Before using this information and the product it supports, read the information in "Notices" on page 49.
# Contents

**Introduction** .................................. v

**Chapter 1. What's new?** ........................................ 1

- New features in version 10.2.1 .................................. 1
  - Support for IBM Cognos Business Intelligence 10.2.0 ............... 1
  - My Folder content ............................................. 1
  - Support for bidirectional content ................................ 1
  - Ability to delete projects ..................................... 2

- New features in version 10.2.0 .................................. 1
  - Support for IBM Cognos Business Intelligence 10.2.0 ............... 1
  - My Folder content ............................................. 1
  - Support for bidirectional content ................................ 1
  - Ability to delete projects ..................................... 2

- Changed features in version 10.2.0 .................................... 2
  - Cognos Business Insight renamed ................................ 2

- New features in version 10.1.1 .................................. 2
  - Support for IBM Cognos Business Intelligence 10.1.1 ............... 2
  - Ability to perform tasks using a command line interface .......... 2
  - Ability to add content to existing projects ....................... 3
  - Support for IBM Cognos BI PowerPlay reports and Business Insight workspaces ............... 3
  - Project configuration option to show total number of reports in packages ............... 3

- Changed features in version 10.1.1 .................................... 3
  - Date-time values when comparing reports .......................... 3

- Deprecated features in version 10.1.1 .................................... 4
  - Support for ReportNet as a source environment ..................... 4

- New features in version 10.1.0 .................................. 4
  - Support for IBM Cognos Business Intelligence 10.1.0 ............... 4
  - Benchmark projects .......................................... 4
  - Report comparison in different formats ............................ 4
  - Report comparison in different languages .......................... 4
  - Report validation in the dynamic query mode ....................... 5
  - Content import from an archived project into a new project .......... 5
  - Package view ................................................. 6
  - Report execution times .................................... 6

- Changed features in version 10.1.0 .................................... 6
  - New character limit for project and archive names ..................... 6
  - Output differences that are not due to an upgrade problem ............ 6

**Chapter 2. The upgrade process** ........................................ 7

- IBM Cognos Lifecycle Manager workflow ........................ 8
  - Supported environments .................................... 10

**Chapter 3. Installation and configuration of Cognos Lifecycle Manager** ........................................ 11

- Installing and starting Cognos Lifecycle Manager .................... 11
- Preparation of your IBM Cognos environments ....................... 12
  - Creation of data source signons .................................. 12
  - Enabling the test case archive function ............................ 12
- The Cognos Lifecycle Manager Interface ................................ 13
  - Views in Cognos Lifecycle Manager .................................. 13
  - Columns in Cognos Lifecycle Manager ............................ 13

**Chapter 4. Cognos Lifecycle Manager projects** ........................................ 17

- Creating a Cognos Lifecycle Manager project ....................... 17
- Configuring a Cognos Lifecycle Manager project ....................... 17
  - Configuring Cognos Lifecycle Manager for SSL ........................ 21
  - Specifying credentials for Cognos Lifecycle Manager ..................... 21
- Generating the list of reports for a Cognos Lifecycle Manager project ..................... 22
- Modifying the list of reports for a project .......................... 23
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archiving a Cognos Lifecycle Manager project.</td>
<td>23</td>
</tr>
<tr>
<td>Importing an archived Cognos Lifecycle Manager project into a new project.</td>
<td>23</td>
</tr>
<tr>
<td><strong>Chapter 5. Report validation and execution in Cognos Lifecycle Manager</strong></td>
<td>25</td>
</tr>
<tr>
<td>Prompt values in Cognos Lifecycle Manager</td>
<td>25</td>
</tr>
<tr>
<td>Automatically adding prompt values to reports</td>
<td>26</td>
</tr>
<tr>
<td>Manually adding prompt values to reports</td>
<td>26</td>
</tr>
<tr>
<td>Validating models and reports in Cognos Lifecycle Manager</td>
<td>26</td>
</tr>
<tr>
<td>Running reports in Cognos Lifecycle Manager</td>
<td>27</td>
</tr>
<tr>
<td>Setting the master for benchmark projects in Cognos Lifecycle Manager</td>
<td>29</td>
</tr>
<tr>
<td>Creating test case archives in Cognos Lifecycle Manager</td>
<td>29</td>
</tr>
<tr>
<td>Test case archive contents.</td>
<td>30</td>
</tr>
<tr>
<td>Saving model specifications in Cognos Lifecycle Manager</td>
<td>31</td>
</tr>
<tr>
<td>Extracting information from target reports</td>
<td>32</td>
</tr>
<tr>
<td>Data trace log files for ReportNet reports</td>
<td>33</td>
</tr>
<tr>
<td>Viewing validation and execution results</td>
<td>34</td>
</tr>
<tr>
<td><strong>Chapter 6. Report comparison in Cognos Lifecycle Manager</strong></td>
<td>37</td>
</tr>
<tr>
<td>Comparing output in Cognos Lifecycle Manager</td>
<td>37</td>
</tr>
<tr>
<td>Viewing output comparison results in Cognos Lifecycle Manager</td>
<td>38</td>
</tr>
<tr>
<td>Using a command line to perform Cognos Lifecycle Manager tasks.</td>
<td>39</td>
</tr>
<tr>
<td>Enabling the dynamic query mode in IBM Cognos BI</td>
<td>41</td>
</tr>
<tr>
<td><strong>Appendix. Troubleshooting</strong></td>
<td>43</td>
</tr>
<tr>
<td>Log files</td>
<td>43</td>
</tr>
<tr>
<td>Fixing problems with starting Cognos Lifecycle Manager</td>
<td>44</td>
</tr>
<tr>
<td>Problems with prompt values generated for dimensional data sources</td>
<td>45</td>
</tr>
<tr>
<td>Incomplete test case archives</td>
<td>45</td>
</tr>
<tr>
<td>Output differences that are not upgrade problems</td>
<td>45</td>
</tr>
<tr>
<td>Out of memory errors when running large reports</td>
<td>47</td>
</tr>
<tr>
<td>java.lang.OutOfMemoryError message in Cognos Lifecycle Manager log file.</td>
<td>47</td>
</tr>
<tr>
<td><strong>Notices</strong></td>
<td>49</td>
</tr>
<tr>
<td><strong>Index</strong></td>
<td>53</td>
</tr>
</tbody>
</table>
Introduction

