified burst key, or burst ID, does not exist

- the requested version does not have any outputs that meet any of the accepted formats, such as XML, PDF, or HTML

  The report author did not specify a default format to be used when the report is run.

- you do not have sufficient access permissions to retrieve this output

To run the report, you must have execute permission for the report and traverse permissions for the folder that contains the report.

**RDS-ERR-1045 LayoutDataXML Output Was Not Generated for the Requested Version for Object [Object ID]**

The report version you want to run exists in the content store, but was not saved with the Layout-DataXML output.

When the report output version is saved, the report author must select the Enable enhanced user features in saved output version check box in IBM Cognos Connection.

For more information, see the IBM Cognos Connection User Guide.

**RDS-ERR-1047 Unable to process the XML output stream**

The XML is invalid, and there is failure with the RSVP.

To resolve this problem, do one of the following:

- Ensure that you can run the report in IBM Cognos Viewer and try accessing or viewing the last page of the report.
Check the server log for the RSVP error message. Refer to the RSVP Error Message guide for help with the problem cited in the error log.

**RDS-ERR-1048 Unable to Process the Context Selection Specification**

Unable to parse an agent specification for a watch item on a saved report.
Examine the server logs for RSVP or ASV errors.

**RDS-ERR-1049 Report Data Service was Unable to Create an Object in the Content Store**

The item could not be saved to IBM Content Manager.
Examine the server log for RSVP errors.

**RDS-ERR-1050 Drill Operation on the IBM Cognos BI Report**

You are unable to drill up or drill down in the report.
Examine the log for RSVP errors.

**RDS-ERR-1053 The Credential Format Received by Report Data Service is Invalid**

A credential passed to the Report Data service authentication service is invalid.
Verify that the XML credential validates against the schema, and that the values correspond to the missing value definitions of the logon request.

**RDS-ERR-1055 An Error Occurred Trying to Load the Supported Conversion Formats**

The installation of IBM Cognos Business Intelligence is corrupted.
Reinstall IBM Cognos BI.

**RDS-ERR-1057 A Runtime Error Occurred While Report Data Service Was Processing the Request**

An error that was not handled occurred in the Report Data Service.
Contact customer support.

**IBM Cognos for Microsoft Office Numbered Error Messages**

The following error messages may appear in a dialog box and are recorded in the IBM® Cognos® for Microsoft® Office log.

**COC-ERR-2005 The Import Failed**

An unknown issue caused the import of report content to fail.
Other possibilities may include

- the logon requirements for IBM Cognos Business Intelligence are not available. You may already be logged onto this namespace, or the target namespace does not exist.

- protection for the Excel workbook structure exists

  The protection prevents users from adding or deleting worksheets or from displaying hidden worksheets.

Check that your report uses standard practices. Revise and resave the report, ensuring that text and images are not located in the same cell.

If the workbook structure is protected, ensure that the Structure check box in the Protect Workbook dialog box is cleared. In Excel, from the Tools menu, click Protection, and then click Protect Workbook. In the Protect Workbook dialog box, clear the Structure check box, and then click OK.

**COC-ERR-2006 Failed to Load the Portal Tree**

This error occurs while attempting to log on to the IBM Cognos Business Intelligence Server from an IBM Cognos for Microsoft Office session. You must install .NET Framework v2.0 or later.

It may be because .NET Framework v2.0 or later is not installed, or it may be a connectivity issue. It may also mean that the IBM Cognos BI service has stopped.

As documented in the IBM Cognos for Microsoft Office Installation Guide, to deploy IBM Cognos for Microsoft Office, you must first install Microsoft .NET Framework version 2.0 or later on the client workstation.

If you have already installed the required Microsoft .NET framework, check for LAN connectivity issues. Restart the IBM Cognos BI service.

**COC-ERR-2014 Refresh Failed**

IBM Cognos for Microsoft Office cannot refresh report content. Another error message should indicate why. If there is no other error message, the problem is outside IBM Cognos for Microsoft Office. This may indicate a system problem, a server malfunction, or no LAN connectivity.

Attempt to refresh the content again. Check system and server functions.

**COC-ERR-2015 Failed to Open the Import Wizard Dialog**

When the IBM Cognos for Microsoft Office Import Content wizard loads, it pages through the report and populates the tree and creates a page for each report element. If an unexpected error occurs in the report, this error is logged.

Try importing the report again. If it fails, open the report in the studio in which is was created and save the report. Check the log file for more detailed information.

**COC-ERR-2301 Logon Failed**

Your user name and password are not correct.

Ensure that you enter a valid user name and password.
Chapter 48: Troubleshooting IBM Cognos Office and the Report Data Service

COC-ERR-2303 This Report Is Not Valid for Rendering

IBM Cognos for Microsoft Office cannot render a top report, where a report is nested within another report.

Take the report out of its nested report and resubmit the request.

**Steps**

1. Redesign the report.
2. Save the report.
3. Import the saved report into IBM Cognos for Microsoft Office.

COC-ERR-2305 Microsoft Excel Returned an Error

A message indicates that you should ensure that Microsoft Excel is not in edit mode, then try again. Report content cannot be refreshed while one of the cells of the workbook is being edited.

Click outside the active cell to return it to a non-edit mode and try again.

COC-ERR-2308 Report Specification is Empty

The report you attempted to import into IBM Cognos for Microsoft Office has no content. To import a report, it must have content.

Choose another report to import, or finish authoring the report before attempting to import it.

COC-ERR-2603 You Must Add a Slide to the Presentation Before Importing Any Content

The presentation has no slides. IBM Cognos for Microsoft Office requires at least one slide in the presentation for the Import Content wizard to start.

Add a slide to the presentation and then try to import report content again.

COC-ERR-2607 Microsoft Office Message

During initialization, you receive an error, COC-ERR-2607, and, in some instances, a Microsoft Office message, such as:

*File or assembly name Microsoft.Office.Interop.ApplicationName, or one of its dependencies, was not found.*

This error indicates that a required application or the .NET support for one of the required Microsoft Office applications is not installed.

Microsoft Office Excel, PowerPoint, and Word, and Microsoft .NET Programmability support for all three of these applications is required for IBM Cognos for Microsoft Office to work properly.

Ensure that you have installed all three Microsoft Office applications and that the Microsoft .NET support is enabled. For more information, see the IBM Cognos for Microsoft Office Installation Guide.
COC-ERR-2609 The Custom property "Property_Name" does not exist

You have imported a prompted report and have specified a name for Custom Property in the Properties pane that does not match the custom document property name in the Microsoft Office Properties dialog box.

In IBM Cognos for Microsoft Office, in the Properties pane, for each prompt, ensure that the value specified in the Custom Property box, matches the value specified in the custom document property in the Microsoft Office Properties dialog box (File, Properties, Custom tab). Ensure that there are no leading and trailing character spaces in the name of the custom document property.

For more information, see the IBM Cognos for Microsoft Office User Guide.

IBM Cognos Office Numbered Error Messages

The following error messages may appear in a dialog box and are recorded in the IBM® Cognos® Office log.

COI-ERR-2002 Block type is not valid

An internal processing error occurred. The block object was not able to be processed.

Contact IBM Cognos Resource Center. Be ready to supply all relevant logs and details related to this error.

COI-ERR-2003 Unexpected type: stacked block

An internal processing error occurred. The data object was not of the expected type and could not be processed.

Contact IBM Cognos Resource Center. Be ready to supply all relevant logs and details related to this error.

COI-ERR-2005 This version of Microsoft Office is not supported

IBM Cognos Office supports the following Microsoft® Office applications: Microsoft Office Excel 2003 or 2007 (Professional or Standard), Microsoft Office Excel XP, Microsoft Office Word 2003 or 2007 (Professional or Standard), Microsoft Office Word XP, Microsoft Office PowerPoint 2003 to 2007, and Microsoft Office PowerPoint XP. You cannot load IBM Cognos Office content to another Microsoft Office application, such as Microsoft Access even when there is an add-in that enables these applications to interoperate.

Load the report content into one of the supported applications and environments.

COI-ERR-2006 This Microsoft Office product is not supported

IBM Cognos Office supports the following Microsoft Office applications: Microsoft Office Excel 2003 or 2007 (Professional or Standard), Microsoft Office Excel XP, Microsoft Office Word 2003 or 2007 (Professional or Standard), Microsoft Office Word XP, Microsoft Office PowerPoint 2003 to 2007, and Microsoft Office PowerPoint XP. You cannot load IBM Cognos Office content to
another Microsoft Office application, such as Microsoft Access even when there is an add-in that enables these applications to interoperate.

Load the report content into one of the supported applications and environments.

**COI-ERR-2008 Unable to Retrieve from Resources. Tried '{0}'**

An internal processing error occurred.

Contact IBM Cognos Resource Center. Be ready to supply all relevant logs and details related to this error.

**COI-ERR-2009 Unable to Perform This Operation Because Microsoft Excel is in Edit Mode**

Report content cannot be refreshed while one of the cells of the workbook is being edited.

Click outside the active cell to return it to a non-edit mode and try again.

**COI-ERR-2010 The name {0} is not valid. A name must not contain both a quote (") character and an apostrophe (') character**

When you create a folder, rename a folder, or publish a document, the name can contain an apostrophe or a quote, but not both.

To resolve this problem, rename the folder or document. Exclude the apostrophe or quote character from the name.

**COI-ERR-2011 The server did not return the expected response. Check that the gateway is valid.**

This error message is displayed if the value entered in the System Gateway URI box of the Options dialog box is not a valid IBM Cognos Business Intelligence server.

To resolve this problem, reenter the System Gateway URI with the gateway address for a valid IBM Cognos BI server.

**COI-ERR-2012 Prompted metadata is not supported**

Although reports with prompted data are supported by IBM Cognos for Microsoft Office, prompted metadata is not.

Import a report that does not require prompted metadata or create defaults for the prompted metadata.

**COI-ERR-2013 Unable to load metadata**

You may be unable to load metadata because you do not have security rights to all of the items in the worksheet or because the items were removed or changed on the server.

Ensure that you have security rights to all of the items that you are trying to view. If this does not fix the problem, ensure that the server and package information are correct and that any items that have been removed from the source database are also removed from the worksheet.
COI-ERR-2014 Help file not found

The help file is missing or corrupted.

To fix the problem, re-install your IBM Cognos Office component, such as IBM Cognos Analysis for Microsoft Excel® or IBM Cognos for Microsoft Office.

To find the most current product documentation, including all translated documentation, access one of the IBM Cognos Information Centers at publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp.

You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

COI-ERR-2015 There was a problem parsing the MIME encoded server response. Tried to find the boundary [{0}] but found the boundary [{1}] instead

While using GZip compression, an option for compressing data that is retrieved from the server, an error occurred. The codes to decompress the data are missing or unrecognized by IBM Cognos Office.

Turn compression off. Although compression is turned on by default, it can be turned off by setting the UseGzipCompression property to false in the CommManagerSettings.xml file, which, by default, is located in the following directory:

C:\Documents and Settings\user name\Local Settings\Application Data\Cognos\Office Connection

Turn compression off if you need to run tests or perform troubleshooting.

To turn gzip compression off set the following attribute:

<setting name="UseGzipCompression">False</setting>

COI-ERR-2305 Unable to perform this operation because Microsoft Excel is in edit mode

Report content cannot be refreshed while one of the cells of the workbook is being edited.

Click outside the active cell to return it to a non-edit mode and try again.

COI-ERR-2307 Login failed

Your user name and password are not correct.

Ensure that you typed a valid user name and password.

COI-ERR-2611 Help file not found

The help file is missing or corrupted.

To fix the problem, re-install your IBM Cognos Office component, such as IBM Cognos Analysis for Microsoft® Excel® or IBM Cognos for Microsoft Office.

To find the most current product documentation, including all translated documentation, access one of the IBM Cognos Information Centers at publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp.
You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.
Appendix A: Round Trip Safety Configuration of Shift-JIS Characters

Shift-JIS is a character encoding system for Japanese characters. It is equivalent to ASCII, a character encoding system for English characters.

Native Encoding and Unicode
Because Shift-JIS and ASCII both define characters for one language, they are native encoding systems. Unicode is a character encoding system that defines characters for all languages. Because software is used in a global, multilingual environment, characters for processing by computers must often be converted between native encoding systems and Unicode.

Round Trip Safety
Issues associated with conversions between native encoding systems and Unicode are referred to as round trip safety issues.

Using Unicode, applications are developed that can handle input from different languages at the same time. Input data, which is entered by users or retrieved from databases, may contain characters encoded in a native encoding system. For example, in Microsoft Windows operating system, English characters input by a user are encoded using Windows-1252.

When an application receives characters in a native encoding system, it converts the characters into Unicode for processing. After the processing is finished, the characters may be converted back into the native encoding system.

In most cases, the characters are converted without ambiguity because each native character is mapped to a single Unicode character. If the conversion of a native language character to and from Unicode results in the original character, the character is considered round trip safe.

For example, the character "A" is round trip safe in Windows-1252, as follows:

- The Windows-1252 character for "A" is 0x41.
- It converts to Unicode U+0041.
- No other Windows-1252 character converts to the same Unicode character, so it always converts back to 0x41.

Issues Specific to Shift-JIS
Although the characters from most native character encoding systems are round trip safe, the Shift-JIS encoding system is an exception. Approximately 400 characters in Shift-JIS are not round trip safe because multiple characters in this group can be mapped to the same Unicode character. For example, the Shift-JIS characters 0x8790 and 0x81e0 both convert to the Unicode character U+2252.
IBM Cognos BI and Shift-JIS

IBM® Cognos® Business Intelligence uses Unicode. The round trip safety of characters is essential to ensure the accuracy of data in generated reports.

The Round Trip Safety Configuration utility \((p. \, 846)\) ensures the round trip safety of Shift-JIS characters only when it is used both to convert characters:

- from Shift-JIS to Unicode
- from Unicode to Shift-JIS

If data is requested from a database that has its own automatic mechanism for Shift-JIS to Unicode conversion, IBM Cognos BI does not call the Round Trip Safety Configuration utility to convert the characters from Unicode to Shift-JIS. The round trip safety of characters in the data cannot be ensured.

Example: Safe Conversion of Shift-JIS

The following example illustrates the problem with Shift-JIS conversion to Unicode:

- A database contains characters encoded in Shift-JIS.
- A record in the database contains the Shift-JIS character 0x8790.
- A user enters the Shift-JIS character 0x8790 into a data entry form in a browser.
- The application receives the input form and converts the Shift-JIS character 0x8790 to the Unicode character U+2252.
- Because the database contains Shift-JIS encoded characters, the Unicode character U+2252 cannot be specified as part of the query.
- The application must convert U+2252 back to a Shift-JIS character. Both 0x8790 and 0x81e0 convert to U+2252. If the conversion process selects 0x81e0, the query returns no records.

To resolve this problem, you can use the Round Trip Safety Configuration utility to ensure that conversion is to 0x8790 and the record is found.

The Round Trip Safety Configuration Utility

You can use the Round Trip Safety Configuration utility to configure the conversion process of Shift-JIS characters so that IBM® Cognos® Business Intelligence always returns the right records.

This utility gives you control over the following two situations:

- More than one Shift-JIS character converts to the same Unicode character.
  
  If your data contains such Shift-JIS characters, you can use the utility to specify that the Unicode character always converts to the required Shift-JIS character \((p. \, 847)\).

- More than one Unicode character represents the same or similar character after conversion.
Such Unicode characters can be considered identical when processed by computers and can be substituted for one another. You can use the utility to ensure that the correct substitution is made (p. 848).

Specify Conversions

If your data contains more than one Shift-JIS character that converts the same Unicode character, use the Round Trip Safety Configuration utility to specify that the Unicode character always converts to the required Shift-JIS character.

Conversion Tab

On this tab, native encoding characters appears in the form 0xYYYY, and Unicode characters appear in the form U+YYYY, where YYYY represents the hexadecimal value of the Unicode character.

For example, the character "A" appears as follows:

- for native encoding, 0x41
- for Unicode, U+0041

Each row represents a mapping rule that associates two or three Shift-JIS characters with the Unicode character in the first column.

By default, all Shift-JIS characters in a row are converted to the associated Unicode character. For example, the Shift-JIS characters 0x8782 and 0xFA59 both convert to the Unicode character U+2116.

You can configure more than one character at a time.

Prerequisite

Before you choose the Shift-JIS character to use in a conversion, determine which Shift-JIS character is currently used in the environment. Only one of the possible Shift-JIS equivalents of a Unicode character can be used in a specific environment.

Steps

1. Start the Round Trip Safety Configuration utility in the c10_location/bin:
   - for Microsoft® Windows® operating system, rtsconfig.exe
   - for UNIX® operating system, rtsconfig

2. Click the Conversion tab.

   Tip: To see the glyph next to the Unicode character, from the View menu, click Glyphs. Depending on the type and size of fonts you use, some glyphs may not be visible.

3. From the Edit menu, click Find a character, and then enter the hexadecimal value of the Shift-JIS character.

4. Click OK.
5. In the First Shift-JIS Character, Second Shift-JIS Character, or Third Shift-JIS Character column, select the Shift-JIS character that you want the Unicode character to convert to.

6. Repeat steps 3 to 5 for each Shift-JIS character that you want to configure.

7. Save your specifications using one of the following methods:
   - To only save your specifications, from the File menu, click Save.
   - To save and apply your specifications, from the Tools menu, click Configure.

If you save only, you can apply your specification later (p. 849). You can also restore default settings (p. 849).

The specifications are saved in the file shift-jis.xml in the $c10_location/bin directory.

Specify Substitutions

After the conversion, the Unicode data may contain characters that are identical in meaning, but different in appearance. For example, a full-width tilde (~) and a half-width tilde have different values in Unicode, but can be considered identical during processing.

You can use the Round Trip Safety Configuration utility to specify that specific pairs of similar characters be substituted by a single character. For example, you can specify that both widths of tilde are substituted by a full-width tilde.

Substitution Tab

On this tab, the first column contains pairs of characters that generally mean the same thing, but are represented by different values in Unicode. Each row represents a substitution rule. The first column lists the data before conversion. The second column lists the possible replacement characters.

Steps

1. Start the Round Trip Safety Configuration utility in the $c10_location/bin:
   - for Microsoft® Windows® operating system, rtsconfig.exe
   - for UNIX® operating system, rtsconfig

2. Click the Substitution tab.
   
   Tip: To see the glyph next to the Unicode character, from the View menu, click Glyphs. Depending on the type and size of fonts you use, some glyphs may not be visible.

3. In the Original Code column, click the character that you want to substitute.

4. In the Substitute Code column, click the equivalent character.
   
   A list of possible substitution options appears.

5. In the list, click the Unicode character that you want to use, or click Do not substitute.

6. Repeat steps 3 to 5 for each Unicode character that you want to substitute.

7. Save your specifications using one of the following methods:
Apply the Conversions and Substitutions

If you do not apply changes when you save, you can apply the data later. Based on information saved in the file `c10_location/bin/shift-jis.xml`, two files are generated:

- for substitution data, `i18n_res.xml`
- for conversion data, `ibm-943_P14A-2000.cnv`

When you apply the data, by default, characters are not checked for round trip safety. When you set the configuration mode, you may choose to check for round trip safety by selecting the option that returns a conversion error at run time for characters that are not round trip safe. This can be useful to initially detect which Shift-JIS characters must be configured.

**Steps**

1. Stop IBM® Cognos® Business Intelligence.
2. In the Round Trip Safety Configuration utility, from the **Tools** menu, click **Set the configuration mode**.
3. Specify whether you want characters checked for round trip safety.
4. From the **Tools** menu, click **Configure**.
5. Start IBM Cognos BI.