This information is intended for use with IBM® Cognos® Lifecycle Manager. Cognos Lifecycle Manager is a Microsoft Windows operating system-based application that assists in the process of verifying upgrades from ReportNet or previous versions of IBM Cognos Business Intelligence to later versions by identifying and logging potential upgrade issues.

Cognos Lifecycle Manager delivers the following three values in support of this activity:

- **Proven practice upgrade process**
  The user interface design and status reporting functionality provide both a proven practice process and support for upgrade project planning and status reporting.

- **Upgrade verification**
  Cognos Lifecycle Manager validates, runs, and compares report results from two different IBM Cognos BI releases to let you rapidly identify upgrade and compatibility issues between releases.

- **Test case capture**
  Cognos Lifecycle Manager automates much of the process of bundling the required files, such as reports and models, for the test case.

This guide contains instructions for installing, configuring, and using Cognos Lifecycle Manager.

**Audience**

To use Cognos Lifecycle Manager effectively, you should be familiar with the following concepts:

- Basic Windows or UNIX operating system administration concepts
- The existing server environment and security infrastructure in your organization
- Reporting concepts
- Metadata modeling concepts

**Finding information**

To find IBM Cognos product documentation on the web, including all translated documentation, access one of the [IBM Cognos Information Centers](http://pic.dhe.ibm.com/infocenter/cogic/v1r0m0/index.jsp). Release Notes are published directly to Information Centers, and include links to the latest technotes and APARs.

You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

**Accessibility features**

Cognos Lifecycle Manager does not currently support accessibility features that help users with a physical disability, such as restricted mobility or limited vision, to use this product.
IBM Cognos HTML documentation has accessibility features. PDF documents are supplemental and, as such, include no added accessibility features.

**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 Sample Outdoors Company, Great Outdoors Company, GO Sales, any variation of the Sample Outdoors or Great Outdoors names, 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.
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 other new features for this release, see the IBM Cognos Business Intelligence New Features Guide.

What's New information for past releases, including versions 8.3 and 8.4, is available by accessing documentation within the IBM Cognos Business Intelligence 10.1.1 information center (http://pic.dhe.ibm.com/infocenter/cbi/v10r1m1/index.jsp).

To review an up-to-date list of environments supported by IBM Cognos products, including information about operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, see Supported Software Environments (http://www.ibm.com/support/docview.wss?uid=swg27037784).

New features in version 10.2.1

There are no new features in this release of IBM Cognos Lifecycle Manager.

New features in version 10.2.0

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

Support for IBM Cognos Business Intelligence 10.2.0

You can use this version of IBM Cognos Lifecycle Manager to test reports that are upgraded to IBM Cognos BI 10.2.0.

My Folder content

Users can now include their My Folder content in an IBM Cognos Lifecycle Manager project.

The My Folder content that users can work with is based on the user credentials specified for the project.
Related tasks:

“Generating the list of reports for a Cognos Lifecycle Manager project” on page 22
When you create a project, you must select the list of reports that you want IBM Cognos Lifecycle Manager to work with. You need to generate the list of reports only once for your source environment.

“Specifying credentials for Cognos Lifecycle Manager” on page 21
If security settings were not specified when you configured a project, you must specify credentials for your IBM Cognos Lifecycle Manager session. Cognos Lifecycle Manager prompts you to specify credentials when you perform a task that requires connecting to the source or target environment.

Support for bidirectional content
IBM Cognos Lifecycle Manager supports the comparison of reports in all bidirectional languages, in each supported output format.

Ability to delete projects
You can now delete projects.

In the Open Project window, there is now a Delete link that allows you to delete a project.

Changed features in version 10.2.0
Listed below are changes to features since the last release. Links to directly-related topics are included.

Cognos Business Insight renamed
In IBM Cognos Business Intelligence 10.2.0, IBM Cognos Business Insight is now IBM Cognos Workspace.

New features in version 10.1.1
Listed below are new features since the last release. Links to directly-related topics are included where applicable.

Support for IBM Cognos Business Intelligence 10.1.1
This version of IBM Cognos Lifecycle Manager supports reports that are upgraded to IBM Cognos BI 10.1.1.

Related concepts:
“Supported environments” on page 10
IBM Cognos Lifecycle Manager supports several environments.

Ability to perform tasks using a command line interface
You can now perform tasks in Cognos Lifecycle Manager using scripts that you execute in a command prompt window. This feature allows you to schedule tasks using any third party scheduling tool.
Related tasks:
“Using a command line to perform Cognos Lifecycle Manager tasks” on page 39
You can perform prompt, validation, execution, and output comparison tasks by using a command line interface instead of the IBM Cognos Lifecycle Manager interface.

**Ability to add content to existing projects**
You can now regenerate the list of reports for an existing project, allowing you to add new content to the project.

Related tasks:
“Modifying the list of reports for a project” on page 23
After you generate the list of reports for a project, you can later modify the list by adding new content to the project.

**Support for IBM Cognos BI PowerPlay reports and Business Insight workspaces**
You can now use Cognos Lifecycle Manager to test IBM Cognos Business Intelligence PowerPlay® reports and Business Insight workspaces.

Related concepts:
“IBM Cognos Lifecycle Manager workflow” on page 8
IBM Cognos Lifecycle Manager connects to the source and target environments, validates and runs reports in both environments, and then compares them. The results of the comparison are presented in a dashboard.

**Project configuration option to show total number of reports in packages**
When configuring a project, an option is now available to show the total number of reports associated to a package in your IBM Cognos Business Intelligence environment.

This option is useful when testing reports in the dynamic query mode. If the number of reports brought into a project when you generate the list of reports is not the same as the total number of reports associated to the package in your environment, the dynamic query mode should not be enabled in the IBM Cognos BI environment when testing is complete.

Related tasks:
“Configuring a Cognos Lifecycle Manager project” on page 17
After you create a project, you must configure it to work with your IBM Cognos environment.

---

**Changed features in version 10.1.1**
Listed below are changes to features since the last release. Links to directly-related topics are included.

**Date-time values when comparing reports**
Date-time values in reports are now ignored when performing an output comparison. Different report execution times are not registered as differences during the comparison. **
As a result, you no longer need to modify the warpproperties.xml.sample file in ReportNet environments (and then saving it as warpproperties.xml) nor the rsvpproperties.xml.sample file in IBM Cognos Business Intelligence environments (and then saving it as rsvpproperties.xml). In previous releases, this was required to specify the same date-time value to appear in source and target reports.

Related tasks:

“Comparing output in Cognos Lifecycle Manager” on page 37

Compare the output between source and target reports in a validation project or between different runs in a benchmark project to check for differences in data and layout.

### Deprecated features in version 10.1.1

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 when applicable.

**Support for ReportNet as a source environment**

Support for ReportNet as a source environment will be deprecated in future releases. IBM Cognos Lifecycle Manager 10.1.0 is the last version of Cognos Lifecycle Manager that supports ReportNet as a source environment.

Related concepts:

“Supported environments” on page 10

IBM Cognos Lifecycle Manager supports several environments.

### New features in version 10.1.0

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

**Support for IBM Cognos Business Intelligence 10.1.0**

This version of IBM Cognos Lifecycle Manager supports reports that are upgraded to IBM Cognos BI 10.1.0.

Related concepts:

“Supported environments” on page 10

IBM Cognos Lifecycle Manager supports several environments.

**Benchmark projects**

You can now create benchmark projects to compare reports in a single environment.

You can use benchmark projects to compare

- Snapshots against a baseline
- Reports following the installation of an IBM Cognos refresh pack or any other upgrade, such as a new database version
- Reports run with the dynamic query mode disabled and enabled
Related tasks:
“Creating a Cognos Lifecycle Manager project” on page 17

You can create either a validation or benchmark project in IBM Cognos Lifecycle Manager.

Report comparison in different formats
In addition to the PDF, you can now compare reports in HTML, XML, CSV, and the following Microsoft Excel spreadsheet software formats: Excel 2007, Excel 2002, and Excel 2000 Single Sheet format.

Related tasks:
“Configuring a Cognos Lifecycle Manager project” on page 17
After you create a project, you must configure it to work with your IBM Cognos environment.

Report comparison in different languages
You can now run and compare reports in any language supported by the version of IBM Cognos Business Intelligence that you are using, including all the languages supported by IBM Cognos BI 10.1.0.

Related tasks:
“Configuring a Cognos Lifecycle Manager project” on page 17
After you create a project, you must configure it to work with your IBM Cognos environment.