Restore the Default Conversion Settings

At any time, you can quickly restore the default settings in your configuration and substitution data. For example, you may want to restore the configuration in the following situations:

- after your application is set to use a different data source that requires a different configuration
- after prototyping

**Steps**

1. Stop IBM® Cognos® Business Intelligence.
2. In the Round Trip Safety Configuration utility, from the **Tools** menu, click **Restore defaults**. The conversion process is set to use the default values.
3. Start IBM Cognos BI.
Specify Conversions for Series 7 PowerPlay Web Reports

IBM® Cognos® Series 7 supplies a limited solution for the Japanese Vendor Defined Characters (VDC) in Shift-JIS encoding. To ensure data integrity and consistency when using PowerPlay® Web reports with IBM Cognos Business Intelligence, you must set the character mapping to default values.

Steps
1. Stop IBM Cognos BI.
3. From the Tools menu, click Restore defaults.
4. From the Tools menu, click Configure.
   The conversion tables are set to use the default values in the background.
6. Start IBM Cognos BI.
Appendix B: Initial Access Permissions

When Content Manager initializes a content store, it creates basic structures and security information. We recommend that you modify these initial settings to secure IBM® Cognos® software (p. 297). The following icons are used to indicate the access permissions. For more information, see "Access Permissions and Credentials" (p. 275).

<table>
<thead>
<tr>
<th>Icon</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>📚</td>
<td>Read</td>
</tr>
<tr>
<td>✍️</td>
<td>Write</td>
</tr>
<tr>
<td>🔐</td>
<td>Execute</td>
</tr>
<tr>
<td>🔄</td>
<td>Set policy</td>
</tr>
<tr>
<td>🔞</td>
<td>Traverse</td>
</tr>
</tbody>
</table>

Content Manager Hierarchy of Objects

The following table shows the Content Manager hierarchy of objects and their contents.

<table>
<thead>
<tr>
<th>Folder</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>/Root</td>
<td>All folders below /Root in the hierarchy.</td>
</tr>
<tr>
<td>/Root/Directory</td>
<td>Information about authentication providers and other information typically found in a directory service.</td>
</tr>
<tr>
<td>/Root/Directory/Cognos</td>
<td>The Cognos® directory namespace containing Cognos groups, data sources, distribution lists, and contacts.</td>
</tr>
<tr>
<td>/Root/Directory/other providers</td>
<td>Other security namespaces, such as NTLM, LDAP, and Active Directory.</td>
</tr>
<tr>
<td>/Root/Public Folders</td>
<td>All application data in Content Manager.</td>
</tr>
</tbody>
</table>
### Folder

<table>
<thead>
<tr>
<th>Folder</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>/Root/Directory/application packages</code></td>
<td>A separate folder for each application containing information about the application.</td>
</tr>
<tr>
<td><code>/Root/Configuration</code></td>
<td>Configuration data for all IBM® Cognos components and templates.</td>
</tr>
<tr>
<td><code>/Root/Capabilities</code></td>
<td>Objects that can be secured through policies that restrict access to functionality, such as Administration, Report Studio, and Query Studio; and to features, such as user defined SQL, and bursting.</td>
</tr>
<tr>
<td><code>/Root/Import</code></td>
<td>Deployment information for each archive imported into Content Manager.</td>
</tr>
<tr>
<td><code>/Root/Export</code></td>
<td>Deployment information for each archive exported from Content Manager.</td>
</tr>
</tbody>
</table>

### The Root Object

<table>
<thead>
<tr>
<th>Object</th>
<th>Group, role, or account</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Root</td>
<td>Everyone</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Top-level Content Manager Objects

<table>
<thead>
<tr>
<th>Object</th>
<th>Group, role, or account</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capabilities</td>
<td>Directory Administrators</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Everyone</td>
<td>✓</td>
</tr>
<tr>
<td>Configuration</td>
<td>Server Administrators</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Everyone</td>
<td>✓</td>
</tr>
<tr>
<td>Public Folders</td>
<td>Report Administrators</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Authors</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Query Users</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>✓</td>
</tr>
</tbody>
</table>
## Appendix B: Initial Access Permissions

<table>
<thead>
<tr>
<th>Object</th>
<th>Group, role, or account</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Express Authors</td>
</tr>
<tr>
<td>Export</td>
<td>Report Administrators</td>
</tr>
<tr>
<td>Import</td>
<td>Report Administrators</td>
</tr>
<tr>
<td>Directory</td>
<td>Everyone</td>
</tr>
</tbody>
</table>

### Capabilities

<table>
<thead>
<tr>
<th>Object</th>
<th>Group, role, or account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive Analytics</td>
<td>Adaptive Analytics Admin-</td>
</tr>
<tr>
<td></td>
<td>trators</td>
</tr>
<tr>
<td></td>
<td>Adaptive Analytics Users</td>
</tr>
<tr>
<td></td>
<td>Directory Administrators</td>
</tr>
<tr>
<td>Administration</td>
<td>Directory Administrators</td>
</tr>
<tr>
<td></td>
<td>Portal Administrators</td>
</tr>
<tr>
<td></td>
<td>Report Administrators</td>
</tr>
<tr>
<td></td>
<td>Server Administrators</td>
</tr>
<tr>
<td></td>
<td>Metrics Administrators</td>
</tr>
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# Appendix B: Initial Access Permissions

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### Built-in and Predefined Objects in the Cognos Namespace

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<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directory Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>All Authenticated Users</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directory Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>All Authenticated Users</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directory Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Controller Administrators</td>
<td>Controller Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directory Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Controller Users</td>
<td>All Authenticated Users</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controller Users</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directory Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Data Manager Authors</td>
<td>All Authenticated Users</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Manager Authors</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directory Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Directory Administrators</td>
<td>Directory Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Express Authors</td>
<td>Directory Administrators</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Express Authors</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Object</td>
<td>Group, role, or account</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Everyone</td>
<td>All Authenticated Users ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anonymous ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metrics Administrators</td>
<td>Metrics Administrators ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directory Administrators ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metrics Authors</td>
<td>Metrics Authors ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>All Authenticated Users ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directory Administrators ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metrics Users</td>
<td>Metrics Users ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>All Authenticated Users ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directory Administrators ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning Contributor Users</td>
<td>All Authenticated Users ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning Contributor Users ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directory Administrators ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning Rights Administrators</td>
<td>Planning Rights Administrators ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directory Administrators ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portal Administrators</td>
<td>Portal Administrators ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directory Administrators ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Query Users</td>
<td>All Authenticated Users ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directory Administrators ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Query Users ✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Access Permissions for IBM Cognos Business Insight Reports

Access permissions for IBM Cognos Business Insight reports can be specified by granting or denying permissions at the folder or package level within IBM Cognos Connection. When permissions have been specified for a report, report part, report folder or dashboard object, the user is able to perform actions based on the permissions set.

The following icons are used to indicate the assigned access permissions.

<table>
<thead>
<tr>
<th>Read</th>
<th>Write</th>
<th>Traverse</th>
<th>Execute</th>
<th>Set Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Read Icon]</td>
<td>![Write Icon]</td>
<td>![Traverse Icon]</td>
<td>![Execute Icon]</td>
<td>![Set Policy Icon]</td>
</tr>
</tbody>
</table>

**Reports.**

- ![Read Icon] The report object is available in the content pane but cannot be dragged or expanded.
The report object is available in the content pane but cannot be expanded to show the report parts.

If the report is dragged onto the canvas and saved output exists, the saved output displays. The error message, *The content cannot be displayed. It may have been deleted or you may not have sufficient privileges*, displays in the widget, if there is no saved output.

Saved output in the dashboard can be viewed. When the user runs a live report in a dashboard, the error message, RSV-CM-0006. *The user does not have execute permission on this report*, displays.

The report object is available in the content pane and cannot be expanded to show report parts. The report will execute with no interactions available.

No interactions are available if:

- a report is dragged to the canvas
- if a user with execute permissions saves a report, and other users open the report
- if a user with execute permissions opens a dashboard created by other users

The error message, *The content cannot be displayed. It may have been deleted or you may not have sufficient privileges*, displays in a dashboard when saved output cannot be viewed.

The report object is available in the content pane and executes with interactions available. The report can be expanded to show report parts. Report changes may not be saved.

If the user adds the report to the dashboard and saves it, changes can be saved. If the report is added to the dashboard by a person who is not the report owner, changes cannot be saved. The error message, *The content cannot be saved. You do not have sufficient privileges*, displays.
## Results

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

The report object is available in the content pane and executes with interactions available. The report can be expanded to show report parts.

When a report is added to the canvas (either as live or saved output), the type of report that is added is dependent on the default action specified in the report’s properties.

This set of permissions includes:

- Read
- Read and Traverse
- Execute
- Read and Execute
- Read, Traverse, and Execute

In addition, the report can be changed and saved.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

When a report is dragged to the dashboard, a copy of the report is created when saved. The copied dashboard report will inherit the permissions from the original report, if that user has set policy permissions.

### Report Parts.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

The report object is displayed, and you can expand it to show the report parts. The report part will execute when dragged onto the canvas.

### Folders.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The folder is displayed in the content pane and you can read folder properties. You cannot drag it onto the canvas or expand it to show the contents. You cannot save dashboard objects in this folder.
### Results

- ✔ ✔
  You can drag the folder onto the canvas and expand it to see its contents, but you cannot save dashboard objects in this folder.

- ✔ ✔
  You can drag the folder onto the canvas and expand it to see the contents. You can also save dashboard objects in this folder.

#### Dashboards.

<table>
<thead>
<tr>
<th>✔</th>
<th>✔</th>
<th>✔</th>
<th>✔</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td>The dashboard is displayed but cannot be opened.</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td>The dashboard opens normally. Traverse is required to show the dashboard’s widgets.</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>The dashboard opens and saves normally.</td>
</tr>
</tbody>
</table>

**Note:** The owner of an object is automatically granted read, write, traverse, and execute permissions. If an object is disabled, you must be granted write access in order to see and edit it.
Appendix C: Localization of Samples Databases

The samples databases provided with IBM® Cognos® software store a selection of text fields, such as names and descriptions, in 23 languages to demonstrate a multilingual reporting environment. This appendix provides information about how data is stored in the samples databases and how the samples databases are set up to use multilingual data, including:

- one column per language (p. 871)
- one row per language (p. 872)
- transliterations and multiscript extensions for Asian languages (p. 873)

For more information on the samples, see "Setting Up the Samples" (p. 73).

One Column Per Language

In this structure, tables contain sets of 23 columns, one for each language. A logical naming convention is used to indicate which language a column contains. The name of each column ends with a language code suffix, such as _EN for English and _FR for French. For example, the column that contains information about countries is named COUNTRY.FR for French data and COUNTRY.DE for German data. All tables use this structure except for PRODUCT_LOOKUP.

Determining the Language (Columns) in the Model

In Framework Manager, you can insert a macro in the SQL of the data source query subject to return a specific column of data. The query subject uses the macro to apply the locale setting and to return a language code. The locale specifies linguistic information and cultural conventions for character type, collation, format of date and time, currency unit, and messages.

The macro, runLocale, uses a parameter map to convert the user’s desired content language into a complete or partial column name. This column name is then substituted in the SQL before the query runs.

Because the samples databases use a language code as the suffix for the column name, the macro uses a parameter map to convert valid run locales into a language code and then concatenates the language code to the base column name.

Sample Query

The macro in the following sample query uses the runLocale session variable as the Language_lookup parameter map key. It returns the language code to be used as the suffix of the column name. In the following Select statement, where French is the language, the macro generates the column name COUNTRY.FR.

```
Select
COUNTRY.COUNTRY_CODE,
#'COUNTRY.COUNTRY_' + $Language_lookup($runLocale)# as Product_Line
```
Because Framework Manager is flexible, your multilingual columns do not have to use the naming system used in the samples. In fact, your multilingual columns can use any naming system. You can encode your naming scheme into the parameter map, as required. You can use any session variable as the parameter map key and return any SQL syntax that you require to substitute at runtime. For more information, see the Framework Manager User Guide.

One Row Per Language

In this structure, each string value has a separate row with a code column that identifies the language. Data is filtered to return only the row that contains the required language data.

Normally, multilingual data is stored in a separate table to avoid duplicating non-descriptive or monolingual data.

In the samples databases, the data table contains the primary key and monolingual data, such as date information. The multilingual table contains data and a compound key composed of the foreign key and language code. For example, the PRODUCT_NAME_LOOKUP table contains the PRODUCT_NUMBER, PRODUCT_LANGUAGE, and PRODUCT_NAME columns, where PRODUCT_NUMBER and PRODUCT_LANGUAGE form the primary key. Each of the localized items is expressed in 23 rows, one for each language.

The following foreign key table contains one or more localized items.

<table>
<thead>
<tr>
<th>Primary key table</th>
<th>Foreign key table</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT</td>
<td>PRODUCT_NAME_LOOKUP</td>
<td>GOSALES</td>
</tr>
<tr>
<td>SLS PRODUCT DIM</td>
<td>SLS_PRODUCT_LOOKUP</td>
<td>GOSALESDW</td>
</tr>
</tbody>
</table>

The samples databases use ISO language codes to identify each row of data.

Determining the Language (Rows) in the Model

In Framework Manager, you can insert a macro in the SQL of the data source query subject to return a specific row of data. The query subject uses the macro to apply the locale setting and to return a language code.

Sample Query

The macro in the sample query below uses the runLocale session variable as the Language_lookup parameter map key and returns the corresponding language code. The sq() function specifies that the return value of the macro be enclosed in single quotation marks to produce a valid SQL filter predicate. In the following Select statement, where German is the language, the macro identifies the language as DE (German), and product the filter (PRODUCT_MULTILINGUAL."LANGUAGE" = 'DE').

```sql
Select
  P.INTRODUCTION_DATE,
  P.PRODUCT_TYPE_CODE,
```

Appendix C: Localization of Samples Databases
Transliterations and Multiscript Extensions

For transliteration of Asian languages, a table contains two columns with equivalent information. One column shows string values using only Latin characters. The other column shows string values using both Asian and Latin characters. The naming convention is to add the suffix _MB.

In the Latin-only columns, transliteration defines the phonetic equivalent of the value defined in the _MB column.

The following tables include columns that contain transliterated values.

<table>
<thead>
<tr>
<th>Table</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORDER_HEADER</td>
<td>GOSALES</td>
</tr>
<tr>
<td>RETAILER</td>
<td>GOSALESs</td>
</tr>
<tr>
<td>RETAILER_SITE_MB</td>
<td>GOSALES</td>
</tr>
<tr>
<td>BRANCH</td>
<td>GOSALES</td>
</tr>
<tr>
<td>EMPLOYEE</td>
<td>GOSALES</td>
</tr>
</tbody>
</table>

Transliterations in the Model

The following example creates a single data source, based on a query subject of two tables. The tables are identical except for the use of Asian characters in one table.

Column with names that end with the suffix _MB store Asian-related data using Asian characters, such as Chinese ideograms. This removes some duplication and makes it easier to define relationships to other query subjects in the model.

Select
RS.RTL_RETAILER_SITE_CODE,
RS.RTL_RETAILER_CODE,
RS.RTL_ADDRESS1,
RS.RTL_ADDRESS2,
RS.RTL_CITY,
RS.RTL_REGION,
RS.RTL_POSTAL_ZONE,
RS.RTL_COUNTRY_CODE,
RS.RTL_ACTIVITY_STATUS_CODE,
RS_MB.RTL_ADDRESS1 as Address1_MB,
RS_MB.RTL_ADDRESS2 as Address2_MB,
RS_MB.RTL_CITY as City_MB,
RS_MB.RTL_REGION as Region_MB
from
[goretailers].RETAILER_SITE as RS,
[goretailers].RETAILER_SITE_MB
as RS_MB
where
RETAILER_SITE.RETAILER_SITE_CODE = RETAILER_SITE_MB.RETAILER_SITE_CODE

### Multiscript Extensions

After defining the query subjects in the model, items with the _MB extension are renamed with a multiscript extension, such as Address 1 (multiscript) to ease use and readability.

### Using Multiscript Extensions for Conditional Formatting

An example of multiscript usage is a mailing address in which the multiscript values ensure that mailing labels are formatted for local handling and delivery.

To add more value to mailing labels, the GO Sales and Retailers model applies conditional formatting to generate international address formats.

In the following example, Address line 3 is the name of a user-defined calculation that is used to generate line three of a mailing label. The expression uses a Country code value to specify how to format the line.

```sql
if ([Retailers].[Retailer site].[Country code] = 6) then
  (' ' + [Retailers].[Retailer site].[Address 1 (multiscript)])
else
  if ([Retailers].[Retailer site].[Country code] = 8) then
    ([Retailers].[Retailer site].[Address 2 (multiscript)])
  else
    if ([Retailers].[Retailer site].[Country code] = 13) then
      ([Retailers].[Retailer site].[Region (multiscript)] + ' ' +
       [Retailers].[Retailer site].[City (multiscript)]
      + ' ' +
      ([Retailers].[Retailer site].[Address 1 (multiscript)])
    else
      ([Retailers].[Retailer site].[Address 2 (multiscript)])
else
  if ([Retailers].[Retailer site].[Country code] = 14) then
    ([Retailers].[Retailer site].[Address 2 (multiscript)])
else
  ([Retailers].[Retailer site].[Address 1 (multiscript)])
```

Multiscript extensions allow a user in any language to use the same model columns to create an address block and see the address properly formatted for each delivery location. For more information, see the Mailing address data source query subjects in the gosales_goretailers sample model.
Appendix D: User Interface Elements Reference List

This appendix shows the IBM® Cognos® Connection user interface elements that you can hide and add.

Elements You Can Hide

The following table describes the user interface elements that you can hide in IBM® Cognos® Connection. Items starting with CRN and CC indicate IBM Cognos Connection user interface elements. Items starting with RV indicate IBM Cognos Viewer elements.

For more information, see "Hide User Interface Elements" (p. 633).