Report validation in the dynamic query mode
You can validate reports that were run using the dynamic query mode. This query mode is available only in IBM Cognos Business Intelligence 10.1.0.

By using IBM Cognos Lifecycle Manager to test reports with the dynamic query mode enabled, you are not affecting the reports that users access in IBM Cognos Connection. Once the testing is complete and successful, you can specify that packages and associated reports in IBM Cognos BI use the dynamic query mode.

Related tasks:
“Configuring a Cognos Lifecycle Manager project” on page 17
After you create a project, you must configure it to work with your IBM Cognos environment.

“Enabling the dynamic query mode in IBM Cognos BI” on page 41
If you ran reports with the dynamic query mode enabled and you are satisfied with the comparison results, you can enable the dynamic query mode (DQM) for packages in IBM Cognos Business Intelligence from within IBM Cognos Lifecycle Manager.

Content import from an archived project into a new project
You can import the contents of an archived project into a new project. With this feature, you can reuse the settings, outputs, and results of an environment in a new project.
Related tasks:
“Importing an archived Cognos Lifecycle Manager project into a new project” on page 23
You can import the contents of an archived project into a new project.

Package view
In the IBM Cognos Lifecycle Manager interface, you can now view reports by the packages to which they are associated.

In IBM Cognos Connection, reports can be organized into many folders. The package view allows you to quickly see which reports belonging to a specific package still need to be validated, run, or compared.

Related concepts:
“Views in Cognos Lifecycle Manager” on page 13
You can view objects in IBM Cognos Lifecycle Manager in different ways.

Report execution times
You can now view the time it takes to run a report in each format and language specified for the report.

Report execution times are shown in the Task Summary page, allowing you to easily compare execution times between the source and target environments in a validation project and between Run1 and Run2 in a benchmark project.

Related tasks:
“Viewing validation and execution results” on page 34
In IBM Cognos Lifecycle Manager, you can view a summary of validation and execution results to see the status of your reports. The summary includes information such as the number of reports that were successfully validated and run, and the time it took to run each report.

Changed features in version 10.1.0
Listed below are changes to features since the last release. Links to directly-related topics are included.

New character limit for project and archive names
Project and archive names can now be up to 100 characters long. The previous maximum was 50 characters.

Output differences that are not due to an upgrade problem
The output compare tools may detect differences when comparing reports that are not due to an upgrade problem. For example, a change in how IBM Cognos Business Intelligence 10.1.0 does word wrapping may change the appearance of upgraded reports.

Related concepts:
“Output differences that are not upgrade problems” on page 45
When comparing reports, IBM Cognos Lifecycle Manager may report differences that are not the result of an upgrade problem.
Chapter 2. The upgrade process

Upgrading to IBM Cognos Business Intelligence is a process that you perform in stages.

The following diagram shows a general upgrade workflow and the stages in the upgrade process. The process includes the following stages:

• Creating an upgrade plan, which includes the following activities:
  – Reviewing resources, such as documentation and the Cognos Upgrade Central website (www.ibm.com/software/analytics/cognos/customercenter/upgrade.html)
  – Verifying the supported environments to ensure compatibility with your other software by going to the IBM Software Compatibility reports (www.ibm.com/support/docview.wss?uid=swg27037784). You may also want to check this page if you are thinking of upgrading your operating system.
  – Evaluating your existing system to determine what you want to move to your new version of the product.
  – Creating a detailed plan to implement your upgrade strategy.

• Creating a development or test system with the new version of the product.
• Using the information learned from the development or test system and applying it as you create your QA or production systems.
IBM Cognos Lifecycle Manager workflow

IBM Cognos Lifecycle Manager connects to the source and target environments, validates and runs reports in both environments, and then compares them. The results of the comparison are presented in a dashboard.
In a benchmark project, you are working in a single IBM Cognos environment. Consider Run 1 as the source environment and Run 2 as the target environment when working in a benchmark project.

Cognos Lifecycle Manager
- tests Public Folders content and the My Folders content of the user that is logged in IBM Cognos Business Intelligence
- tests report output only by comparing results from one release (the source) to another (the target)
- tests reports created in IBM Cognos Report Studio, IBM Cognos Query Studio, IBM Cognos Analysis Studio, or IBM Cognos PowerPlay. The studios are not used in the testing, only saved report specifications.
- Analysis Studio reports are tested only when upgrading from IBM Cognos BI 8.2 to 8.3, 8.4, 10.1.x, or 10.2.x.
- tests workspaces created in IBM Cognos Workspace.
   In the Cognos Lifecycle Manager user interface, a folder is created for each workspace. The folder contains all of the objects that make up the workspace, and objects that cannot be tested are set to Out of Scope.
- does not test any other aspects of the upgrade such as configuration, the studios, IBM Cognos Connection, skins, and customizations
- does not perform the actual product or report upgrade
  Upgrade is performed using the standard upgrade mechanisms documented for IBM Cognos BI.
- does not test embedded HTML items except when they are used to control prompts and parameters
  HTML items are not rendered in PDF output.
- does not test embedded JavaScript item
  JavaScript items are not rendered in PDF output.
- does not test interactive functionality such as drill up, drill down, drill through, HTML links to external content, and bookmarks
• runs as a single user application, so security by value and similar user
dependent items are not tested
• does not test report views, bursting, and performance or scalability differences
• does not compare prompt pages
• can enable dynamic query mode (DQM) for packages in the target Cognos BI
  environment

Related concepts:
[Chapter 4, “Cognos Lifecycle Manager projects,” on page 17]
With IBM Cognos Lifecycle Manager projects, you can organize tasks into smaller
pieces.

Supported environments
IBM Cognos Lifecycle Manager supports several environments.

Cognos Lifecycle Manager supports the following environments as the source
environment:
• ReportNet 1.1 MR3 or MR4
• IBM Cognos 8 8.2, 8.3, 8.4
• IBM Cognos Business Intelligence 10.1.x, 10.2.x

Cognos Lifecycle Manager supports the following environments as the target
environment:
• IBM Cognos 8 8.2, 8.3, 8.4
• IBM Cognos Business Intelligence 10.1.x, 10.2.x
Chapter 3. Installation and configuration of Cognos Lifecycle Manager

IBM Cognos Lifecycle Manager is a standalone single-user application that you can install on any computer. It does not need to be installed on the computer where ReportNet or IBM Cognos Business Intelligence is installed.

Installing and starting Cognos Lifecycle Manager

The installation wizard leads you through the process of installing IBM Cognos Lifecycle Manager on your computer.

Before you begin

Note: Because Cognos Lifecycle Manager is a single-user application, there should be only one web browser session connected to the Cognos Lifecycle Manager server at a time. Multiple browser sessions can lead to a loss of data.

Before you install Cognos Lifecycle Manager, install the latest IBM Cognos Business Intelligence service pack or updater kit in your source (if applicable) and target environments.

You can obtain updater kits or service packs at the Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter).

Cognos Lifecycle Manager has the following system requirements.

Table 1. IBM Cognos Lifecycle Manager system requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Microsoft Windows</td>
</tr>
<tr>
<td>RAM</td>
<td>Minimum: 1 GB</td>
</tr>
<tr>
<td>Disk space</td>
<td>A minimum of 216 MB of free space is required to install the software.</td>
</tr>
<tr>
<td>Java™ Runtime Environment (JRE)</td>
<td>An IBM JRE is installed automatically with Cognos Lifecycle Manager.</td>
</tr>
<tr>
<td>Web browser</td>
<td>Cognos Lifecycle Manager supports the same browsers as IBM Cognos BI.</td>
</tr>
<tr>
<td>Other</td>
<td>Adobe Flash Player 9.0 or higher is required to view Flash-based elements.</td>
</tr>
</tbody>
</table>

Procedure

1. From the win32 directory where you extracted the downloaded installation package, double-click the isetup.exe file.
2. Follow the directions in the installation wizard to copy the required files to your computer.
3. Click Finish.
4. From the Microsoft Windows Start menu, click IBM Cognos Lifecycle Manager Startup.

A command window displays and Cognos Lifecycle Manager is initialized.
5. From the Microsoft Windows Start menu, click **IBM Cognos Lifecycle Manager URI**.

    **Tip:** Alternatively, you can type the following web address in your browser: http://<computer name>:4797/LifecycleManager

**Results**

If Cognos Lifecycle Manager does not start, you might need to change the default startup or shutdown port.

**Related tasks:**

*“Fixing problems with starting Cognos Lifecycle Manager” on page 44*

When you try to start IBM Cognos Lifecycle Manager, an error message displays.

---

**Preparation of your IBM Cognos environments**

Before using IBM Cognos Lifecycle Manager, you must prepare your IBM Cognos environments. Preparing your environments involves creating data source signons and enabling the test case archive function.

**Creation of data source signons**

If the source and target environments are configured for single signon (SSO) for the reporting databases, your administrator must create a data source signon for all users that will be running IBM Cognos Lifecycle Manager.

For more information, see the ReportNet Administration and Security Guide or the IBM Cognos Business Intelligence Administration and Security Guide.

**Enabling the test case archive function**

The test case archive function in IBM Cognos Lifecycle Manager creates files containing diagnostic information that can help the Cognos Customer Center resolve issues. If the source environment is IBM Cognos Business Intelligence, you must modify two files before the test case archive function can work.

You must also modify these files in the target environment.

**Procedure**

1. Stop the IBM Cognos service.
2. On the computer where IBM Cognos BI is installed, navigate to the `install_location\configuration` directory.
3. Using a text editor, open the rsvpproperties.xml.sample file.
4. Locate the `RecordingsEnabled` property and then do the following.
    - This property exists as a comment in the file.
    - For the line `<!--<property>RecordingsEnabled</property>-->
      `, delete `<!--`.
    - For the line `<value type="long">0</value>-->
      `, change the value `0` to `2` and delete `-->`.
5. Save the file as rsvpproperties.xml.
6. Go to the `install_location\webapps\p2pd\WEB-INF\services` directory.
7. Open the reportservice.xml file.
8. Locate the `process_shutdown_timeout_ms` parameter and change the value to `1000`. 
9. Save the file and restart the IBM Cognos service.