<table>
<thead>
<tr>
<th>User Interface Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;CRN_HEADER/&gt;</code></td>
<td>The IBM Cognos Connection top header (h1)</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_TITLE/&gt;</code></td>
<td>Left-hand side of the IBM Cognos Connection top header (h1)</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS/&gt;</code></td>
<td>Right-hand side of the IBM Cognos Connection top header (h1)</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_LAUNCH/&gt;</code></td>
<td>The Launch menu in the upper-right corner of Cognos Connection</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_USERNAME/&gt;</code></td>
<td>Not supported</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_AUTHENTICATION/&gt;</code></td>
<td>Authentication options</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_REFRESH/&gt;</code></td>
<td>Refresh button</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_SEARCH/&gt;</code></td>
<td>Search options</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_PERSONAL/&gt;</code></td>
<td>My Area options</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_PERSONAL_myinbox/&gt;</code></td>
<td>My Inbox option in My Area Options and in the Welcome page</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_PERSONAL_subscriptions/&gt;</code></td>
<td>My Watch Items option in My Area Options</td>
</tr>
<tr>
<td>User Interface Element</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_PERSONAL_preferences/&gt;</code></td>
<td>My Preferences option in My Area Options</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_PERSONAL_activities/&gt;</code></td>
<td>My Activities and Schedules option in My Area Options</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HELP/&gt;</code></td>
<td>Help menu</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HELP_quickTour/&gt;</code></td>
<td>Quick Tour link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HELP_getStarted/&gt;</code></td>
<td>Getting Started link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HELP_moreDocs/&gt;</code></td>
<td>More Documentation link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HELP_companyWebsite/&gt;</code></td>
<td>IBM Cognos on the Web link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HELP_welcome/&gt;</code></td>
<td>Go to the Welcome Page link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HELP_about/&gt;</code></td>
<td>About IBM Cognos Connection link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HOME/&gt;</code></td>
<td>Home option</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_HOME_setHome/&gt;</code></td>
<td>Set View as Home option</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_mypages/&gt;</code></td>
<td>Deprecated</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_rs/&gt;</code></td>
<td>Report Studio link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_qs/&gt;</code></td>
<td>Query Studio link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_mm/&gt;</code></td>
<td>Metric Studio link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_es/&gt;</code></td>
<td>Event Studio link. Used to be <code>&lt;CRN_HEADER_OPTIONS_ags&gt;</code></td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_as/&gt;</code></td>
<td>Analysis Studio link. Used to be <code>&lt;CRN_HEADER_OPTIONS_ps&gt;</code></td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_cc/&gt;</code></td>
<td>IBM Cognos Connection link (IBM Cognos Viewer only). Deprecated.</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_pc/&gt;</code></td>
<td>Contributor link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_cs/&gt;</code></td>
<td>Controller Studio link</td>
</tr>
<tr>
<td>User Interface Element</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_dt/&gt;</code></td>
<td>Drill-through Definitions link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_aa/&gt;</code></td>
<td>Adaptive Analytics link</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_cbi/&gt;</code></td>
<td>Hides the IBM Cognos Business Insight link on the Launch menu</td>
</tr>
<tr>
<td><code>&lt;CRN_HEADER_OPTIONS_cbia/&gt;</code></td>
<td>Hides the IBM Cognos Business Insight Advanced link on the Launch menu</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER/&gt;</code></td>
<td>IBM Cognos Connection header (h2). Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_TITLE/&gt;</code></td>
<td>Left-hand side of the IBM Cognos Connection header (h2). Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU/&gt;</code></td>
<td>Right-hand side of the IBM Cognos Connection header (h2). Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU_home/&gt;</code></td>
<td>Home link. Replaced by <code>&lt;CRN_HEADER_HOME/&gt;</code></td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU_return/&gt;</code></td>
<td>Return link (IBM Cognos Viewer only)</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU_search/&gt;</code></td>
<td>Search link</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU_logon/&gt;</code></td>
<td>Log On link</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU_logoff/&gt;</code></td>
<td>Log Off link</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU_about/&gt;</code></td>
<td>About link (IBM Cognos Viewer only). Replaced by <code>&lt;CRN_HEADER_HELP_about/&gt;</code></td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU_help/&gt;</code></td>
<td>Help link</td>
</tr>
<tr>
<td><code>&lt;CC_HEADER_MENU_preferences/&gt;</code></td>
<td>Preferences link</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS/&gt;</code></td>
<td>Tools link. Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_directory/&gt;</code></td>
<td>Directory link. Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_capabilities/&gt;</code></td>
<td>Capabilities link. Deprecated</td>
</tr>
<tr>
<td>User Interface Element</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_schedule/&gt;</code></td>
<td>Schedule link. Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_administration/&gt;</code></td>
<td>Server administration link. Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_deployment/&gt;</code></td>
<td>Deployment link. Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_csadministration/&gt;</code></td>
<td>Content administration link. Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_portal/&gt;</code></td>
<td>Portal administration link. Deprecated</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_drillthru/&gt;</code></td>
<td><strong>Drill-through Definitions link</strong></td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TOOLS_preferences/&gt;</code></td>
<td><strong>My Preferences link</strong></td>
</tr>
<tr>
<td><code>&lt;CC_VIEW/&gt;</code></td>
<td>IBM Cognos Connection header (h3)</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TABS/&gt;</code></td>
<td>Left-hand side of the IBM Cognos Connection header (h3) that includes the tabs</td>
</tr>
<tr>
<td><code>&lt;CC_VIEW_TABS_OPTIONS/&gt;</code></td>
<td>The page menu button on left-hand side of the portal tabs</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR/&gt;</code></td>
<td>IBM Cognos Connection header (h4) that includes the path navigation and toolbar</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_PATH/&gt;</code></td>
<td>Path navigation</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS/&gt;</code></td>
<td>Toolbar buttons</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_refreshUsingGet/&gt;</code></td>
<td>Refresh</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newjobDefinition/&gt;</code></td>
<td>New Job</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newfolder/&gt;</code></td>
<td>New Folder</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newURL/&gt;</code></td>
<td>New URL</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newconfigurationFolder/&gt;</code></td>
<td>New Configuration Folder</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newrole/&gt;</code></td>
<td>New Role</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newgroup/&gt;</code></td>
<td>New Group</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newnamespaceFolder/&gt;</code></td>
<td>New Namespace Folder</td>
</tr>
<tr>
<td>User Interface Element</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newdataSource/&gt;</code></td>
<td>New Data Source</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newdataSourceConnection/&gt;</code></td>
<td>New Connection</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newdataSourceSignon/&gt;</code></td>
<td>New Data Source Signon</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newcontact/&gt;</code></td>
<td>New Contact</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newdistributionList/&gt;</code></td>
<td>New Distribution List</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newprinter/&gt;</code></td>
<td>New Printer</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newadminFolder/&gt;</code></td>
<td>New Admin Folder</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newportletFolder/&gt;</code></td>
<td>New Portlet Folder</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newcontentTask/&gt;</code></td>
<td>New Content Task</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newcmmSystemTask/&gt;</code></td>
<td>New IBM Cognos Metrics Manager task</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newimportDeploymentFolder/&gt;</code></td>
<td>New import deployment folder</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_newexportDeploymentFolder/&gt;</code></td>
<td>New export deployment folder</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_import/&gt;</code></td>
<td>New import specification</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_export/&gt;</code></td>
<td>New export Specification</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_cut/&gt;</code></td>
<td>Cut</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_copy/&gt;</code></td>
<td>Copy</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_paste/&gt;</code></td>
<td>Paste</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_delete/&gt;</code></td>
<td>Delete</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_refresh/&gt;</code></td>
<td>Refresh</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_selectall/&gt;</code></td>
<td>Select all</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_deselectall/&gt;</code></td>
<td>Deselect All</td>
</tr>
<tr>
<td><code>&lt;CC_TOOLBAR_BUTTONS_list/&gt;</code></td>
<td>List view mode</td>
</tr>
<tr>
<td>User Interface Element</td>
<td>Description</td>
</tr>
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<td>-------------------------------------------------------</td>
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<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_detail/&gt;</td>
<td>Detailed view mode</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_properties/&gt;</td>
<td>Current folder properties</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_configuration_properties/&gt;</td>
<td>Configuration folder properties</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_order/&gt;</td>
<td>Order</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_deployment_properties/&gt;</td>
<td>Deployment Properties</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_enable_sched/&gt;</td>
<td>Enable Schedule</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_disable_sched/&gt;</td>
<td>Disable Schedule</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_view_events/&gt;</td>
<td>View Events</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_page_sizes/&gt;</td>
<td>Page sizes option in configuration tool</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_search/&gt;</td>
<td>Search</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_edit_layout/&gt;</td>
<td>Edit the layout of a custom portal page</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_newpagelet/&gt;</td>
<td>Add a custom portal page</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_delete_page/&gt;</td>
<td>Delete a custom portal page</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_newmetricsIntegrationTaskGroup/&gt;</td>
<td>New data integration task</td>
</tr>
<tr>
<td>&lt;CC_TOOLBAR_BUTTONS_newmetricsPackage/&gt;</td>
<td>New metrics package</td>
</tr>
<tr>
<td>&lt;CC_DIALOG_HEADER/&gt;</td>
<td>Not supported</td>
</tr>
<tr>
<td>&lt;CC_DIALOG_HEADER_help/&gt;</td>
<td>Help link on dialog screens</td>
</tr>
<tr>
<td>&lt;CC_RUN_OPTIONS_email_attachment/&gt;</td>
<td>Include the report check box</td>
</tr>
<tr>
<td>&lt;RV_HEADER/&gt;</td>
<td>IBM Cognos Viewer header</td>
</tr>
<tr>
<td>&lt;RV_HEADER_TITLE/&gt;</td>
<td>Left hand side of the IBM Cognos Viewer header</td>
</tr>
<tr>
<td>&lt;RV_HEADER_MENU/&gt;</td>
<td>Right hand side of the IBM Cognos Viewer header</td>
</tr>
<tr>
<td>User Interface Element</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><code>&lt;RV_HEADER_MENU_LOGOFF/&gt;</code></td>
<td>Log Off link</td>
</tr>
<tr>
<td><code>&lt;RV_HEADER_MENU_LOGON/&gt;</code></td>
<td>Log On link</td>
</tr>
<tr>
<td><code>&lt;RV_HEADER_MENU_RETURN/&gt;</code></td>
<td>Return link</td>
</tr>
<tr>
<td><code>&lt;RV_HEADER_MENU_ABOUT/&gt;</code></td>
<td>About link</td>
</tr>
<tr>
<td><code>&lt;RV_HEADER_MENU_HOME/&gt;</code></td>
<td>Home link</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR/&gt;</code></td>
<td>Not applicable</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS/&gt;</code></td>
<td>Toolbar options in IBM Cognos Viewer</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_DOWNLOAD/&gt;</code></td>
<td>Download toolbar button. This applies when download is enabled.</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_SAVE/&gt;</code></td>
<td>Save toolbar button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_SAVEAS/&gt;</code></td>
<td>Save As toolbar button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_SEND/&gt;</code></td>
<td>Email toolbar button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_HISTORY/&gt;</code></td>
<td>History toolbar option</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_RUN/&gt;</code></td>
<td>Run toolbar button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_HTML/&gt;</code></td>
<td>HTML format view button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_PDF/&gt;</code></td>
<td>PDF format view button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_XLS/&gt;</code></td>
<td>XLS format view button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_XLS_CSV/&gt;</code></td>
<td>CSV format view button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_XML/&gt;</code></td>
<td>XML format view button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_XLS_SPREADSHEETML/&gt;</code></td>
<td>Microsoft® Excel 2007 format view</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_XLS_XLWA/&gt;</code></td>
<td>Excel 2002 format view</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_DRILLDOWN/&gt;</code></td>
<td>Hides the drill down button</td>
</tr>
<tr>
<td><code>&lt;RV_TOOLBAR_BUTTONS_DRILLUP/&gt;</code></td>
<td>Hides the drill up button</td>
</tr>
</tbody>
</table>
Elements You Can Add

You can add user interface elements to IBM® Cognos® Connection.

Use the following example to add a URL, an icon, a tooltip, and a label to the right side of the IBM Cognos Connection top header (h1), where the target element can be one of _blank, _self, _parent, or _top.

```xml
<CRN_HEADER_OPTIONS>
  <item show="user_type">
    <url>
      http-encoded URL to execute
    </url>
    <onclick>other action to take when link is clicked</onclick>
    <target>browser window to target</target>
    <label xml:lang="en">link text</label>
    <tooltip xml:lang="en">tooltip text</tooltip>
    <label xml:lang="language">link text</label>
    <tooltip xml:lang="language">tooltip text</tooltip>
    <icon>icon to show for this element</icon>
  </item>
</CRN_HEADER_OPTIONS>
```

For information about hiding user interface elements, see "Hide User Interface Elements" (p. 633).
Appendix E: User Reference Help for Portal Services

Administrators typically configure default settings for each instance of a portlet before making it available to users.

When you access the IBM® Cognos® portlets through your portal, you can change some settings to customize instances of each Cognos portlet. You can then save your settings for subsequent sessions.

You can change the content and layout of a portlet using the edit button on the title bar. If the page or portlet is read-only or locked by an administrator, the edit button is disabled or does not appear on the portlet title bar.

**IBM Cognos Navigator**

Use this portlet to browse a list of links that open published IBM® Cognos® reports and other entries.

To modify the properties for this portlet, click the edit button on the title bar to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

**Notes**

- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.

- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td>Specifies the title of the portlet. If no title is specified, the folder name is used by default. You can specify a title for each supported language version of the product. <strong>Note:</strong> The title does not appear in WebSphere®, WCI, and SAP portals.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td>Folder</td>
<td>Specifies the location where the portlet navigation begins.</td>
</tr>
<tr>
<td>View</td>
<td>Specifies how entries are shown:</td>
</tr>
<tr>
<td></td>
<td>● To show a list of entry names, use the <strong>Navigator list</strong> view. This is the default view.</td>
</tr>
<tr>
<td></td>
<td>● To show entry names and detailed information, such as the last modification date, use the <strong>Navigator details</strong> view. Links open more detailed information about the entry.</td>
</tr>
<tr>
<td></td>
<td>● To show URLs and shortcuts in an RSS-type format, use the <strong>News list</strong> view. RSS is a way of showing URLs in a Web page as short summaries that contain links to the associated pages.</td>
</tr>
<tr>
<td>Open links</td>
<td>Specifies how the links in this portlet are opened. You can</td>
</tr>
<tr>
<td></td>
<td>● open and navigate the linked entries in a new browser window.  This is the default option.</td>
</tr>
<tr>
<td></td>
<td>● open and navigate the linked entries in the currently opened browser window. This option is only available when the page containing IBM Cognos Navigator is added as a portal tab in Cognos Connection.</td>
</tr>
<tr>
<td></td>
<td>● open and navigate the linked entries in a specified HTML frame.  Type the name of the window or frame in the provided text box.</td>
</tr>
<tr>
<td></td>
<td>● open and navigate the linked entries in the IBM Cognos Viewer portlet.  Type the channel name as specified in IBM Cognos Viewer.</td>
</tr>
<tr>
<td>Open navigation links inside this portlet</td>
<td>Specifies whether to maximize the portlet view when navigating the folder hierarchy.</td>
</tr>
</tbody>
</table>
### Description

Specifies how the IBM Cognos entries are shown in this portlet:

- To show or hide the parent entry of the starting folder in the IBM Cognos folder hierarchy, use the **Parent in path** check box.

- To show or hide the **Actions** column for the entries, and view the content of container entries in source applications, use the **Actions** check box.

- To show or hide the modification date and description of entries in applicable views, use the **Additional information** check box.

- To specify in how many columns you want the entries to appear in the details view, use the **Number of columns in a details view** check box.

  The default is 2 for the normal portlet view, and 4 for the maximized portlet view.

  You can specify a different view for normal and maximized windows.

  Note: The maximized view is not available in SharePoint Portal Server.

### Number of entries

Specifies the maximum number of entries to show per page.

The menu bar in the portlet shows how many entries are available for a folder.

### Separators

Specifies whether separators are used in a list view.

To make long lists of entries easier to read, use alternating background colors to separate the entries in the list.

## IBM Cognos Search

Use this portlet to find published IBM® Cognos® reports and other entries.

Searches are performed against various types of IBM Cognos entries and folders. Use the advanced search options to perform more complex searches.

By default, the search results are shown as links that open entries in a new browser window.

You can save your search settings for future use.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.
In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

Notes

- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.

- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. If no title is specified, the portlet name is used by default. You can specify a title for each supported language version of the product. <strong>Note:</strong> The title does not appear in WebSphere®, WCI, and SAP portals.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td>Saved searches</td>
<td>Specifies the saved results of previous searches. To save your most recent search results, type a name in the Last search box and then click Save. To rename a search, type the new name in the appropriate Saved searches text box. To delete a search, click Delete next to the appropriate Saved searches text box.</td>
</tr>
</tbody>
</table>
| Open links       | Specifies how the links are opened. You can:  

  - open and navigate the linked entries in a new browser window. This is the default option
  - open and navigate the linked entries in the currently opened browser window.
  - open the linked entries in a target browser window or frame. Type the name of the window or frame in the provided text box.
  - open and navigate the linked entries in the IBM Cognos Viewer portlet. Type the channel name as specified in IBM Cognos Viewer. |
### IBM Cognos Viewer (IBM Cognos Connection)

Use this portlet to view and interact with published IBM® Cognos® reports and other entries, and to enable interactivity between other IBM Cognos Viewer portlets in the same page.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

### Notes
- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.
- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of results to show per page</td>
<td>Specifies the maximum number of entries to list per page.</td>
</tr>
<tr>
<td>Content of entry view</td>
<td>Specifies whether to show additional details for the entries in the search results.</td>
</tr>
<tr>
<td></td>
<td>Use the Show details check box to show the entry modification date.</td>
</tr>
<tr>
<td></td>
<td>Use the Show actions check box to show the entry actions. For example, you can use this option to view report outputs, run reports with options, open reports for editing, set properties, or set a schedule to run reports directly from the search results view.</td>
</tr>
<tr>
<td>Search results</td>
<td>Specifies how to show the search results.</td>
</tr>
<tr>
<td></td>
<td>Select the Maximize the view when displaying search results check box when you want to show the results in a maximized view. This is useful when the results list is long.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. If no title is specified, the entry name is used by default. You can specify a title for each supported language version of the product. <strong>Note:</strong> The title does not appear in WebSphere®, WCI, and SAP portals.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td>Entry</td>
<td>Specifies the location of the entry, such as a report, to display in this portlet. You can search the folders to locate the entry. After you select the entry, the Report Properties link appears. Use this link to access the advanced portlet properties.</td>
</tr>
<tr>
<td>Channel</td>
<td>Enables communication between this portlet and other Cognos portlets. To set up communication between specific portlets, type the same channel name for the portlets that you want to interact. The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, Cognos, Cognos_Portlets, or CognosPortlets.</td>
</tr>
<tr>
<td>Height (pixels)</td>
<td>Specifies the portlet height in pixels. If the report image is larger than this setting, scroll bars appear when you view the report.</td>
</tr>
</tbody>
</table>

**Advanced Properties**

Use these properties to override the default IBM Cognos Viewer properties, customize the portlet user interface, and enable interactivity between other portlets in the same page.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fragment action</td>
<td>Defines the default action when the portlet is invoked in a page. When you select <strong>Show a run action</strong>, the run button appears in the portlet. When the button is clicked, the report runs. This feature helps to avoid running multiple reports at the same time.</td>
</tr>
<tr>
<td></td>
<td>When <strong>Show most recent saved output</strong> is selected and there is no saved report output when the portlet is invoked, you can choose to run the report, or show the run button.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Prompt the user</td>
<td>Controls prompted reports in a page or a dashboard.</td>
</tr>
<tr>
<td></td>
<td>When you select <strong>Only when required parameter values are missing</strong>, the user is prompted if the report contains required prompts and the values are missing. Otherwise the report runs successfully.</td>
</tr>
<tr>
<td></td>
<td>When you select <strong>Every time</strong>, if the report contains optional or required prompts, the user is prompted to enter the prompt values before the report is run.</td>
</tr>
<tr>
<td></td>
<td>When you select <strong>Based on the prompt settings of the report</strong>, IBM Cognos Viewer uses the prompts specified in the report.</td>
</tr>
<tr>
<td></td>
<td>When you select <strong>Never and show the report only when required values are provided</strong>, IBM Cognos Viewer attempts to run the report, but the page remains hidden until the required prompt values are provided.</td>
</tr>
<tr>
<td>Portlet communication options (Prompt values)</td>
<td>Enables communication between the IBM Cognos Viewer portlets in the same page when using prompted reports.</td>
</tr>
<tr>
<td></td>
<td>When you select the <strong>Communicate with other portlets</strong> check box, communication between this portlet and other portlets that also have this check box selected is enabled. To set up communication between specific portlets, click <strong>Portlets using channel</strong> and type the channel name. Only the portlets that share the same channel name can interact. By specifying the channel name, you have more control over the page. For example, you can link only reports that have matching parameters.</td>
</tr>
<tr>
<td></td>
<td>The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, sales_reports or AbC are valid channel names.</td>
</tr>
</tbody>
</table>

**Table of Values**

**Property**

- Prompt the user
- Portlet communication options (Prompt values)