Related tasks:
“Creating test case archives in Cognos Lifecycle Manager” on page 29

If you have a report that is invalid or cannot be run due to an upgrade related error in the target report, you can create a test case archive that contains diagnostic information to help the Cognos Customer Center investigate the issue.

The Cognos Lifecycle Manager Interface

To work effectively in IBM Cognos Lifecycle Manager, familiarize yourself with the interface.

Views in Cognos Lifecycle Manager

You can view objects in IBM Cognos Lifecycle Manager in different ways.

Error view

The Error View shows the packages and reports that were not successfully validated or run, organized by error message. Clicking an error message lists the items that produced the error. If an information icon appears in the Options column for the error, clicking the icon provides more information about the error. You can also click the search icon beside the message to search IBM Support web pages for additional information, such as IBM Cognos Proven Practices documents.

After errors are fixed, you can use this view to quickly locate, revalidate, and rerun objects that had problems.

Package view

The Package View shows reports organized by the packages that they were created with. Since reports can be organized in different folders in Cognos Connection, this view allows you to easily see the status of all reports associated to a particular package. The Package View also shows reports that are associated to a package but are not in the current project.

Note: This view is not available for projects created in previous versions of Cognos Lifecycle Manager.

List view

The List View shows all objects in a flat list.

Tree view

The Tree View shows all objects in the same structure as in IBM Cognos Connection.

Columns in Cognos Lifecycle Manager

The IBM Cognos Lifecycle Manager interface has columns that include priority flag, status, DQM enabled, Progress, Options, and Lock status.
**Priority flag column**

You set the priority flag for each object by clicking the **Priority** column for the object. The priority flag indicates only the importance of the object to users. It has no effect on any Cognos Lifecycle Manager functions.

**Status column**

The **Status** column indicates the current status of each object. You can manually change the status of an object by clicking its **Status** column and choosing a different value. For example, if you do not want to validate or run a particular object, change its status to **Out of Scope**.

The following list describes the possible status values for an object.

- **New**
  Indicates that the validation, execution, or output comparison operation has not been performed on the object.

- **In Progress**
  Indicates that the validation, execution, or output comparison operation has not been performed on all children of an object or has failed for one or more children of an object.

- **Partial Success**
  Indicates that the execution or output comparison operation was partially successful. For example, you compare reports in XML and Adobe PDF formats and the XML reports are identical but there are differences in the PDF output.

- **Completed**
  Indicates that the validation, execution, or output comparison operation has been completed on the object and all of its children.

- **Prompt Values Missing**
  Indicates that some reports in the package or folder require prompts, and no prompt values are defined.
  
  If a report has required prompts, you must provide a prompt value for each prompt before you can run the report.

- **Out of Scope**
  Informs Cognos Lifecycle Manager to ignore this object during the validation, execution, or output comparison operation.
  
  When this value is specified, you can apply it to all of the object's children by selecting the **Apply to all actions (target and source)** check box.

  **Tip:** When testing workspaces in IBM Cognos Workspace, Cognos Lifecycle Manager automatically sets objects that cannot be tested to **Out of Scope**.

- **In Scope**
  If an object's status is **Out of Scope**, puts the object back in scope.
When this value is specified, you can apply it to all of the object's children by selecting the **Apply to all actions (target and source)** check box.

**Valid**
Following validation, indicates that the object is valid.

**Invalid**
Following validation, indicates that the object is invalid.

**Fail**
Following validation, execution, or output compare, indicates that the object failed the operation.

**Succeeded**
Following execution, indicates that the object ran successfully.

**Differences**
Following output comparison, indicates that differences were found.

**No differences**
Following output comparison, indicates that no differences were found.

**Approved**
Following output comparison, indicates that differences that were found were approved.

**Rejected**
Following output comparison, indicates that differences that were detected were rejected.

**DQM enabled column**

The **DQM enabled** column indicates whether the dynamic query mode is enabled for each object.

**Progress column**

The **Progress column** indicates what operations were performed successfully. A bullet exists for each of the five operations that you can perform on a report. A green bullet indicates that an operation was performed successfully, and a yellow bullet indicates missing prompt values, a validation or execution operation was not successful, or differences were found in a comparison operation.

**Tip:** Pause the pointer over the bullets to see a tooltip indicating the status of each operation.

**Note column**

You can add notes to each object by clicking the **Note column** for the object.

**Options column**

The **Options column** shows what actions are available for an object. The actions that are available depend on the task that you are performing.
are validating reports, the available options include validate report and edit prompt values.

**Lock status column**

The lock status [lock icon] indicates whether an object is locked. An object becomes locked after the validation or execution operation is successful. If you want to revalidate or rerun an object, you must first unlock it.