**Description**

- Controls prompted reports in a page or a dashboard.
- When you select **Only when required parameter values are missing**, the user is prompted if the report contains required prompts and the values are missing. Otherwise the report runs successfully.
- When you select **Every time**, if the report contains optional or required prompts, the user is prompted to enter the prompt values before the report is run.
- When you select **Based on the prompt settings of the report**, IBM Cognos Viewer uses the prompts specified in the report.
- When you select **Never and show the report only when required values are provided**, IBM Cognos Viewer attempts to run the report, but the page remains hidden until the required prompt values are provided.
- Enables communication between the IBM Cognos Viewer portlets in the same page when using prompted reports.
- When you select the **Communicate with other portlets** check box, communication between this portlet and other portlets that also have this check box selected is enabled. To set up communication between specific portlets, click **Portlets using channel** and type the channel name. Only the portlets that share the same channel name can interact. By specifying the channel name, you have more control over the page. For example, you can link only reports that have matching parameters.
- The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, sales_reports or AbC are valid channel names.
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill down and drill up</td>
<td>Enables sharing of drill-down and drill-up actions when a page contains reports based on dimensionally modeled data sources. The item on which the drill action is based must be present in all linked reports in the page. In some cases, the sharing of drill events is not recommended. For example, simultaneous drill requests may have a negative impact on performance. When you select the <strong>Communicate with other portlets</strong> check box, communication between the portlet and other portlets that also have this check box selected is enabled. To set up communication between specific portlets, click <strong>Portlets using channel</strong> and type the channel name. Only the portlets that share the channel name can interact. By specifying the channel name, you have more control over the page. For example, you can link only the reports that have matching parameters. The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, sales_reports or AbC.</td>
</tr>
<tr>
<td>Report-based drill through</td>
<td>Enables sharing of drill-through actions when a page contains a report with an authored drill-through path. You must select the <strong>Communicate with other portlets on the page</strong> check box, and type the channel name in the box provided. Only the portlets that share the channel name can interact. The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, sales_reports or AbC are valid channel names.</td>
</tr>
<tr>
<td>View Options (Show Toolbar)</td>
<td>Specify whether the portlet toolbar should appear in the normal or maximized view. The toolbar contains the edit button, help button, and refresh button.</td>
</tr>
</tbody>
</table>

**IBM Cognos Viewer**

Use this portlet to view and interact with published IBM® Cognos® reports and other entries in your portal.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.
In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

Notes
- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.
- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. If no title is specified, the entry name is used by default. You can specify a title for each supported language version of the product. <strong>Note:</strong> The title does not appear in WebSphere®, WCI, and SAP portals.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td>Entry</td>
<td>Specifies the location of the entry, such as a report, to display in this portlet. You can search the folders to locate the entry.</td>
</tr>
<tr>
<td>Channel</td>
<td>Enables communication between this portlet and other Cognos portlets. To set up communication between specific portlets, type the same channel name for the portlets that you want to interact. The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, Cognos, Cognos_Portlets, or CognosPortlets.</td>
</tr>
<tr>
<td>Portlet action</td>
<td>Specifies the report run options. You can choose to show the most recent saved report output, show a run option button that a user can activate, or run the report.</td>
</tr>
<tr>
<td>Show toolbar</td>
<td>Specifies whether to show the portlet toolbar in the normal or maximized view. This applies to reports only. <strong>Note:</strong> The maximized view is not available in Microsoft® SharePoint Portal Server.</td>
</tr>
</tbody>
</table>
IBM Cognos Extended Applications

Use this portlet to view and interact with custom applications created using the IBM® Cognos® Software Development Kit.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

Notes
- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.
- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Specifies an application to show in the portlet.</td>
</tr>
<tr>
<td>Options</td>
<td>Some extended applications include application parameters that you can configure. These parameters affect how the application operates.</td>
</tr>
</tbody>
</table>
**IBM Cognos Metric List**

Use this portlet to add performance metrics to a page. The metrics are created in IBM® Cognos® Metric Studio.

You can configure the portlet to show different types of metric lists, such as a watch list, an accountability list, a scorecard, or a strategy list. However, if the IBM Cognos Custom Diagram portlet in a page uses the same channel, the configured metric list may not appear. Instead, a strategy metric list of the IBM Cognos Custom Diagram portlet appears. To see the configured metric list, click **Back to default entry**.

This portlet is interactive. When you click a metric name, the content of the IBM Cognos History Chart and IBM Cognos Viewer portlets using the same channel is automatically updated. When you position a pointer over a metric icon, a tooltip appears that shows the history chart associated with the metric. When you click the arrow button, the metric opens in Metric Studio. When you position a pointer over the comment icon for a metric or a strategy, the tooltip shows the latest comment.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click **Cancel**.

**Notes**

- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.

- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. You can use the default metric list name, or type a new name. If no title is specified, the portlet name is used. You can specify a title for each supported language version of the product. Note: The title does not appear in WebSphere®, WCI, and SAP portals.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td><strong>Property</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Show title in content area</td>
<td>Shows the title in content area of the portlet.</td>
</tr>
<tr>
<td></td>
<td>This option is useful when the portal does not show the title bar.</td>
</tr>
<tr>
<td>Metric package</td>
<td>Specifies a metric package that contains the metrics.</td>
</tr>
<tr>
<td>List type</td>
<td>Use to add performance metrics to a page. You can configure the portlet to show the following types of metric lists:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Watch List</strong></td>
</tr>
<tr>
<td></td>
<td>Contains the metrics that a user wants to monitor closely.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Accountability List</strong></td>
</tr>
<tr>
<td></td>
<td>Contains the metrics that a user owns.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Scorecard metric list</strong></td>
</tr>
<tr>
<td></td>
<td>Contains the metrics included in a scorecard.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Strategy metric list</strong></td>
</tr>
<tr>
<td></td>
<td>Contains metrics associated to a strategy. The metrics can be filtered by a specified scorecard.</td>
</tr>
<tr>
<td></td>
<td>To select a scorecard, use the <strong>Apply a scorecard filter</strong> check box. If no scorecard is selected, all metrics in the strategy are shown.</td>
</tr>
<tr>
<td>Portlet communication options</td>
<td>Enables communication between this portlet, the IBM Cognos Viewer portlet, and other IBM Cognos Metric Studio portlets.</td>
</tr>
<tr>
<td></td>
<td>When you select the <strong>Communicate with other portlets</strong> check box, communication between this portlet and other portlets that also have this check box selected is enabled. To set up communication between specific portlets, click <strong>Portlets using channel</strong> and type the channel name. Only the portlets that share the same channel name can interact.</td>
</tr>
<tr>
<td></td>
<td>The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, sales_reports or AbC are valid channel names.</td>
</tr>
<tr>
<td>Number of entries</td>
<td>Specify the maximum number of metrics displayed in the list.</td>
</tr>
<tr>
<td></td>
<td>For a strategy metric list, and lists viewed with grouping enabled, this value is ignored. Valid range is 1 to 1000.</td>
</tr>
</tbody>
</table>

### TM1 Cube Viewer

The following table lists the properties for the TM1® Cube Viewer portlet.
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify TM1</td>
<td>The TM1 data sources that have their connection information configured in the IBM® Cognos® 8 Data Source Connections are provided in the TM1 Datasources list. To select a pre-configured TM1 data source, click Choose a TM1 Datasource and select a TM1 data source from the Datasources list.</td>
</tr>
<tr>
<td></td>
<td>To select an existing TM1 data source that is not configured in the IBM Cognos 8 Data Source Connections, click Enter TM1 host and server name. The Administration Host name is the computer on which the IBM Cognos TM1 Admin Server is running. For Administration Host, type the network reachable address of the computer. For the Server Name, type the name of the TM1 server.</td>
</tr>
<tr>
<td>Identify cubeview</td>
<td>Click Select a cubeview and then click Select an entry to browse to a cube and select it.</td>
</tr>
<tr>
<td></td>
<td>Alternatively, click Type in the cube and view names. Enter the Cube name and the View name to identify the cubeview. Next, click Public or Private to identify the status of the view.</td>
</tr>
<tr>
<td>Protocol Selections</td>
<td>Select Use secured sockets protocol if the TM1 Web server uses SSL.</td>
</tr>
<tr>
<td>Display Options</td>
<td>Select Show the tool bar to show the tool bar on the page.</td>
</tr>
<tr>
<td></td>
<td>Select Automatic recalculation to automatically update the values on the page when a change occurs or if the portlet is responding to events from another portlet.</td>
</tr>
<tr>
<td></td>
<td>Select Show tabs to show tabs on the page.</td>
</tr>
<tr>
<td></td>
<td>Select Show titles of dimensions to show the titles associated with a dimension on the page.</td>
</tr>
<tr>
<td>Chart Options</td>
<td>Select the chart only, grid only, or grid and chart from the Display mode list. Select 3-Dimensional to show the chart as a 3-dimensional figure. Select Legend to show the legend that corresponds to the display mode.</td>
</tr>
<tr>
<td></td>
<td>Select the type of chart from Chart Type list.</td>
</tr>
<tr>
<td></td>
<td>Select a color palette from the Chart Palette list.</td>
</tr>
</tbody>
</table>
### Property | Description
---|---
Callback Options | Select **Navigation Viewer selection** to enable communication from the Navigation Viewer portlet. Select **Cube Viewer selection** to enable communication from the Cube Viewer. To set up communication between TM1 portlets, type the same channel name for the portlets that you want to interact. TM1 Viewer portlets will listen on the channel name specified in the **Listen to Channel** and will send to the channel specified in the **Send to Channel**. The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, Cognos, Cognos_Portlets, or CognosPortlets are valid.

View Options | Select a language from the **Language** list. The portlet title defaults to being the name of the viewer, if the option to show a title was chosen for the portal. To customize the title on the portlet, enter a name in **Title**. To change the height of the page, enter a value in **Height (pixels)**.

---

### TM1 Navigation Viewer

The following table lists the properties for the TM1® Navigation Viewer portlet.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify TM1</td>
<td>The TM1 data sources that have their connection information configured in the IBM® Cognos® 8 Data Source Connections are provided in the TM1 Datasources list. To select a pre-configured TM1 data source, click <strong>Choose TM1 Datasource</strong> and select the TM1 data source from the Datasources list. To select an existing TM1 data source that is not configured in the IBM® Cognos® 8 Data Source Connections, click <strong>Enter TM1 host and server name</strong>. The Administration Host name is the computer on which the IBM Cognos TM1 Admin Server is running. For <strong>Administration Host</strong>, type the network reachable address of the computer. For the <strong>Server Name</strong>, type the name of the TM1 server.</td>
</tr>
<tr>
<td>Protocol Selections</td>
<td>Select <strong>Use secured sockets protocol</strong> if the TM1 Web server uses SSL.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Display Options</td>
<td>Select <strong>Show the tool bar</strong> to show the tool bar on the page.</td>
</tr>
<tr>
<td>Callback Options</td>
<td>To send information to another TM1 Viewer portlet, enter a channel name in <strong>Send to Channel</strong> to identify the target portlet. The</td>
</tr>
<tr>
<td></td>
<td>channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example,</td>
</tr>
<tr>
<td></td>
<td>Cognos, Cognos_Portlets, or CognosPortlets are valid.</td>
</tr>
<tr>
<td>View Options</td>
<td>Select a language from the <strong>Language</strong> list.</td>
</tr>
<tr>
<td></td>
<td>The portlet title defaults to being the name of the viewer, if the option to show a title was chosen for the portal. To customize</td>
</tr>
<tr>
<td></td>
<td>the title on the portlet, enter a name in <strong>Title</strong>.</td>
</tr>
<tr>
<td></td>
<td>To change the height of the page, enter a value in <strong>Height (pixels)</strong>.</td>
</tr>
</tbody>
</table>

**TM1 Websheet Viewer**

The following table lists the properties for the TM1® Websheet Viewer portlet.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify TM1</td>
<td>The TM1 data sources that have their connection information configured in the IBM® Cognos® 8 Data Source Connections are provided in the TM1 Datasources list. To select a pre-configured TM1 data source, click <strong>Choose a TM1 Datasource</strong> and select the TM1 data source from the <strong>Datasources</strong> list. To select an existing TM1 data source that is not configured in the IBM® Cognos® 8 Data Source Connections, click <strong>Enter TM1 host and server name</strong>. The Administration Host name is the computer on which the IBM Cognos TM1 Admin Server is running. For <strong>Administration Host</strong>, type the network reachable address of the computer. For the <strong>Server Name</strong>, type the name of the TM1 server.</td>
</tr>
<tr>
<td>Identify Websheet</td>
<td>Click <strong>Select a websheet</strong> and then click <strong>Select an entry</strong> to browse to a websheet and select it.</td>
</tr>
<tr>
<td></td>
<td>Click <strong>Enter path to websheet</strong> and enter the full path to the websheet in <strong>Websheet path</strong>.</td>
</tr>
<tr>
<td>Protocol Selections</td>
<td>Select Use secured sockets protocol if the TM1 Web server uses SSL.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Display Options</td>
<td>Select <strong>Show the tool bar</strong> to show the tool bar on the page. Select <strong>Automatic recalculation</strong> to automatically update the values on the page when a change occurs or if the portlet is responding to events from another portlet. Select <strong>Show tabs</strong> to show tabs on the page.</td>
</tr>
<tr>
<td>Callback Options</td>
<td>Select a language from the <strong>Language</strong> list. The portlet title defaults to being the name of the viewer, if the option to show a title was chosen for the portal. To customize the title on the portlet, enter a name in <strong>Title</strong>. To change the height of the page, enter a value in <strong>Height (pixels)</strong>.</td>
</tr>
<tr>
<td>View Options</td>
<td>Select a language from the <strong>Language</strong> list. To show a title on the portlet, enter a name in <strong>Title</strong>. To change the height of the page, enter a value in <strong>Height (pixels)</strong>.</td>
</tr>
</tbody>
</table>

**IBM Cognos History Chart**

Use this portlet to add a metric history chart to a page. The history chart is a graphical illustration of the historical performance of a metric.

When you click a metric name in other IBM® Cognos® Metric Studio portlets, the metric history chart in this portlet is automatically updated if the portlets are using the same channel.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click **Cancel**.

**Notes**

- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.
- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet.</td>
</tr>
<tr>
<td></td>
<td>Select the <strong>Use the entry name</strong> check box if you want to use the name of a metric associated with the history chart as a title. If no title is specified, the portlet name is used by default.</td>
</tr>
<tr>
<td></td>
<td>You can specify a title for each supported language version of the product.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>The title does not appear in WebSphere®, WCI, and SAP portals.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td>Show title in content area</td>
<td>Shows the title in content area of the portlet.</td>
</tr>
<tr>
<td></td>
<td>This option is useful when the portal does not show the title bar.</td>
</tr>
<tr>
<td>Portlet communication options</td>
<td>Enables communication between this portlet, the IBM Cognos Viewer portlet, and other IBM Cognos Metric Studio portlets.</td>
</tr>
<tr>
<td></td>
<td>When you select the <strong>Communicate with other portlets</strong> check box, communication between this portlet and other portlets that also have this check box selected is enabled. To set up communication between specific portlets, click <strong>Portlets using channel</strong> and type the channel name. Only the portlets that share the same channel name can interact.</td>
</tr>
<tr>
<td></td>
<td>The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, sales_reports or AbC are valid channel names.</td>
</tr>
<tr>
<td>Image Width</td>
<td>Specifies the image width in pixels. The range is 350 to 1000 pixels.</td>
</tr>
<tr>
<td>Image Height</td>
<td>Specifies the image height in pixels. The range is 100 to 1000 pixels.</td>
</tr>
</tbody>
</table>

**IBM Cognos Impact Diagram**

Use this portlet to display impact diagrams associated with a metric.

When you click a metric in the IBM® Cognos® Custom Diagram or IBM Cognos Metric List portlet, the impact diagram associated with the metric appears in this portlet. You can select other diagrams from the drop-down menu in the top, left corner of the portlet.

The diagrams in this portlet are interactive. When you click a metric name, the content of the IBM Cognos History Chart and IBM Cognos Viewer portlets using the same channel is automatically updated. When you position a pointer over a metric icon, a tooltip appears that shows the history chart and the most recent data values associated with the metric.
To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

**Notes**
- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.
- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. Select the Use the entry name check box if you want to use the name of a metric associated with the impact diagram as a title. If no title is specified, the portlet name is used by default. You can specify a title for each supported language version of the product. <strong>Note:</strong> The title does not appear in WebSphere®, WCI, and SAP portals.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td>Show title in content area</td>
<td>Shows the title in content area of the portlet. This option is useful when the portal does not show the title bar.</td>
</tr>
<tr>
<td>Portlet communication options</td>
<td>Enables communication between this portlet, the IBM Cognos Viewer portlet, and other IBM Cognos Metric Studio portlets. When you select the Communicate with other portlets check box, communication between this portlet and other portlets that also have this check box selected is enabled. To set up communication between specific portlets, click Portlets using channel and type the channel name. Only the portlets that share the same channel name can interact. The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, sales_reports or AbC are valid channel names.</td>
</tr>
<tr>
<td>Image Width</td>
<td>Specifies the image width in pixels. The range is 100 to 2000 pixels.</td>
</tr>
</tbody>
</table>
IBM Cognos Custom Diagram

Use this portlet to display custom diagrams associated with a scorecard.

You can configure the portlet to show the default diagram associated with the scorecard. You can select other diagrams from the drop-down menu in the top, left corner of the portlet.

The diagrams in this portlet are interactive. When you click a metric name, the content of the IBM® Cognos® History Chart, IBM Cognos Impact Diagram, and IBM Cognos Viewer portlets is updated. When you position a pointer over a metric icon, the tooltip appears that shows the history chart and the most recent data values associated with the metric. When you click a strategy element, the content of the IBM Cognos Metric List portlet is updated. When you position a pointer over a strategy element, a tooltip appears that shows the metrics summary count.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

Notes

- In SAP Enterprise Portal, portlets are named iViews. This document may refer to iViews as portlets.

- In Microsoft® SharePoint Portal Server, portlets are named Web Parts. This document may refer to Web Parts as portlets.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Height</td>
<td>Specifies the image height in pixels. The range is 100 to 2000 pixels.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. Select the Use the entry name check box if you want to use the scorecard name as a title. If no title is specified, the portlet name is used by default. You can specify a title for each supported language version of the product. Note: The title does not appear in WebSphere®, WCI, and SAP portals.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
</tbody>
</table>
### Property | Description
--- | ---
Show title in content area | Shows the title in content area of the portlet. This option is useful when the portal does not show the title bar.
Metric package | Specifies a metric package that contains the scorecard.
Scorecard | Specifies the scorecard associated with the configured metric package.
Portlet communication options | Enables communication between this portlet, the IBM Cognos Viewer portlet, and other IBM Cognos Metric Studio portlets.
When you select the **Communicate with other portlets** check box, communication between this portlet and other portlets that also have this check box selected is enabled. To set up communication between specific portlets, click **Portlets using channel** and type the channel name. Only the portlets that share the same channel name can interact.
The channel name can contain only letters, numbers, and underscore (_) characters, and must not contain any spaces. For example, sales_reports or AbC are valid channel names.
Image Width | Specifies the image width in pixels. The range is 100 to 2000 pixels.
Image Height | Specifies the image height in pixels. The range is 100 to 2000 pixels.

### Bookmarks Viewer
Use this portlet to register and show active Web links in a page.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click **Cancel**.

The following table shows the properties that you can change.

| Property | Description |
--- | ---
Title | Specifies the title of the portlet. If no title is specified, the name Bookmarks Viewer is used by default.
You can specify a title for each supported language version of the product. |
**Property** | **Description**
--- | ---
Language | Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.

Bookmarks | Specifies the URL address of the Web page you want to register. You can type an alias next to the URL. The alias will be shown in the portlet instead of the URL.

To add boxes for new URLs, click **Add a bookmark line**. To delete URLs, select the associated check box and click **Delete**.

Open links | Specifies how the links in this portlet are opened. You can

- open and navigate the linked entries in a new browser window.
  This is the default option

- open and navigate the linked entries in the currently opened browser window.

- open the linked entries in a target browser window or frame.
  Type the name of the window or frame in the provided text box.

- open and navigate the linked entries in the HTML Viewer portlet.
  Type the channel name as specified in HTML Viewer.