When an object is locked, it is ignored when you validate or run reports. This saves you time when you need to revalidate or rerun a group of reports.

**Related tasks:**

“Configuring a Cognos Lifecycle Manager project” on page 17

After you create a project, you must configure it to work with your IBM Cognos environment.
Chapter 4. Cognos Lifecycle Manager projects

With IBM Cognos Lifecycle Manager projects, you can organize tasks into smaller pieces.

For example, you can organize the reports in a source system into multiple projects, and have different people work on each project. Or if you are upgrading more than one system, you can create a project for each system. For example, upgrading Server A to Server B can be one project and upgrading Server C to Server D can be another project.

Creating a Cognos Lifecycle Manager project

You can create either a validation or benchmark project in IBM Cognos Lifecycle Manager.

Create a validation project when you are upgrading to a new version of IBM Cognos Business Intelligence and you want to compare reports from the old (source) environment to reports from the new (target) environment.

Create a benchmark project to benchmark an environment and compare reports that are run at different times in that environment.

You can use benchmark projects for other purposes. For example, create a benchmark project to compare reports following the installation of a Cognos BI refresh pack or a database upgrade, or to compare reports run with the dynamic query mode disabled against reports run with the dynamic query mode enabled.

You can also import the contents of an archived project into a new project.

To create a project, click Projects > New Project.

A project opens and the name of the project displays in the top left corner. If you create a blank project or a project using the same configuration settings as an existing project, you are asked to configure the project and generate the report list. If you create a project based on an existing project, a copy of the existing project is opened. The original project remains unchanged.

Related tasks:

“Configuring a Cognos Lifecycle Manager project”

After you create a project, you must configure it to work with your IBM Cognos environment.

“Importing an archived Cognos Lifecycle Manager project into a new project” on page 23

You can import the contents of an archived project into a new project.

Configuring a Cognos Lifecycle Manager project

After you create a project, you must configure it to work with your IBM Cognos environment.
**Before you begin**

Before you configure a project, ensure that your IBM Cognos servers are running.

If your system gateways and dispatchers use the Secure Sockets Layer (SSL) protocol, you must configure IBM Cognos Lifecycle Manager for SSL before Cognos Lifecycle Manager can connect to the systems.

**Procedure**

1. Click **Settings > Configure**.
2. On the **Basic** tab, specify information about your source and, if applicable, the target environment.
   - If IBM Cognos Application Firewall (CAF) is running in the target environment, ensure that the value in the **Dispatcher URI** box for the target environment does not include `/ext`.
   - Click the **Version** list and click the IBM Cognos Business Intelligence version that you are working with.
   - To improve performance, in the **Max connections** box, type the maximum number of connections that Cognos Lifecycle Manager can use to connect to the source and target environments when performing tasks such as validating reports.

   **Tip:** For validation projects, the icons for the **Launch Source Portal** and **Launch Target Portal** links at the bottom left of Cognos Lifecycle Manager indicate whether the tool is connected to the source and target environments respectively. A red x in the icon indicates that Cognos Lifecycle Manager is not able to connect to the environment. For benchmark projects, the **Launch IBM Cognos Portal** link indicates whether Cognos Lifecycle Manager is connected to the environment that you want to benchmark.

3. On the **Security** tab, specify user information so that Cognos Lifecycle Manager can access your ReportNet or IBM Cognos BI environments.
   - Cognos Lifecycle Manager does not support single signon (SSO). You must specify authentication information manually when configuring a project even if your environment uses SSO for IBM Cognos source and target reports.
   - Cognos Lifecycle Manager uses security information specified on this tab to access the source and target environments regardless of who is using the tool. If you want users to run Cognos Lifecycle Manager using their own security information, do not enter information here. Users can use their own credentials when running a Cognos Lifecycle Manager session.
   - If you are using a custom Java authentication provider in the source or target environment, click the **Add parameters** link for the environment and add the required values.

   Security information specified here as well as report outputs, debug data, report specifications, and logs are stored in the `Cognos_Lifecycle_Manager_install_location\data` folder. This information is not secured. You must follow your organization’s security policies regarding the security of this information. For example, this can consist of folder encryption or folder user permissions that limit access to potentially sensitive data.

   **Tip:** You can find the namespace ID in IBM Cognos Configuration by accessing the property sheet of the Authentication namespace being used for Cognos Lifecycle Manager.
4. On the **Advanced** tab, specify the settings that you want. The following information provides explanation for some of the options.

- If you do not want to see a data-sensitive warning message every time you create a test case archive, clear the **Always show data sensitive warnings** check box.

- If you do not want to see Flash-based content in the user interface, clear the **Use Flash tools** check box. Flash-based content includes a task summary page with a different layout and additional summary information and a more interactive output compare tool.

- If you do not want to see folders that have no children in the Cognos Lifecycle Manager window, select the **Suppress folder(s) with no children** check box.