**HTML Viewer**

Use this portlet to insert any Web page into a page. The Web page is specified by a URL address.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click **Cancel**.

The following table shows the properties that you can change.

**Property** | **Description**
--- | ---
Title | Specifies the title of the portlet. If no title is specified, the Web page URL address is used by default.

You can specify a title for each supported language version of the product.
### Image Viewer

Use this portlet to insert an image into a page. The image must be a single file that is accessible by a URL address. The image can also be used as a link.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. If no title is specified, the image URL address is used by default. You can specify a title for each supported language version of the product.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td>Image</td>
<td>Specifies the location of the image. Type the associated URL address.</td>
</tr>
<tr>
<td>Target URL</td>
<td>Specifies the Web page where a link to the image or the image appears. Type the appropriate URL address.</td>
</tr>
<tr>
<td>Open links</td>
<td>Specifies how the links in this portlet are opened. You can open and navigate the linked entries in a new browser window. This is the default option open and navigate the linked entries in the currently opened browser window. open the linked entries in a target browser window or frame. Type the name of the window or frame in the provided text box open and navigate the linked entries in the HTML Viewer portlet. Type the channel name as specified in HTML Viewer.</td>
</tr>
<tr>
<td>Image size</td>
<td>Specifies the size of the image. You can leave the original size of the image, or customize the image by changing its height and width. You can also tile the image.</td>
</tr>
</tbody>
</table>

**RSS Viewer**

Use this portlet to show the content of a Real Simple Syndication (RSS) 1.0 or 2.0 news feed specified by a URL address. RSS is a format for syndicating news and is used by many Web sites to publish frequently updated content.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

The following table shows the properties that you can change.
### Property | Description
--- | ---
Title | Specifies the title of the portlet. If no title is specified, the Web page URL address is used by default.
You can specify a title for each supported language version of the product.

Language | Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.

URL | Specifies the URL address that identifies the RSS channel feed.
The RSS channel includes a list of links to specific Web pages. The links may include a title and a short description of the linked story.

Features to expose | Specifies how the entries in this portlet are shown.
Use the **Show details** option to include a description of an entry.
Use the **Show the RSS channel signature** option to include an image, such as a logo, associated with the entry.
Use the **Alternating backgrounds** option to separate entries in long lists with different background colors to make the entries easier to read.

Open links | Specifies how the links in RSS Viewer are opened. You can
- open and navigate the linked entries in a new browser window.
  This is the default option.
- open and navigate the linked entries in the currently opened browser window.
- open the linked entries in a target browser window or frame.
  Type the name of the window or frame in the provided text box.
- open and navigate the linked entries in the HTML Viewer portlet.
  Type the channel name as specified in HTML Viewer.

Maximum displayed entries | Specifies the maximum number of URLs to display in the portlet.

### HTML Source

Use this portlet to insert custom text and images into a page.

This portlet adds a Freeform HTML code to the page, as typed by the user. For security reasons, the HTML tags that could pose a cross-site scripting threat, or break the integrity of the page, are not supported. Note that using the HTML source portlet could expose your environment to malicious code and other security risks.
If you are running a new database, HTML source portlet is disabled by default.

If you delete the containing portlet producer, manually using Cognos Administration or with the IBM® Cognos® Software Developer Kit, when the server restarts the HTML source portlet (along with other deleted portlets) is recreated but disabled.

If you import the entire content store, the states of the HTML source portlet remain unchanged.

If invalid HTML code is added, the portlet may not render it successfully. In this situation, you may need to delete the portlet from the page and start again. For more information about supported tags, see the table in this section.

To modify the properties for this portlet, click the edit button to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button in the portlet title bar. To exit the properties page without saving the changes, click the return button or click Cancel.

The following table shows the properties used to configure this portlet.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. If no title is specified, the Web page URL address is used by default. You can specify a title for each supported language version of the product.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
</tbody>
</table>
**Property** | **Description**
--- | ---
HTML Code | Specifies the HTML code to render in the view mode of the portlet. The code can be in any supported language.

Type valid HTML code that contains:
- supported HTML tags
  The following tags are not supported:
  - `<BODY>`, `<BODY>`, `<FORM>`, `<FORM>`, `<HTML>`, `<HTML>`
    These tags are filtered and removed from the code.
  - `<HEAD>`, `<HEAD>`, `<FRAMESET>`, `<FRAMESET>`, `<FRAME>`
    These tags are filtered and removed from the code including the content between the start and end tags.
  - `<script>`
    JavaScript™ is not supported.
- supported attributes for the tags
- matching start and end tags
  Ensure that all start tags have matching end tags. When the start and end tags are not matched, the missing tag is removed, but the content remains.
- absolute URLs in references to images and external resources, such as CSS files
  The URLs must include server names. Relative URLs are not supported.

**Note:** You must have the required permissions for the Styles and portlets secured feature to access this property

---

**Multi-page**

Use this portlet to create a dashboard with multiple tabs.

To modify the properties for this portlet, click the edit button ![edit button] to open the properties page. If the edit button is disabled or not visible, the administrator did not make these settings available to you.

In the portlet properties page, to reset the default portlet settings, or to return to the settings specified by your administrator, click the reset button ![reset button] in the portlet title bar. To exit the properties page without saving the changes, click the return button ![return button] or click **Cancel**.
The following table shows the properties that you can change.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Specifies the title of the portlet. If no title is specified, the Web page URL address is used by default. You can specify a title for each supported language version of the product.</td>
</tr>
<tr>
<td>Language</td>
<td>Specifies the product language version in which the title appears. You can assign the same title for multiple language versions.</td>
</tr>
<tr>
<td>Source folder for pages</td>
<td>Specifies a folder or package in Public Folders where the entries for the portlet tabs reside. The entries can be pages, reports, shortcuts, folders, and so on.</td>
</tr>
<tr>
<td>Display Style</td>
<td>Specifies how the tabs appear in the dashboard: horizontally at the top of the page, or vertically on the left side of the page.</td>
</tr>
<tr>
<td>Show icons in tabs</td>
<td>Shows the icons that represent the type of entry in each tab. For example, if the entry is a shortcut, the shortcut icon will be included in the tab.</td>
</tr>
<tr>
<td>Vertical tabs width</td>
<td>Specifies the default width in pixels for vertical tabs.</td>
</tr>
<tr>
<td>Show tab menu</td>
<td>Specifies whether to show the tab menu button in the top, left side of the page. The tab menu is used to add, delete, and reorder the page tabs, and to edit the page.</td>
</tr>
<tr>
<td>Maximum height for reports</td>
<td>Specifies the page height for a selected tab when the content, such as a report, is displayed in an iFrame.</td>
</tr>
</tbody>
</table>
Appendix F: Schema for Data Source Commands

When you work with data source connections, you can also add or edit data source commands. Data source commands are run when the query engine performs specific actions on a database, such as opening a connection or closing a user session. For example, you can use data source commands to set up an Oracle proxy connection or virtual private database. For more information, see "Passing IBM Cognos Context to a Database" (p. 238).

A data source command block is an XML document that is used to specify the commands that the database should run.

This document contains reference material about each element in the XML schema that defines the command blocks.

After the description of each element, separate sections describe

• the child elements that the element can or must have

• the parent elements that can contain the element

There are also code samples that show how you can use elements in a command block.

Element Model Group

The list of children for each element is presented as a DTD model group, and elements are listed in the order that they must occur. The following standard notation is used.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plus sign (+)</td>
<td>The preceding element may be repeated more than once but must occur at least once.</td>
</tr>
<tr>
<td>Question mark (?)</td>
<td>The preceding element is optional. It may be absent or it may occur exactly once.</td>
</tr>
<tr>
<td>Asterisk (*)</td>
<td>An asterisk (*) after an element specifies that the element is optional. It may occur zero or more times.</td>
</tr>
<tr>
<td>None</td>
<td>If an element has no plus sign (+), question mark (?), or asterisk (*) following it, the element must occur only once.</td>
</tr>
<tr>
<td>Parentheses</td>
<td>Parentheses group elements. Element groups are controlled using the same symbols as elements.</td>
</tr>
<tr>
<td>Bar (l)</td>
<td>A bar (l) between elements specifies that one of the listed elements must be present.</td>
</tr>
</tbody>
</table>
## commandBlock

Defines a group of commands that the database runs when specific events occur. This is the root element of the schema.

### Child Elements of commandBlock Element

\((\text{commands})^+\)

### Parent Elements of commandBlock Element

The commandBlock element has no parent elements.

## commands

Specifies the set of commands that the database runs. The commands run in the order that they appear within the commandBlock.

### commands Sample Code

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sessionStartCommand>
      <arguments>
        <argument>
          <name>OCI_ATTR_USERNAME</name>
          <value>PROXY_USER1</value>
        </argument>
      </arguments>
    </sessionStartCommand>
  </commands>
</commandBlock>
```

### Child Elements of commands Element

\((\text{sessionStartCommand}|\text{sessionEndCommand}|\text{setCommand}|\text{sqlCommand})^*\)

### Parent Elements of commands Element

`commandBlock`

## sessionStartCommand

Defines a command used to begin a proxy session in the database.
There should be only one sessionStartCommand per commandBlock. If the commandBlock contains more than one sessionStartCommand, only the last one will be used to create a proxy session.

**sessionStartCommand Sample Code**

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sessionStartCommand>
      <arguments>
        <argument>
          <name>OCI_ATTR_USERNAME</name>
          <value>PROXY_USER1</value>
        </argument>
        <argument>
          <name>OCI_ATTR_PASSWORD</name>
          <value>password1</value>
        </argument>
      </arguments>
    </sessionStartCommand>
  </commands>
</commandBlock>
```

**Child Elements of sessionStartCommand Element**

(Arguments)?

**Parent Elements of sessionStartCommand Element**

commands

**sessionEndCommand**

Defines a command used to terminate a proxy session in the database.

If no sessionEndCommand is supplied, the proxy session will be terminated upon disconnecting from the database.

**sessionEndCommand Sample Code**

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sessionEndCommand>
    </sessionEndCommand>
  </commands>
</commandBlock>
```

**Child Elements of sessionEndCommand Element**

(Arguments)?

**Parent Elements of sessionEndCommand Element**

commands
arguments

Specifies the argument values to be used with the command.

arguments Sample Code

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sessionEndCommand>
      <arguments/>
    </sessionEndCommand>
  </commands>
</commandBlock>
```

Child Elements of arguments Element

`(argument)*`

Parent Elements of arguments Element

- sessionStart
- sessionEnd

argument

Defines an argument value for a call to a database API.

argument Sample Code

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sessionStartCommand>
      <arguments>
        <argument>
          <name>OCI_ATTR_USERNAME</name>
          <value>PROXY_USER1</value>
        </argument>
        <argument>
          <name>OCI_ATTR_PASSWORD</name>
          <value>password1</value>
        </argument>
      </arguments>
    </sessionStartCommand>
  </commands>
</commandBlock>
```

Child Elements of argument Element

`(name, value)`

Parent Elements of argument Element

- arguments
**setCommand**

This element is reserved for future use.

**sqlCommand**

Defines a command that represents a native SQL statement to be run by the database.

**sqlCommand Sample Code**

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sqlCommand>
      <sql> BEGIN PKG1.STORED_PROC1; END; </sql>
    </sqlCommand>
  </commands>
</commandBlock>
```

**Child Elements of sqlCommand Element**

(sql)

**Parent Elements of sqlCommand Element**

(commands)

**sql**

Specifies the SQL statement for the database to run. The SQL statement must be in native SQL.

**sql Sample Code**

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sqlCommand>
      <sql> BEGIN PKG1.STORED_PROC1; END; </sql>
    </sqlCommand>
  </commands>
</commandBlock>
```

**Child Elements of sql Element**

The sql element has no child elements.

**Parent Elements of sql Element**

(sqlCommand)

**name**

Identifies the argument to be set.
The value of the name element must be one of:

- OCI_ATTR_USERNAME
- OCI_ATTR_PASSWORD

**name Sample Code**

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sessionStartCommand>
      <arguments>
        <argument>
          <name>OCI_ATTR_USERNAME</name>
          <value>PROXY_USER1</value>
        </argument>
      </arguments>
    </sessionStartCommand>
  </commands>
</commandBlock>
```

**Child Elements of name Element**

The name element has no child elements.

**Parent Elements of name Element**

- argument
- setCommand

**value**

Specifies the value to be used for the argument.

**value Sample Code**

Here is an example of how you can use this element in a commandBlock.

```xml
<commandBlock>
  <commands>
    <sessionStartCommand>
      <arguments>
        <argument>
          <name>OCI_ATTR_USERNAME</name>
          <value>PROXY_USER1</value>
        </argument>
      </arguments>
    </sessionStartCommand>
  </commands>
</commandBlock>
```

**Child Elements of value Element**

The value element has no child elements.
Parent Elements of value Element

- argument
- setCommand
Appendix F: Schema for Data Source Commands
If you configure IBM® Cognos® software to send log messages to a database (p. 103), the tables and the columns in each table are automatically created when you start the IBM Cognos services.

To avoid name conflicts with database keywords, all column names in the log database have the prefix "COGIPF". If you are upgrading from ReportNet 1.1 MR1 or MR2 to IBM Cognos Business Intelligence version 10.1, the prefixes exist in the log database already and you do not need to make any changes. However, if you are upgrading from a release before ReportNet® 1.1 MR1, to continue using reports that are based on the sample model from the previous release, you must update your audit metadata package to reflect the new column names. You can either:

- reimport the Sample Deployment Archive
- republish the package using the sample model

If you have created your own log database model, you must add the prefix "COGIPF" to the column names of the logging database tables in the model.

**Table Definitions**

Log messages are recorded in a table in the logging database under certain conditions. These conditions depend on the logging level that you configure in the Web portal. For information about logging levels, see "Log Messages" (p. 104).

When a user logs on to IBM® Cognos® software, a session ID is assigned and recorded in all log messages. You can use the session ID to identify all actions performed by a user.

The database table definitions that are created in the logging database are described in the following table, with a cross-reference to associated column definitions.

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_ACTION (p. 922)</td>
<td>Stores information about operations performed on objects</td>
</tr>
<tr>
<td>COGIPF_AGENTBUILD (p. 923)</td>
<td>Stores information about agent mail delivery</td>
</tr>
<tr>
<td>COGIPF_AGENTRUN (p. 924)</td>
<td>Stores information about agent activity including tasks and delivery</td>
</tr>
<tr>
<td>COGIPF_ANNOTATIONSERVICE (p. 926)</td>
<td>Stores audit information about Annotation service operations</td>
</tr>
<tr>
<td>COGIPF_EDITQUERY (p. 927)</td>
<td>Stores information about query runs</td>
</tr>
</tbody>
</table>
### Table Name | Description
--- | ---
COGIPF_HUMANTASKSERVICE (p. 929) | Stores audit information about Human Task service operations (tasks and corresponding task states)
COGIPF_HUMANTASKSERVICE_DETAIL (p. 932) | Stores additional details about Human Task service operations (not necessarily required for every audit entry, for example, notification details and human role details)
COGIPF_NATIVEQUERY (p. 933) | Stores information about queries that IBM Cognos software makes to other components
COGIPF_PARAMETER (p. 934) | Stores parameter information logged by a component
COGIPF_RUNJOB (p. 935) | Stores information about job runs
COGIPF_RUNJOBSTEP (p. 936) | Stores information about job step runs
COGIPF_RUNREPORT (p. 938) | Stores information about report runs
COGIPF_THRESHOLD_VIOLATIONS (p. 940) | Stores information about threshold violations for system metrics
COGIPF_USERLOGON (p. 943) | Stores user logon and logoff information
COGIPF_VIEWREPORT (p. 945) | Stores information about report view requests

### Table Interactions

An example of table interactions is shown in the following diagram. Your audit sample may be different depending on your needs.
1. Interactions with COGIPF_PARAMETER are
   COGIPF_REQUESTID=
   COGIPF_REQUESTID

2. COGIPF_REQUESTID=
   COGIPF_REQUESTID
### COGIPF_ACTION Table

The COGIPF_ACTION table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCAL_TIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td></td>
<td>NOT NULL</td>
<td></td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the component subrequest</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The name of the component that generates the indication</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILDNUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The level of the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_OPERATION</td>
<td>The action performed on the object</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The object on which the operation is run</td>
<td>VARCHAR (255)</td>
</tr>
</tbody>
</table>
## COGIPF_AGENTBUILD Table

The COGIPF_AGENTBUILD table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the component subrequest</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
</tbody>
</table>
### COGIPF_COMPONENT Table

The COGIPF_COMPONENT table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The name of the component that generates the indication</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILD NUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The level of the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_OPERATION</td>
<td>The operation</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The object on which the operation is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TARGET_NAME</td>
<td>The target name</td>
<td>VARCHAR (512)</td>
</tr>
<tr>
<td>COGIPF_TARGET_PATH</td>
<td>The target path</td>
<td>VARCHAR (1024)</td>
</tr>
<tr>
<td>COGIPF_STATUS</td>
<td>The status of the operation: blank, success, warning, or failure</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_ERRORDETAILS</td>
<td>Error details</td>
<td>VARCHAR (2000)</td>
</tr>
<tr>
<td>COGIPF_AGENT_PATH</td>
<td>The agent name</td>
<td>VARCHAR (1024)</td>
</tr>
<tr>
<td>COGIPF_SCHEDULETIME</td>
<td>The target schedule time</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_USER</td>
<td>The user who created the agent</td>
<td>VARCHAR (512)</td>
</tr>
<tr>
<td>COGIPF_EMAIL</td>
<td>The email address</td>
<td>VARCHAR (512)</td>
</tr>
</tbody>
</table>

### COGIPF_AGENTRUN Table

The COGIPF_AGENTRUN table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the component subrequest</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The name of the component that generates the indication</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILD_NUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The level of the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_OPERATION</td>
<td>The operation</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The object on which the operation is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TARGET_PATH</td>
<td>The target path</td>
<td>VARCHAR (1024)</td>
</tr>
<tr>
<td>COGIPF_STATUS</td>
<td>The status of the operation: blank, success, warning, or failure</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_ERROR_DETAILS</td>
<td>Error details</td>
<td>VARCHAR (2000)</td>
</tr>
<tr>
<td>COGIPF_AGENTPATH</td>
<td>The agent name</td>
<td>VARCHAR (1024)</td>
</tr>
<tr>
<td>COGIPF_SCHEDULETIME</td>
<td>The target schedule time</td>
<td>INTEGER</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>COGIPF_TARGET_NAME</td>
<td>The target name</td>
<td>VARCHAR (512)</td>
</tr>
<tr>
<td>COGIPF_USER</td>
<td>The user who created the agent</td>
<td>VARCHAR (512)</td>
</tr>
<tr>
<td>COGIPF_EMAIL</td>
<td>The email address</td>
<td>VARCHAR (512)</td>
</tr>
<tr>
<td>COGIPF_MESSAGEID</td>
<td>The identification of the message</td>
<td>VARCHAR (255)</td>
</tr>
</tbody>
</table>

**COGIPF_ANNOTATIONSERVICE Table**

The COGIPF_ANNOTATIONSERVICE table contains the following columns. For more information, see "System Performance Metrics" (p. 117).

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td></td>
<td><strong>NOT NULL</strong></td>
<td></td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification of the step, empty if none</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the subrequest.</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
</tbody>
</table>
### COGIPF_EDITQUERY Table

The COGIPF_EDITQUERY table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td></td>
<td>While the report is executing, this is the time that the report execution started. After the report execution is complete, this is the end time of report execution.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To check if execution is complete, see COGIPF_STATUS. A blank entry means an incomplete execution. A filled entry means execution completed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To calculate the execution start time for a report that has already completed execution, subtract COGIPF_RUNTIME from COGIPF_LOCALTIMESTAMP.</td>
<td></td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the component subrequest</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The name of the component that generates the indication</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILDNUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The level of the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The object on which the operation is run</td>
<td>VARCHAR (255)</td>
</tr>
</tbody>
</table>
The COGIPF_HUMANTASKSERVICE table contains the following columns. For more information, see "System Performance Metrics" (p. 117).

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request.</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the subrequest.</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_BUILDNUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_OPERATION</td>
<td>The action performed on the object, for example, ADD, UPDATE</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The target type</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TARGET_PATH</td>
<td>The object path</td>
<td>VARCHAR (1024)</td>
</tr>
<tr>
<td>COGIPF_STATUS</td>
<td>The status of the operation: blank if execution has not completed, success, warning, or failure</td>
<td>VARCHAR (50)</td>
</tr>
<tr>
<td>COGIPF_LOGENTRYID</td>
<td>The primary key used to link the tables COGIPF_HUMANTASKSERVICE and COGIPF_HUMANTASKSERVICE _DETAIL</td>
<td>VARCHAR (50), NOT NULL</td>
</tr>
<tr>
<td>COGIPF_TASKID</td>
<td>The task identification</td>
<td>VARCHAR (50)</td>
</tr>
<tr>
<td>COGIPF_TRANSACTION_TYPE</td>
<td>The operation that is performed, specific to the Human Task service, for example, claim, setPriority, getTaskInfo, changeSubscription.</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_USER</td>
<td>The user who performed the transaction in COGIPF_TRANSACTION_TYPE</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>COGIPF_TASK_PRIORITY</td>
<td>The priority of the task:</td>
<td>INTEGER</td>
</tr>
<tr>
<td></td>
<td>• 1 = high</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 3 = medium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 5 = low</td>
<td></td>
</tr>
<tr>
<td>COGIPF_TASK_STATUS</td>
<td>The status of the task: blank if execution has not completed, success, warning, or failure</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TASK_ACTIVATION_TIME</td>
<td>The time that the task was activated. A date/time value which is stored in the database in long numeric form.</td>
<td>BIGINT</td>
</tr>
<tr>
<td>COGIPF_TASK_EXPIRATION_TIME</td>
<td>The date and time when the task expired</td>
<td>BIGINT</td>
</tr>
<tr>
<td>COGIPF_TASK_NAME</td>
<td>The name of the task</td>
<td>NTEXT</td>
</tr>
<tr>
<td>COGIPF_TASK_SUBJECT</td>
<td>The subject of the task</td>
<td>NTEXT</td>
</tr>
<tr>
<td>COGIPF_TASK_DESCRIPTION</td>
<td>The description of the task</td>
<td>NTEXT</td>
</tr>
<tr>
<td>COGIPF_TASK_TIMEZONEID</td>
<td>The time zone id of the task</td>
<td>VARCHAR (50)</td>
</tr>
<tr>
<td>COGIPF_TASK_ACTUAL_OWNER</td>
<td>The owner of the task</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TASK_INITIATOR</td>
<td>The initiator (creator) of the task</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TASK_CLASS_NAME</td>
<td>The name of the task class which the task is an instance of</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TASK_CLASS_OPERATION</td>
<td>The action performed on the object</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TASK_COMMENT</td>
<td>Comments that are related to the task</td>
<td>VARCHAR (2048)</td>
</tr>
</tbody>
</table>
The COGIPF_HUMANTASKSERVICE_DETAIL table contains the following columns. For more information, see "System Performance Metrics" (p. 117).

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification of the step, empty if none</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the SUBrequest.</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TASKID</td>
<td>The alphanumeric identification of the task</td>
<td>VARCHAR (50)</td>
</tr>
<tr>
<td>COGIPF_LOGENTRYID</td>
<td>The primary key used to link the tables COGIPF_HUMANTASKSERVICE and COGIPF_HUMANTASKSERVICE_DETAIL</td>
<td>VARCHAR (50) NOT NULL</td>
</tr>
<tr>
<td>COGIPF_NOTIFICATION_DETAILS</td>
<td>Details about notification emails sent about the task</td>
<td>NTEXT</td>
</tr>
<tr>
<td>COGIPF_HUMANROLE_USER</td>
<td>The userid of the user who performs a role for a task</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td></td>
<td>Combines with COGIPF_HUMANROLE to define the role of the user for the task</td>
<td></td>
</tr>
<tr>
<td>COGIPF_HUMANROLE_ROLE</td>
<td>The role of the user</td>
<td>VARCHAR (50)</td>
</tr>
<tr>
<td></td>
<td>Combines with COGIPF_HUMAN_USER to define the role of the user for the task</td>
<td></td>
</tr>
<tr>
<td>COGIPF_SUBSCRIPTION_OPERATION</td>
<td>The subscription operation, for example, SUBSCRIBE or UNSUBSCRIBE</td>
<td>VARCHAR (50)</td>
</tr>
</tbody>
</table>
### COGIPF_SUBSCRIPTION Table

The COGIPF_SUBSCRIPTION table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_SUBSCRIPTION_EVENT</td>
<td>The task event for which the user is subscribing or unsubscribing</td>
<td>SMALLINT</td>
</tr>
<tr>
<td>COGIPF_SUBSCRIPTION_USER</td>
<td>The user who is subscribing or unsubscribing for a task event</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TASK_MESSAGE</td>
<td>The task message</td>
<td>NTEXT</td>
</tr>
<tr>
<td>COGIPF_TASK_MESSAGE_TYPE</td>
<td>The type of message stored in COGIPF_TASK_MESSAGE</td>
<td>VARCHAR (20)</td>
</tr>
<tr>
<td></td>
<td>Values can be INPUT, OUTPUT, or FAULT</td>
<td></td>
</tr>
<tr>
<td>COGIPF_DETAIL_ID</td>
<td>The sequence number of the detail record</td>
<td>VARCHAR (50) NOT NULL</td>
</tr>
</tbody>
</table>

### COGIPF_NATIVEQUERY Table

The COGIPF_NATIVEQUERY table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255) NOT NULL</td>
</tr>
</tbody>
</table>
# Appendix G: Data Schema for Log Messages

The COGIPF_PARAMETER table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_OPERATION</td>
<td>The action performed on the object</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The object on which the operation is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_PARAMETER_NAME</td>
<td>The name of the parameter logged by a component</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_PARAMETER_VALUE</td>
<td>The value of the parameter logged by a component</td>
<td>VARCHAR (512)</td>
</tr>
</tbody>
</table>
## COGIPF_RUNJOB Table

The COGIPF_RUNJOB table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td></td>
<td>While the report is executing, this is the time that the report execution started. After the report execution is complete, this is the end time of report execution.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To check if execution is complete, see COGIPF_STATUS. A blank entry means an incomplete execution. A filled entry means execution completed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To calculate the execution start time for a report that has already completed execution, subtract COGIPF_RUNTIME from COGIPF_LOCALTIMESTAMP.</td>
<td></td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td></td>
<td>NOT NULL</td>
<td></td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the component subrequest</td>
<td>VARCHAR (255)</td>
</tr>
</tbody>
</table>
### COGIPF_THREADID
The alphanumeric identification of the thread where the request is run

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The name of the component that generates the indication</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILDNUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The level of the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The object on which the operation is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_JOBPATH</td>
<td>The job path</td>
<td>VARCHAR (512)</td>
</tr>
<tr>
<td>COGIPF_STATUS</td>
<td>The status of the operation: blank, success, warning, or failure</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_ERRORDETAILS</td>
<td>Error details</td>
<td>VARCHAR (2000)</td>
</tr>
<tr>
<td>COGIPF.getRuntime</td>
<td>The number of milliseconds it took the job to run</td>
<td>INTEGER</td>
</tr>
</tbody>
</table>

### COGIPF_RUNJOBSTEP Table
The COGIPF_RUNJOBSTEP table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated. While the report is executing, this is the time that the report execution started. After the report execution is complete, this is the end time of report execution. To check if execution is complete, see COGIPF_STATUS. A blank entry means an incomplete execution. A filled entry means execution completed. To calculate the execution start time for a report that has already completed execution, subtract COGIPF_RUNTIME from COGIPF_LOCALTIMESTAMP.</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255) NOT NULL</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the component subrequest</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The name of the component that generates the indication</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILDNUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The level of the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The object on which the operation is run</td>
<td>VARCHAR (255)</td>
</tr>
</tbody>
</table>
### COGIPF_RUNREPORT Table

The COGIPF_RUNREPORT table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td></td>
<td>While the report is executing, this is the time that the report execution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>started. After the report execution is complete, this is the end time of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>report execution.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To check if execution is complete, see COGIPF_STATUS. A blank entry means</td>
<td></td>
</tr>
<tr>
<td></td>
<td>an incomplete execution. A filled entry means execution completed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To calculate the execution start time for a report that has already</td>
<td></td>
</tr>
<tr>
<td></td>
<td>completed execution, subtract COGIPF_RUNTIME from COGIPF_LOCALTIMESTAMP.</td>
<td></td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255) NOT NULL</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the component subrequest</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The name of the component that generates the indication</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILDNUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The level of the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The object on which the operation is run. The values include:</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td></td>
<td>• Report ReportService is an interactive report</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PromptForward ReportService is a report generated after a prompt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PromptBackward ReportService is a report generated after the user moved to the previous prompt page</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Report BatchReportService is a batch or scheduled run report</td>
<td></td>
</tr>
<tr>
<td>Note: The value of this column is expressed in two parts: the object type of execution and from which service the report is run, for example &quot;Report ReportService&quot; and &quot;Query BatchReportService&quot;.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### COGIPF_THRESHOLD_VIOLATIONS Table

The COGIPF_THRESHOLD_VIOLATIONS table contains the following columns. For more information, see "System Performance Metrics" (p. 117).

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The alphanumeric identification of the component</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILDNUMBER</td>
<td>The alphanumeric identification of the build</td>
<td>INTEGER</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The logging level. Should always be 1 to ensure that threshold violation information is available.</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_OPERATION</td>
<td>A threshold for the metric has been crossed</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_TARGET_TYPE</td>
<td>The target type</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_TARGETNAME</td>
<td>The target name</td>
<td>VARCHAR (512)</td>
</tr>
<tr>
<td>COGIPF_TARGET_PATH</td>
<td>The target path of the dispatcher that contains the threshold manager</td>
<td>VARCHAR (1024)</td>
</tr>
<tr>
<td>COGIPFRESOURCE_TYPE</td>
<td>The resource type that exceeds the threshold</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPFRESOURCE_PATH</td>
<td>The path of the resource that exceeded the threshold value</td>
<td>VARCHAR (512)</td>
</tr>
<tr>
<td>COGIPF_METRIC_NAME</td>
<td>The name of the metric</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_METRIC_VALUE</td>
<td>The value of the metric</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_METRIC_HEALTH</td>
<td>The status of the metric: good, average, or poor</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_LOWER_AVG_THRSHLD</td>
<td>The lower average threshold setting. If COGIPF_LOWER_AVG_THRSHLD_XCL is 1, the metric score is average when the metric is less than this threshold setting. The metric score is good when the metric is greater than or equal than this value. If COGIPF_LOWER_AVG_THRSHLD_XCL is 0 (zero), the metric score is average when the metric is less than or equal to this value. The metric score is good when the metric is greater than this value.</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
</tbody>
</table>
| COGIPF_LOWER_AVG_THRSHLD_EXCL  | The flag that indicates if the threshold setting in COGIPF_LOWER_AVG_THRSHLD is included when determining the metric score.  
If it is 0, the threshold setting is included when the metric score is determined. If it is 1, the threshold setting is not included when the metric score is determined. | DECIMAL (1,0)   |
| COGIPF_LOWER_POOR_THRSHLD      | The lower poor threshold setting.                                            | VARCHAR (128)   |
|                                | If COGIPF_LOWER_POOR_THRSHLD_XCL is 1, the metric score is poor when the metric is less than this threshold setting.  
If COGIPF_LOWER_POOR_THRSHLD_XCL is 0 (zero), the metric score is poor when the metric is less than or equal to this value. |                |
| COGIPF_LOWER_POOR_THRSHLD_EXCL | The flag that indicates if the threshold setting in COGIPF_LOWER_POOR_THRSHLD is included when determining the metric score.  
If it is 0, the threshold setting is included when the metric score is determined. If it is 1, the threshold setting is not included when the metric score is determined. | DECIMAL (1,0)   |
| COGIPF_UPPER_AVG_THRSHLD       | The upper average threshold setting  
If COGIPF_UPPER_AVG_THRSHLD_XCL is 1, the metric score is poor when the metric is less than this threshold setting.  
If COGIPF_UPPER_AVG_THRSHLD_XCL is 0 (zero), the metric score is average when the metric is greater than or equal to this value. The metric score is good when the metric is less than or equal to this value. | VARCHAR (128)   |
### COGIPF_USERLOGON Table

The COGIPF_USERLOGON table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>Column name</td>
<td>Description</td>
<td>Data type</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if there is none)</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_SUBREQUESTID</td>
<td>The alphanumeric identification of the component subrequest</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_THREADID</td>
<td>The alphanumeric identification of the thread where the request is run</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_COMPONENTID</td>
<td>The name of the component that generates the indication</td>
<td>VARCHAR (64)</td>
</tr>
<tr>
<td>COGIPF_BUILDNUMBER</td>
<td>The major build number for the component that generates the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOG_LEVEL</td>
<td>The level of the indication</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_STATUS</td>
<td>The status of the operation: blank, success, warning, or failure</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_ERRORDETAILS</td>
<td>Error details</td>
<td>VARCHAR (2000)</td>
</tr>
<tr>
<td>COGIPF_LOGON_OPERATION</td>
<td>Logon, logoff, or logon expired</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_USERNAME</td>
<td>The display name of the user</td>
<td>VARCHAR2 (255)</td>
</tr>
<tr>
<td>COGIPF_USERID</td>
<td>The username of the user</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_NAMESPACE</td>
<td>The namespace display name</td>
<td>VARCHAR (255)</td>
</tr>
</tbody>
</table>
### COGIPF_VIEWREPORT Table

The COGIPF_VIEWREPORT table contains the following columns.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Description</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGIPF_REMOTE_IPADDR</td>
<td>The IP address of the user</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_IPADDR</td>
<td>The host IP address where the log message is generated</td>
<td>VARCHAR (128)</td>
</tr>
<tr>
<td>COGIPF_HOST_PORT</td>
<td>The host port number</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_PROC_ID</td>
<td>The process ID assigned by the operating system</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_LOCALTIMESTAMP</td>
<td>The local date and time when the log message was generated</td>
<td>TIMESTAMP</td>
</tr>
<tr>
<td></td>
<td>While the report is executing, this is the time that the report execution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>started. After the report execution is complete, this is the end time of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>report execution.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To check if execution is complete, see COGIPF_STATUS. A blank entry means</td>
<td></td>
</tr>
<tr>
<td></td>
<td>an incomplete execution. A filled entry means execution completed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To calculate the execution start time for a report that has already</td>
<td></td>
</tr>
<tr>
<td></td>
<td>completed execution, subtract COGIPF_RUNTIME from COGIPF_LOCALTIMESTAMP.</td>
<td></td>
</tr>
<tr>
<td>COGIPF_TIMEZONE_OFFSET</td>
<td>The time zone, offset from GMT</td>
<td>INTEGER</td>
</tr>
<tr>
<td>COGIPF_SESSIONID</td>
<td>The alphanumeric identification of the user session</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td>COGIPF_REQUESTID</td>
<td>The alphanumeric identification of the request</td>
<td>VARCHAR2 (255)</td>
</tr>
<tr>
<td></td>
<td>NOT NULL</td>
<td></td>
</tr>
<tr>
<td>COGIPF_STEPID</td>
<td>The alphanumeric identification for the step within a job run (empty if</td>
<td>VARCHAR (255)</td>
</tr>
<tr>
<td></td>
<td>there is none)</td>
<td></td>
</tr>
</tbody>
</table>
### Column name | Description | Data type
---|---|---
COGIPF_SUBREQUESTID | The alphanumeric identification of the component subrequest | VARCHAR (255)
COGIPF_THREADID | The alphanumeric identification of the thread where the request is run | VARCHAR (255)
COGIPF_COMPONENTID | The name of the component that generates the indication | VARCHAR (64)
COGIPF_BUILDNUMBER | The major build number for the component that generates the indication | INTEGER
COGIPF_LOG_LEVEL | The level of the indication | INTEGER
COGIPF_TARGET_TYPE | The object on which the operation is run | VARCHAR (255)
COGIPF_REPORTPATH | The report path | VARCHAR (1024)
COGIPF_STATUS | The status of the operation: blank, success, warning, or failure | VARCHAR (255)
COGIPF_ERRORDETAILS | Error details | VARCHAR (2000)
COGIPF_REPORTNAME | The name of the report that was viewed | VARCHAR (512)
COGIPF_PACKAGE | The package with which the report is associated | VARCHAR (1024)
COGIPF_REPORTFORMAT | The format of the report (p. 431) | VARCHAR (255)
COGIPF_MODEL | The model that the report is associated with | VARCHAR (512)
Appendix H: Performing Tasks in IBM Cognos BI Using URLs

The URLs provide a quick and efficient way to start IBM Cognos BI components and open specified content, such as reports, metrics, folders, or pages.

You can use the URLs to

- start IBM Cognos BI components
- access an IBM Cognos Connection page

You can use the URL Report sample program included with the IBM Cognos Software Development Kit to see examples that demonstrate how to perform basic tasks by clicking embedded links on an active server page. For information about the samples installed with the Software Development Kit, see the *Software Development Kit Developer Guide*. However, for complex tasks, such as scheduling, we recommend that you use the Software Development Kit to create a custom application.

You can use various declarations to identify the requested action, depending on the IBM Cognos BI component.

**Note:** These declarations are not the same as the Software Development Kit methods exposed by the BI Bus API.

For more information on using URLs see the IBM Cognos BI *Administration and Security Guide*.

### CGI Program and Alternative Gateways

All URL commands begin with a declaration of the end point for the request: either cognos.cgi or an alternative gateway. For IBM Cognos BI, the complete syntax is:

```
http://webservice:portnumber/ibmcognos/cgi-bin/cognos.cgi
```

If you configured IBM Cognos BI to use a gateway other than the default CGI program, type the URL that corresponds to your gateway. For information about configuring gateways, see the *Installation and Configuration Guide*.

The supported gateways are listed in the following table:

<table>
<thead>
<tr>
<th>Gateway</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISAPI</td>
<td><a href="http://webservice/ibmcognos/isapi">http://webservice/ibmcognos/isapi</a></td>
</tr>
<tr>
<td>Apache Connector (Windows)</td>
<td><a href="http://webservice/ibmcognos/cgi-bin/mod_cognos.dll">http://webservice/ibmcognos/cgi-bin/mod_cognos.dll</a></td>
</tr>
<tr>
<td>Apache Connector (Solaris and AIX)</td>
<td><a href="http://webservice/ibmcognos/cgi-bin/mod_cognos.so">http://webservice/ibmcognos/cgi-bin/mod_cognos.so</a></td>
</tr>
<tr>
<td>Apache Connector (HPUX)</td>
<td><a href="http://webservice/ibmcognos/cgi-bin/mod_cognos.sl">http://webservice/ibmcognos/cgi-bin/mod_cognos.sl</a></td>
</tr>
</tbody>
</table>
There are two methods to start most IBM Cognos components: parameterized URL and cognosLaunch. Both methods perform the same function and use the same parameters. You can use either method to perform many UI tasks.

Parameterized URL Method

The parameterized URL method performs tasks or starts specific components using parameters typed in the Web browser address bar. Using both get and post methods, the launch.xts or cc.xts parameter starts the specified IBM Cognos BI component.

This method requires that the parameters use the following format:
&ArgumentName=ArgumentValue

The ArgumentName parameter specifies the type, and the ArgumentValue parameter specifies the value of the called arguments. All names and values must be character strings.

This method is easier to begin using than the cognosLaunch method because it does not require advance preparation. However, the longer URL-encoded entries are restrained by browser character limits.

You can use these commands to browse content in IBM Cognos Connection or view pages in IBM Cognos Viewer.

Mandatory Parameterized URL Parameters

If you are using the parameterized URL method to start any component, you must use the following parameters with this syntax:
http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts

followed by the specific component parameters you want to use.

If you want to start IBM Cognos Viewer using the parameterized URL method, use the following parameters with this syntax:
http://localhost/cgi-bin/cognos.cgi?b_action=cognosViewer

If you want to start IBM Cognos Connection using the parameterized URL method, use the following URL:
http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/cc.xts

The mandatory building blocks for parameterized URL commands are as follows:

- gateway
This is the mandatory argument value that specifies the IBM Cognos BI gateway. The gateway name in this example is `http://server/ibmcognos/cgi-bin/cognos.cgi?`.

IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter. For more information see, "URL Validation" (p. 950).

- `b_action=xts.run`
  Identifies the action. To specify IBM Cognos Viewer, use `b_action=cognosViewer`. For more information see, "Starting IBM Cognos Viewer" (p. 960).

- `m=portal/launch.xts&ui.tool=tool_name`
  Identifies the IBM Cognos BI component interface that displays the result. To start IBM Cognos Connection, use `m=portal/cc.xts`.

- `ui.action`
  Specifies the action to take. Acceptable values for the Studio components are `new` and `edit`. The default is `new`. Acceptable values for IBM Cognos Viewer are `run` and `view`. The default is `view`.

**cognosLaunch Method**

The cognosLaunch method uses a JavaScript function to perform tasks and start components. To use the launch utility in a Web page, you must first include the following statement in the HTML file from which you start the specific component:

```html
<script language="JavaScript" src="CognosGateway/cognoslaunch.js"></script>
```

*CognosGateway* is the main IBM Cognos BI gateway defined in IBM Cognos Configuration.

This statement enables the page to open a specified report in the chosen IBM Cognos component using the `cognosLaunch` JavaScript parameters.

This method requires that the parameters use the following format:

"Argument Name","Argument Value"

The `Argument Name` parameter specifies the type, and the `Argument Value` parameter specifies the value of the called arguments. All names and values must be character strings.

The cognosLaunch method uses a simpler construction than the parameterized URL method, but requires an enabled starting page.

**Mandatory cognosLaunch Parameters**

If you are using the cognosLaunch method to start any component, use the following parameters with this syntax:

`cognosLaunch("ui.gateway"," gateway ","ui.tool"," component")`

- "ui.gateway"
  This is the mandatory argument value that specifies the IBM Cognos BI gateway.
IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter. For more information see, "URL Validation" (p. 950).

- "ui.tool"
  This is the mandatory argument value that specifies the IBM Cognos BI component.

- ui.action
  Specifies the action to take. Acceptable values for the Studio components are new and edit. The default is new. Acceptable values for IBM Cognos Viewer are run and view. The default is view.
  
  You cannot use this parameter with Metric Studio.

### Common Optional Parameters

In addition to the mandatory parameters required by each IBM Cognos BI component, you can use the following optional parameters, unless otherwise specified:

- ui.object
  Specifies the path of the target object. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).
  
  This parameter is mandatory for Event Studio, Analysis Studio, and Metric Studio.

- ui.folder
  Specifies the target folder. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).
  
  You cannot use this parameter with Analysis Studio.

- ui.backURL
  Specifies the URI to open after you close the selected component.
  
  IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter. For more information see, "URL Validation" (p. 950).

### URL Validation

IBM Cognos Application Firewall validation is enforced on URLs using the following rules.

- Fully qualified, or absolute URLs:
  
  protocol://host[:port]/path[?query]

  Where protocol is either ‘http’ or ‘https’ and the host is validated against the valid domain list, which is specified by the administrator in IBM Cognos Configuration. For more information, see the Installation and Configuration Guide.

- URLs relative to the IBM Cognos BI installation web root:
  
  /<install root>/*
Where <install root> is the gateway file path, taken from the Gateway URI from Cognos Configuration Tool. For example, /ibmcognos/ps/portal/images/.

- One of the following specifically allowed URLs:
  - `about:blank` (case insensitive)
  - `JavaScript:window.close()` (case insensitive, with or without trailing semi-colon)
  - `JavaScript:parent.close()` (case insensitive, with or without trailing semi-colon)
  - `JavaScript:history.back()` (case insensitive, with or without trailing semi-colon)
  - `parent.cancelErrorPage()` (case insensitive, with or without trailing semi-colon)
  - `doCancel()` (case insensitive, with or without trailing semi-colon)

In addition, an advanced configuration setting, RSVP.RENDER.VALIDATEURL, can be used to specify whether these rules are applied to values specified by any URL values contained within a report specification. CAF must be enabled for the RSVP.RENDER.VALIDATEURL setting to take effect.

### Starting IBM Cognos BI Components

Use a URL to start IBM Cognos BI components and open specified content. For example, you can quickly open a report in Query Studio, or a metric in Metric Studio without using IBM Cognos Connection.

The components can be started from any enabled Web page.

You can use a URL to start the following IBM Cognos BI components:

- Report Studio (p. 952)
- Query Studio (p. 955)
- Analysis Studio (p. 957)
- Metric Studio (p. 958)
- Event Studio (p. 958)
- IBM Cognos Viewer (p. 960)

### Start Parameters

Before using either the parameterized URL or cognosLaunch method you must first locate the object that you want to access. The easiest way to identify the location of an object, such as a saved report, is to start IBM Cognos Connection and copy the object search path "Using a Page ID Instead of the Object Search Path" (p. 966) into the required URL command. The full path must be copied, as listed in the report properties, including the relevant package name and report names.

For example, using the following parameterized URL starts IBM Cognos Viewer and runs the report named 2005 Sales Summary:
Starting Report Studio

You can use a URL to open and run a specific report in Report Studio.

Use the following parameters to start Report Studio with the parameterized URL method:

http://localhost/ibmcognos/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.tool=ReportStudio&ui.gateway=http://localhost/ibmcognos/cgi-bin/cognos.cgi?&ui.option=/content

When starting Report Studio with the parameterized URL method, specify both the gateway (http://localhost/ibmcognos/cgi-bin/cognos.cgi?) and the ui.gateway parameter.

For a list of mandatory parameterized URL launch parameters, see "Mandatory Parameterized URL Parameters" (p. 948).

Use the following parameters to start Report Studio with the cognosLaunch method:

cognosLaunch("ui.gateway","http://localhost/ibmcognos/cgi-bin/cognos.cgi?","ui.tool","ReportStudio","ui.action","");

For a list of mandatory cognosLaunch parameters, see "Mandatory cognosLaunch Parameters" (p. 949).

In addition to the mandatory parameters required, you can also use the following optional parameters:

- ui.object

  Specifies the path of the target object. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- ui.folder

  Specifies the target folder. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- ui.backURL

  Specifies the URI to open after you close the selected component.

  IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter. For more information see, "URL Validation" (p. 950).
Parameterized URL Examples

This section provides examples for performing specific functions when starting Report Studio using the parameterized URL method.

- **Starting Report Studio**
  ```
  ```

- **Starting Report Studio to a specific package**
  ```
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.gateway=http://localhost/ibmcognos/cgi-bin/cognos.cgi&ui.tool=ReportStudio&ui.object=/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (query)']/ui.action=new
  ```

- **Editing a report in Report Studio**
  ```
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.gateway=http://localhost/ibmcognos/cgi-bin/cognos.cgi&ui.tool=ReportStudio&ui.object=/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (query)']/folder[@name='Report Studio Report Samples']/report[@name='Health Insurance']/ui.action=edit
  ```

cognosLaunch Examples

This section provides examples for performing specific functions when starting Report Studio using the CognosLaunch method.

- **Starting Report Studio**
  ```
  cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','ReportStudio')
  ```

- **Starting Report Studio to a specific package**
  ```
  cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','ReportStudio','ui.action','new','ui.object','/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (query)']')
  ```

- **Editing a report in Report Studio**
  ```
  cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','ReportStudio','ui.action','edit','ui.object','/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (query)']/folder[@name='Report Studio Report Samples']/report[@name='Health Insurance']')
  ```

Starting Business Insight Advanced

You can use a URL to open and run a specific report in Business Insight Advanced.

Use the following parameters to start Business Insight Advanced with the parameterized URL method:

```
```
When starting Business Insight Advanced with the parameterized URL method, specify both the gateway (http://localhost/ibmcognos/cgi-bin/cognos.cgi) and the ui.gateway parameter.

For a list of mandatory parameterized URL launch parameters, see "Mandatory Parameterized URL Parameters" (p. 948).

Use the following parameters to start Report Studio with the cognosLaunch method:

cognosLaunch("ui.gateway","http://localhost/ibmcognos/cgi-bin/cognos.cgi?","ui.tool","ReportStudio","ui.option","/content","ui.profile","BUA_standalone")

For a list of mandatory cognosLaunch parameters, see "Mandatory cognosLaunch Parameters" (p. 949).

In addition to the mandatory parameters required, you can also use the following optional parameters:

- **ui.object**
  Specifies the path of the target object. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- **ui.folder**
  Specifies the target folder. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- **ui.backURL**
  Specifies the URI to open after you close the selected component.
  IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter. For more information see, "URL Validation" (p. 950).

### Parameterized URL Examples

This section provides examples for performing specific functions when starting Report Studio using the parameterized URL method.

- **Starting Business Insight Advanced**
  

- **Starting Business Insight Advanced to a specific package**
  
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.gateway=http://localhost/ibmcognos/cgi-bin/cognos.cgi&ui.tool=ReportStudio&ui.profile=BUA_standalone&ui.object=/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (analysis)']&ui.action=new

- **Editing a report in Business Insight Advanced**
  
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.gateway=http://localhost/ibmcognos/cgi-bin/cognos.cgi&ui.tool=ReportStudio&ui.profile=BUA_standalone&ui.object=/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (analysis)']/folder[@name='Business Insight Advanced']/report[@name='Promotion Success']&ui.action=edit
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cognosLaunch Examples
This section provides examples for performing specific functions when starting Business Insight
Advanced using the CognosLaunch method.
●

Starting Business Insight Advanced
cognosLaunch('ui.gateway','http://localhost/ibmcognos
/cgi-bin/cognos.cgi','ui.tool','ReportStudio','ui.profile','BUA_standalone')

●

Starting Business Insight Advanced to a specific package
cognosLaunch('ui.gateway','http://localhost/ibmcognos
/cgi-bin/cognos.cgi','ui.tool','ReportStudio','ui.profile','BUA_
standalone','ui.action','new','ui.object','/content/folder[@name=\'Samples\
']/folder[@name=\'Models\']/package[@name=\'GO Data Warehouse (analysis)\']')

●

Editing a report in Business Insight Advanced
cognosLaunch('ui.gateway','http://localhost/ibmcognos
/cgi-bin/cognos.cgi','ui.tool','ReportStudio','ui.profile','BUA_
standalone','ui.action','edit','ui.object','/content/folder[@name=\'Samples\
']/folder[@name=\'Models\']/package[@name=\'GO Data Warehouse (analysis)\']/
folder[@name=\'Business Insight Advanced\']/report[@name=\'Promotion
Success\']')

Starting Query Studio
You can use a URL to quickly open a specific report in Query Studio.
Use the following mandatory parameters to start Query Studio with the parameterized URL method:
http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.
tool=QueryStudio&ui.object=/content&ui.action=new

Use the following mandatory parameters to start Query Studio with the cognosLaunch method:
cognosLaunch('ui.gateway','http://localhost/ibmcognos
/cgi-bin/cognos.cgi','ui.tool','QueryStudio','ui.action','new')

The ui.action parameter is a mandatory for both methods.
The following parameters are optional for Query Studio:
●

cv.header

Specifies whether to display the header. Acceptable values are true and false.
●

ui.spec

Specifies an XML document that contains an IBM Cognos BI report specification. For information about IBM Cognos BI report specifications, see the report specification topics in the IBM
Cognos Software Development Kit Developer Guide.
●

run.outputLocale

Specifies the output language. Acceptable values are expressed as a hyphenated language-region
pair, in accordance with the RFC3066 standard. The default value is en-us.
●

run.prompt

Specifies whether the report service issues prompts, so you can enter report option values.
Acceptable values are true and false. The default value is true.

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- **ui.object**
  Specifies the path of the target object. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- **ui.folder**
  Specifies the target folder. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- **ui.backURL**
  Specifies the URI to open after you close the selected component.
  IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter. For more information see, "URL Validation" (p. 950).

Use the following parameters for debugging purposes only:

- **run.outputFormat**
  Specifies the output format. Acceptable values are CSV, HTML, PDF, singleXLS, XHTML, XLWA, and XML.

- **asynch.primaryWaitThreshold**
  Specifies the maximum amount of time, in seconds, that the server can use to process the request before sending a response to the client. Acceptable values are any integer. Use a value of 0 to make the client wait indefinitely. The default value is 7.

- **asynch.secondaryWaitThreshold**
  Specifies the maximum amount of time, in seconds, that the server can use to process the request before sending a response to the client. Acceptable values are any integer. Use a value of 0 to make the client wait indefinitely. The default value is 30.

For a list of all common optional launch parameters for both methods, see "Common Optional Parameters" (p. 950).

**Parameterized URL Examples**

This section provides examples for performing specific functions when starting Query Studio using the parameterized URL method.

- **Starting Query Studio to a specific package**
  
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.tool=QueryStudio&ui.object=/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (analysis)']&ui.action=new

- **Starting Query Studio to a specific report**
  
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.tool=QueryStudio&ui.object=/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (analysis)']/folder[@name='Query Studio Report Samples']/query[@name='Return Quantity by Product Line']&ui.action=edit
**cognosLaunch Examples**

This section provides examples for performing specific functions when starting Query Studio using the CognosLaunch method.

- **Starting Query Studio to a specific package**
  
cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','QueryStudio','ui.action','new','ui.object','/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (analysis)']')

- **Starting Query Studio to a specific report**
  
cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','QueryStudio','ui.action','edit','ui.object','/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Data Warehouse (analysis)']/folder[@name='Query Studio Report Samples']/query[@name='Return Quantity by Product Line']')

**Starting Analysis Studio**

You can use a URL to quickly open and run a specific report in Analysis Studio.

Use the following parameters to start Analysis Studio with the parameterized URL method:

http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.gateaway=http://localhost/ibmcognos/cgi-bin/cognos.cgi&ui.tool=AnalysisStudio&ui.action=new

When starting Analysis Studio with the parameterized URL method, specify both the gateway (http://localhost/ibmcognos/cgi-bin/cognos.cgi) and the ui.gateway parameter.

Use the following parameters to start Analysis Studio with the cognosLaunch method:

cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','AnalysisStudio','ui.action','new')

The ui.object parameter is mandatory for both methods. However, if it is missing, you are prompted to select a package.

In addition to the mandatory parameters required, you can also use the following optional parameter:

- ui.backURL

  Specifies the URI to open after you close the selected component.

  IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter.
  
  For more information see, "URL Validation" (p. 950)

**Parameterized URL Examples**

This section provides examples for performing specific functions when starting Analysis Studio using the parameterized URL method.

- **Starting Analysis Studio to a specific package**
  
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.gateaway=http://localhost/ibmcognos/cgi-bin/cognos.cgi&ui.tool=AnalysisStudio&ui.object=/content/folder[@name='Samples']/folder[@name='Cubes']/package[@name='Sales and Marketing (cube)']/folder[@name='Analysis Studio Report Samples']/ui.action=new
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- **Viewing an analysis report in Analysis Studio**
  
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.gateway=http://localhost/ibmcognos/cgi-bin/cognos.cgi&ui.tool=AnalysisStudio&ui.object=/content/folder[@name='Samples']/folder[@name='Cubes']/package[@name='Sales and Marketing (cube)']/folder[@name='Analysis Studio Report Samples']/analysis[@name='Custom Rank Sample']&ui.action=edit

  **cognosLaunch Examples**

  This section provides examples for performing specific functions when starting Analysis Studio using the CognosLaunch method.

- **Starting Analysis Studio to a specific package**

  cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','AnalysisStudio','ui.action','new','ui.object','/content/folder[@name='Samples']/folder[@name='Cubes']/package[@name='Sales and Marketing (cube)']/folder[@name='Analysis Studio Report Samples']')

- **Viewing an analysis report in Analysis Studio**

  cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','AnalysisStudio','ui.action','edit','ui.object','/content/folder[@name='Samples']/folder[@name='Cubes']/package[@name='Sales and Marketing (cube)']/folder[@name='Analysis Studio Report Samples']/analysis[@name='Custom Rank Sample']')

**Starting Metric Studio**

You can use a URL to quickly open a metric in Metric Studio.

Use the following parameters to start Metric Studio with the parameterized URL method:

http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.tool=MetricStudio&ui.action=new

Use the following parameters to start Metric Studio with the cognosLaunch method:

  cognosLaunch('ui.gateway','http://localhost/ibmcognos/cgi-bin/cognos.cgi','ui.tool','MetricStudio','ui.action','new')

The ui.object parameter is mandatory for both methods. However, if it is missing, you are prompted to select a package.

In addition to the mandatory parameters required, you can also use the following optional parameters:

- **ui.folder**

  Specifies the target folder. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- **ui.backURL**

  Specifies the URI to open after you close the selected component.

  IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter. For more information see, "URL Validation" (p. 950)
Parameterized URL Examples

This section provides an example when starting Metric Studio using the parameterized URL method.

- Starting Metric Studio to a specific package
  
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.
  tool=MetricStudio&ui.object=/content/package[@name='GO Metrics']&ui.action=new

CognosLaunch Examples

This section provides an example when starting Metric Studio using the CognosLaunch method.

- Starting Metric Studio to a specific package
  
  cognosLaunch('ui.gateway','http://localhost/ibmcognos
  /cgi-bin/cognos.cgi','ui.tool','MetricStudio','ui.action','new','ui.object','/
  content/package[@name='GO Metrics']')

Starting Event Studio

You can use a URL to quickly access and edit an agent in Event Studio.

Use the following parameters to start Event Studio with the parameterized URL method:

http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.
  tool=EventStudio&ui.object=/content/package[@name='GO Sales (analysis)']&ui.
  action=new

Use the following parameters to start Event Studio with the cognosLaunch method:

  cognosLaunch('ui.gateway','http://localhost/ibmcognos
  /cgi-bin/cognos.cgi','ui.tool','EventStudio','ui.action','new')

The ui.action and ui.object parameters are mandatory. If ui.object is missing, you are
prompted to select a package.

In addition to the mandatory parameters required, you can also use the following optional param-
eters:

- ui.folder

  Specifies the target folder. Acceptable values are the Content Manager search path or store ID.
  For more information, see "Using Search Paths and Page IDs" (p. 965).

- ui.backURL

  Specifies the URI to open after you close the selected component.

  IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter.
  For more information see, "URL Validation" (p. 950).

Parameterized URL Examples

This section provides an example when starting Event Studio using the parameterized URL method.

- Opening an agent in Event Studio
  
  http://localhost/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/launch.xts&ui.
  tool=EventStudio&ui.object=/content/folder[@name='Samples']/folder@
  [name='Models']/package[@name='GO Sales (query)']/folder[@name='Event Studio
  Samples']/agentDefinition[@name='ELM Escalation Agent']&ui.action=run
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cognosLaunch Examples
This section provides examples for performing specific functions when starting Event Studio using
the CognosLaunch method.
●

Starting Event Studio
cognosLaunch('ui.gateway','http://localhost/ibmcognos
/cgi-bin/cognos.cgi','ui.tool','EventStudio','ui.action','new','ui.object','/
content/package[@name=\'GO Sales and Retailers\']')

●

Opening an agent in Event Studio
cognosLaunch('ui.gateway','http://localhost/ibmcognos
/cgi-bin/cognos.cgi','ui.tool','EventStudio','ui.action','edit','ui.object','/
content/folder[@name=\'Samples\']/folder[@name=\'Models\']/package[@name=\
'GO Sales (query)\']/folder[@name=\'Event Studio Samples\']/agentDefinition
[@name=\'ELM Escalation Agent\']')

Starting IBM Cognos Viewer
You can use a URL to quickly open a specified report in IBM Cognos Viewer.
Use the following parameters to start IBM Cognos Viewer with the parameterized URL method:
http://localhost/cgi-bin/cognos.cgi?b_action=cognosViewer&ui.object=/content/
folder[@name='Samples']/folder[@name='Cubes']/package[@name='Sales and Marketing
(cube)']/folder[@name='Report Studio Report Samples']/report[@name='Actual vs.
Planned Revenue']&ui.action=run

Use the following parameters to start IBM Cognos Viewer with the cognosLaunch method:
cognosLaunch('ui.gateway','http://localhost/ibmcognos
/cgi-bin/cognos.cgi','ui.tool','CognosViewer')

For a complete list of the IBM Cognos Viewer parameters, see the "URL API Reference" Appendix
in the Software Development Kit Developer Guide.
The following parameters are optional for IBM Cognos Viewer:
●

run.outputFormat

Specifies the output format. Acceptable values are CSV, HTML, PDF, singleXLS, XHTML, XLWA,
and XML. The default value is HTML.
Note: To protect IBM Cognos BI and your servers, the IBM Cognos Application Firewall (CAF)
rejects URL-based requests for output in XLS format.
●

run.outputLocale

Specifies the output language. Acceptable values are expressed as a hyphenated language-region
pair, in accordance with the RFC3066 standard. The default value is en-us.
●

run.prompt

Specifies whether the report service issues prompts, so you can enter report option values.
Acceptable values are true and false. The default value is true.
●

run.xslURL

Specifies the location of an XSL stylesheet that can be applied to the report, thereby rendering
it in the requested format. An acceptable value is a URI.

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When referencing the XSL file, ensure that the specified file is valid, and exists on the application server in the templates/rsvp/xsl directory. Referencing an invalid stylesheet terminates the process.

- `run.outputEncapsulation`  
  Specifies how output documents in the response are encapsulated. Acceptable values are `HTML`, `URL`, `URLQueryString`, `none`.

- `asynch.attachmentEncoding`  
  Specifies how attachments to the response are encoded. Acceptable values are `base64`, `MIME`, `MIMECompressed`. The default value is `base64`.

- `asynch.primaryWaitThreshold`  
  Specifies the maximum amount of time, in seconds, that the server can use to process the request before sending a response to the client. Acceptable values are any integer. Use a value of 0 to make the client wait indefinitely. The default value is 7.

- `asynch.secondaryWaitThreshold`  
  Specifies the maximum amount of time, in seconds, that the server can use to process the request before sending a response to the client. Acceptable values are any integer. Use a value of 0 to make the client wait indefinitely. The default value is 30.

- `ui.object`  
  Specifies the path of the target object. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- `ui.folder`  
  Specifies the target folder. Acceptable values are the Content Manager search path or store ID. For more information, see "Using Search Paths and Page IDs" (p. 965).

- `ui.backURL`  
  Specifies the URI to open after you close the selected component. IBM Cognos Application Firewall validation is enforced on URLs that contain this parameter. For more information see, "URL Validation" (p. 950).

### Parameterized URL Examples

This section provides examples for performing specific functions when viewing reports using the parameterized URL method.

- **Viewing saved reports**
  
  ```
  http://localhost/cgi-bin/cognos.cgi?b_action=cognosViewer&ui.object=/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Sales (analysis)']/folder[@name='Report Studio Report Samples']/report[@name='2005 Sales Summary']&ui.action=run
  ```

- **Running live reports**
  
  ```
  http://localhost/cgi-bin/cognos.cgi?b_action=cognosViewer&ui.object=/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Sales Administration and Security Guide']
  ```
cognosLaunch Examples

This section provides examples for performing specific functions when viewing reports using the CognosLaunch method.

- Viewing saved reports
  
cognosLaunch('ui.gateway', 'http://localhost/ibmcognos/cgi-bin/cognos.cgi', 'ui.tool', 'CognosViewer', 'ui.action', 'view', 'ui.object', 'defaultOutput(/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Sales (analysis)']/folder[@name='Report Studio Report Samples']/report[@name='2005 Sales Summary'])')

- Running live reports
  
cognosLaunch('ui.gateway', 'http://localhost/ibmcognos/cgi-bin/cognos.cgi', 'ui.tool', 'CognosViewer', 'ui.action', 'run', 'ui.object', '/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Sales (analysis)']/folder[@name='Report Studio Report Samples']/report[@name='2005 Sales Summary'])

- Viewing reports in different output modes
  
cognosLaunch('ui.gateway', 'http://localhost/ibmcognos/cgi-bin/cognos.cgi', 'ui.tool', 'CognosViewer', 'ui.action', 'run', 'ui.object', '/content/folder[@name='Samples']/folder[@name='Models']/package[@name='GO Sales (analysis)']/folder[@name='Report Studio Report Samples']/report[@name='2005 Sales Summary'], 'run.outputFormat', 'PDF')

Starting IBM Cognos BI Components in a Specified Browser Window

This feature allows you to start an IBM Cognos BI component in a named browser window.

To do this, you must use the following parameters with this syntax:

  cognosLaunchInWindow(windowName, windowProperties, "ui.gateway", "gateway", "ui.tool", "component")

The windowName and windowProperties parameters represent the values specific to starting an IBM Cognos BI component in a named browser window.

The windowName string is the name of the browser window, frame, or iframe in which to start the specified component. If the specified name does not exist, a newly created pop-up browser window appears with the name. To create a new pop-up window, use "_blank" as the value.

The windowProperties string defines the properties applied to the new pop-up window. This only applies to newly created windows. The available values depend on the type of the Web browser you are using, and correspond to the values supported by the JavaScript window.open() function. Some options may not work in all browsers.
The `windowProperties` parameter consists of a comma-separated list. Each item consists of an option and a value, separated by the equals sign (=). For example, "fullscreen=yes, toolbar=yes". Some common examples include:

- **channelmode**
  Specifies whether to display the window in theater mode, and show the channel band. The default is no. Acceptable values are yes and no.

- **directories**
  Specifies whether to add directory buttons. The default is yes. Acceptable values are yes and no.

- **fullscreen**
  Specifies whether to display the browser in full-screen mode. This mode hides the browser's title bar and menus. A window in full-screen mode must also be in channelmode. The default is no. Acceptable values are yes and no.

- **height**
  This integer specifies the height of the window, in pixels. The minimum value is 100.

- **left**
  This integer specifies the left position, in pixels, relative to the upper-left corner of the screen.

- **location**
  Specifies whether to display the input field for entering URLs directly into the browser. The default is yes. Acceptable values are yes and no.

- **menubar**
  Specifies whether to display the menu bar. The default is yes. Acceptable values are yes and no.

- **resizable**
  Specifies whether to display resize handles at the corners of the window. The default is yes. Acceptable values are yes and no.

- **scrollbars**
  Specifies whether to display horizontal and vertical scroll bars. The default is yes. Acceptable values are yes and no.

- **status**
  Specifies whether to display a status bar at the bottom of the window. The default is yes. Acceptable values are yes and no.

- **titlebar**
  Specifies whether to display a title bar for the window. This parameter is only valid if the calling application is an HTML Application, or a trusted dialog box. The default is yes. Acceptable values are yes and no.
● **toolbar**

Specifies whether to display the browser toolbar. The default is *yes*. Acceptable values are *yes* and *no*.

● **top**

This integer specifies the top position, in pixels. This value is relative to the upper-left corner of the screen.

● **width**

This sets the width of the window, in pixels. The minimum value is 100.

The `ui.gateway`, `ui.tool`, along with some additional parameter values are described in "Start Parameters" (p. 951).

---

**Access an IBM Cognos Connection Page**

Using a URL, you can quickly access any IBM Cognos Connection page. For example, if you use a corporate portal not supported by Portal Services, and use IBM Cognos portlets to populate frames in that portal, you can embed any IBM Cognos Connection page using the page URL. This page appears in a targeted frame, using your corporate look and feel.

Before you can access an IBM Cognos Connection page using URLs, you must prepare the page for standalone access (p. 965).

**Step**

● In a browser, type a URL using the following parameters:

```
http://[gateway]?b_action=xts.run&m=portal/cc.xts&m_page=path:[search path]&style=[stylesheet]&ui=h1&m_pagemode=view
```

The parameters for starting a page are as follows:

● **gateway**

Full prefix that identifies the IBM Cognos BI gateway. For example, `localhost/ibmcognos/cgi-bin/cognos.cgi`.

● **m=portal/cc.xts**

Identifies the component interface.

● **m_page=path:[search path]**

Identifies an IBM Cognos Connection page. For more information, see "Using Search Paths and Page IDs" (p. 965).

● **style=[stylesheet]**

Identifies the .css file that overrides the default IBM Cognos BI style.

The IBM Cognos Connection pages use the IBM Cognos BI stylesheet by default. You can use your own corporate style to maintain a consistent look and feel of your page. To do so, edit the URL to set the `style=[stylesheet]` parameter to the location of the required .css file. For example, `style=http://myserver/mystyles.css`. 
• **ui=h1**
  Hides some of the IBM Cognos BI user interface elements.
  When an IBM Cognos Connection page appears as a portion of another Web page, some of its user interface elements, such as top headers, links, and toolbars, may become redundant. You can hide these elements and leave only the required content of the page. In this example, \texttt{h1} hides the main IBM Cognos Connection header. For more information about hiding user interface elements, see the customization chapters in the \textit{Administration and Security Guide}.

• **m_pagemode=view**
  Hides some of the portlet user interface elements, and makes the page read-only.
  Some of the portlet user interface elements, such as frames around the portlets and title bars, may become redundant when the portlet appears within another page. You can hide these elements.

---

**Preparing a Page for Standalone Access**

You must prepare each page in IBM Cognos Connection so that the page can be accessed by using a URL. You must do this even if you intend to use only one portlet in the page.

Ensure that the following conditions are met:

• **The page is saved in a public folder in IBM Cognos Connection.**
   The objects in Public Folders can be accessed by all users. An individual users can access a standalone page from his own My Folders directory, but that page is only accessible to that user.

• **The IBM Cognos BI logon mechanism is implemented by your application.**
   Your application is responsible for authenticating users. This is not required if the host application and IBM Cognos BI have already established single signon.
   For more information about setting single signon, see the \textit{Installation and Configuration Guide}.

• **The required access permissions are set for the page.**
   Read permissions are granted to all users of a portal page or application that embeds the IBM Cognos Connection page. Write permissions are granted to the portal administrator and the page owner. This makes the page read-only, preventing other users from editing the portlet settings inside the page.
   For more information about setting access permissions, see the \textit{Administration and Security Guide}.

The page is now ready for standalone access (p. 964).

---

**Using Search Paths and Page IDs**

When building URLs, you need to know the search paths of the objects you want to access using the URLs.
If you want to access an IBM Cognos Connection page, you can use its search paths or its ID. Search paths define the fully qualified location of the entry in the content store and are not installation-specific. IDs are installation-specific. For ease of use, we recommend that you access the page using search paths (p. 966).

When using the cognosLaunch method, you specify the object's search path after the "ui.object" parameter.

If you are using the parameterized URL method, specify the object's search path using the following m_page parameter format, where search path is the search path of the page object:

```
&m_page=path:[[search path]]
```

For example,

```
m_page=path:/content/folder[@name='Public Pages']/pagelet[@name='EP portlet Demo']
```

**Tip:** To find the page search path and ID in IBM Cognos Connection, navigate to the folder that contains the page and click the page properties button. On the General tab, click View the search path, ID and URL.

Using a Page ID Instead of the Object Search Path

Instead of the search path, you can also specify the object's page ID using the following cognosLaunch parameters:

"ui.object","storeID('storeID')"

If you are using the parameterized URL method (p. 948), you can specify the object's page ID using the following m_page parameter format, where page ID is the object's page ID:

```
m_page=[page ID]
```

The ID appears as an unseparated series of characters. For example,

```
i80E9B692820A4F91B8655D4E84F292AF
```

To find the IDs, follow the instructions in "Using Search Paths and Page IDs" (p. 965).

Deployment Considerations

References to deployment objects are based on search paths, not IDs. For a specific IBM Cognos Connection page, the object's page ID remains valid until the application's deployment mechanism transfers the original object to another IBM Cognos BI server. In the destination environment, all IDs are different. In such an event, you must map all ID references to the new IDs on the system.
access permission
A privilege that permits the access or use of an object.

agent
The object type created and edited by Event Studio. An agent contains the event condition and the associated tasks to perform.

anonymous access
A type of access that allows users and servers to access a server without first authenticating with it.

authentication
The process of validating the identity of a user or server.

authentication provider
The communication mechanism to an external authentication source. Functionalities, such as user authentication, group membership, and namespace searches, are made available through authentication providers.

burst
To create several report results by running a single report once. For example, the user can create a report that shows sales for each employee, and run it once, sending different results to regional managers by bursting on region.

burst key
The dimension or level of a query in the report specification that is used to create, or burst, a set of report results.

capability
A group of functions and features that can be hidden or revealed to simplify the user interface. Capabilities can be enabled or disabled by changing preference settings, or they can be controlled through an administration interface.

contact
A named e-mail address to which reports and agent e-mails can be sent. Contacts are never authenticated.

content locale
A code that is used to set the language or dialect used for browsers and report text, and the regional preferences, such as formats for time, date, money, money expressions, and time of day.
**Content Manager**
The service that retrieves information from the content store, and saves information to the content store.

**content store**
The database that contains the data needed to operate, such as report specifications, published models, and security rights.

**credential**
Information acquired during authentication that describes a user, group associations, or other security-related identity attributes, and that is used to perform services such as authorization, auditing, or delegation. For example, a user ID and password are credentials that allow access to network and system resources.

**data source**
The source of data itself, such as a database or XML file, and the connection information necessary for accessing the data.

In TM1®, the file or data used as the source for the TurboIntegrator import process.

**deployment**
The process of moving an application (such as a report or model) to a different instance. For example, reports are often created in a test environment and then deployed to production. When an application is deployed, it is Approved, transferred, and imported.

**deployment archive**
A file used for deployment. A deployment archive contains the data from the content store that is being moved.

**drill down**
In a multidimensional representation of data, to access information by starting with a general category and moving downwards through the hierarchy of information. For example from Years to Quarters to Months.

In TM1, to access information by starting with a general category and moving through the hierarchy of information. For example, in a database, to move from field to file to record.

**drill up**
To navigate from one level of data to a less detailed level. The levels are set by the structure of the data.

**event**
A change to a state, such as the completion or failure of an operation, business process, or human task, that can trigger a subsequent action, such as persisting the event data to a data repository or invoking another business process.

In Cognos Real-Time Monitoring and Cognos Now!, a row or a series of rows of data.
**gateway**
An extension of a Web server program that transfers information from the Web server to another server. Gateways are often CGI programs, but may follow other standards such as ISAPI and Apache modules.

**glyph**
The actual shape (bit pattern, outline) of a character image. For example, italic A and roman A are two different glyphs representing the same underlying character. Strictly speaking, any two images which differ in shape constitute different glyphs. In this usage, glyph is a synonym for character image, or simply image (The Unicode Standard - Version 1.0).

**group**
A collection of users who can share access authorities for protected resources.

**job**
A group of runnable objects, such as reports, agents, and other jobs that the user runs and schedules as a batch.

**job step**
The smallest part of a job that can be run separately. A job step can be a report or it can be another job.

**locale**
A setting that identifies language or geography and determines formatting conventions such as collation, case conversion, character classification, the language of messages, date and time representation, and numeric representation.

**metric**
A measure to assess performance in a key area of a business.

**metric package**
In Cognos Connection, a representation of a Metric Studio application. A metric package contains connection information, reports, and metric management tasks for that application.

**model**
In Data Manager, a system, consisting of fact data and metadata, that represents the aspects of a business.

**namespace**
For authentication and access control, a configured instance of an authentication provider that allows access to user and group information. In Framework Manager, namespaces uniquely identify query items, query subjects, and so on. You import different databases into separate namespaces to avoid duplicate names.
In XML and XQuery, a uniform resource identifier (URI) that provides a unique name to associate with the element, attribute, and type definitions in an XML schema or with the names of elements, attributes, types, functions, and errors in XQuery expressions.

news item
A single entry in a Really Simple Syndication (RSS) compatible format. It can include a headline, text, and a link to more information. A news item task in an agent can be used to create news items for display in a Cognos Connection portlet.

package
A subset of a model, which can be the whole model, to be made available to the Cognos server.

passport
Session-based information, stored and encrypted in Content Manager memory, regarding authenticated users. A passport is created the first time a user accesses a Cognos product, and it is retained until a session ends, either when the user logs off or after a specified period of inactivity.

portlet
A reusable component that is part of a web application that provides specific information or services to be presented in the context of a portal.

product locale
The code or setting that specifies which language, regional settings, or both to use for parts of the product interface, such as menu commands.

project
In Framework Manager, a set of models, packages, and related information for administration, and for sharing model information.

In Metric Studio, a task or set of tasks undertaken by a team and monitored on a scorecard. A project tracks the dates, resources, and status of the project.

In Metric Designer, a group of extracts. Each extract contains the metadata that is used to populate the Metric Studio data store or to create applications.

prompt
A report element that asks for parameter values before the report is run.

publish
In Cognos BI, to expose all or part of a Framework Manager model or Transformer PowerCube, through a package, to the Cognos server, so that the data can be used to create reports and other content.

In Cognos Planning, to copy the data from Contributor or Analyst to a data store, typically so that the data can be used for reporting purposes.
query
A request for information from a data source based on specific conditions: for example, a request for a list of all customers in a customer table whose balances are greater than $1000.

really simple syndication
An XML file format for syndicated web content that is based on the Really Simple Syndication specification (RSS 2.0). The RSS XML file formats are used by Internet users to subscribe to Web sites that have provided RSS feeds.

report
A set of data deliberately laid out to communicate business information.

report output
The output produced as a result of executing a report specification against a data set.

report specification
An executable definition of a report, including query and layout rules, which can be combined with data to produce a report output.

report view
A reference to another report that has its own properties, such as prompt values, schedules, and results. Report views can be used to share a report specification instead of making copies of it.

rich site summary
An XML-based format for syndicated web content that is based on the RSS 0.91 specification. The RSS XML file formats are used by Internet users to subscribe to Web sites that have provided RSS feeds.

session
The time during which an authenticated user is logged on.

task
An action performed by an agent if the event status meets the task execution rules. For example, an agent can send an e-mail, publish a news item, or run a report.

template
In report authoring, a reusable report layout or style that can be used to set the presentation of a query or report.
In Data Manager, a component that can be used to define reference structure attributes or dimension table columns together with their semantics.

user
Any individual, organization, process, device, program, protocol, or system that uses the services of a computing system.
**watch list**
A list of metrics that each user has chosen to monitor closely. If notification is enabled in Metric Studio, the user will receive e-mail notification of changes to these metrics. Users can also choose to display their watch list as a portlet within Cognos Connection.

**watch rule**
A user-defined condition that determines whether a report is delivered to the user. When the rule is run, the output is evaluated and, if it satisfies the condition or rule, the report is delivered by e-mail or news item. Watch rules limit report delivery to those reports containing data of significance to the user.

**Web Services for Remote Portlets**
A standard for creating presentation-oriented web services so that they can be easily integrated within other applications, such as web portals.
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