- In the Package view, if you do not want to see the total number of reports associated to each package in your IBM Cognos BI environment, clear the **Show total report count in package view** check box. When selected, this option shows the number of reports brought into the project when you generate the list of reports and the total number of reports in the package, separated by a slash (/). This information is useful when testing reports in the dynamic query mode. If the two numbers are different, do not enable the dynamic query mode in IBM Cognos BI for the package when testing is complete, because there are remaining reports that require testing.

  **Tip:** Clear this check box if you are not testing reports in dynamic query mode. This will improve performance when you generate the list of reports.

- When the **Validation level** field is set to **Warning**, any warning or error found during validation makes the report invalid. When the **Validation level** field is set to **Error**, only an error makes the report invalid.

  **Note:** A report that is invalid might still run and produce output for output comparison. For example, a ReportNet feature that is not supported in IBM Cognos BI might produce a warning during validation, but the report can still run.

- In the **Action Timeout (s)** box, specify the maximum amount of time in seconds that you want Cognos Lifecycle Manager to spend performing a task such as validating or running a report. If the maximum time is exceeded, Cognos Lifecycle Manager moves to the next report.

- In the **Wait time (s)** box, specify the maximum amount of time in seconds that you want Cognos Lifecycle Manager to wait after shutting down or starting the source or target system’s report service. For systems running IBM Cognos BI, the report service must be shut down and started several times when Cognos Lifecycle Manager creates a test case archive.

  **Tip:** You may need to increase this value when Lifecycle Manager is unable to complete creating a test case archive.

- To improve performance when comparing output of large reports, in the **Compare options** section, specify the number of pages at the beginning and at the end of reports that you want Cognos Lifecycle Manager to compare.
For example, if you specify 10 in the **Beginning pages (Text)** and **End pages (Text)** boxes, Cognos Lifecycle Manager will compare only the first and last 10 pages of text output, such as CSV.

**Note:** Doing a full comparison of large reports can impact the performance of your ReportNet and IBM Cognos BI servers as well as Cognos Lifecycle Manager.

5. **On the Preferences** tab, specify the following information.

**Tip:** You can also specify this information at the report level. To do this, click a report to access its properties and then click the **Preferences** tab.

- In the **Format Options** section, select the formats you want to run and compare reports in.
  
  If you want to apply your selection to all children objects, click **Yes** for the option **Override format changes to children**. This saves you time when children objects are set to run in different formats.
  
  Click the **Default Format** list and specify which report output execution time you want to see in the Task Summary page.

- In the **Dynamic Query mode Options** section, choose whether to enable the dynamic query mode (DQM) when running reports in the source and target environments in a validation project or in each run in a benchmark project. The option you select is applied to all packages in the project. Note that you can enable the dynamic query mode only for IBM Cognos BI 10.1.0 and higher environments.
  
  If you choose **Default**, Cognos Lifecycle Manager uses the setting that was specified for each package.
  
  If you want to apply your selection to all children objects, click **Yes** for the option **Override Dynamic Query mode changes to children**. This saves you time when children objects are set to run in a different query mode.

  **Note:** If you run reports against a data source that is not supported by the dynamic query mode, an error occurs. For more information about data sources supported by the dynamic query mode, see the *IBM Cognos BI Dynamic Query Guide*.

- In the **Language Options** section, select the languages that you want to run and compare reports for.
  
  If you want to apply your selection to all children objects, click **Yes** for the option **Override Language changes to children**. This saves you time when children objects are set to run in different languages.
  
  Click the **Default Language** list and specify which report language execution time you want to see in the Task Summary page.
Related concepts:

“Columns in Cognos Lifecycle Manager” on page 13
The IBM Cognos Lifecycle Manager interface has columns that include priority flag, status, DQM enabled, Progress, Options, and Lock status.

Related tasks:

“Creating a Cognos Lifecycle Manager project” on page 17
You can create either a validation or benchmark project in IBM Cognos Lifecycle Manager.

“Generating the list of reports for a Cognos Lifecycle Manager project” on page 22
When you create a project, you must select the list of reports that you want IBM Cognos Lifecycle Manager to work with. You need to generate the list of reports only once for your source environment.

“Enabling the dynamic query mode in IBM Cognos BI” on page 41
If you ran reports with the dynamic query mode enabled and you are satisfied with the comparison results, you can enable the dynamic query mode (DQM) for packages in IBM Cognos Business Intelligence from within IBM Cognos Lifecycle Manager.

“Creating test case archives in Cognos Lifecycle Manager” on page 29
If you have a report that is invalid or cannot be run due to an upgrade related error in the target report, you can create a test case archive that contains diagnostic information to help the Cognos Customer Center investigate the issue.

“Comparing output in Cognos Lifecycle Manager” on page 37
Compare the output between source and target reports in a validation project or between different runs in a benchmark project to check for differences in data and layout.

Configuring Cognos Lifecycle Manager for SSL
If the source and target system gateways and dispatchers use the Secure Sockets Layer (SSL) protocol, you must configure IBM Cognos Lifecycle Manager for SSL before Cognos Lifecycle Manager can connect to the systems.

To configure Cognos Lifecycle Manager for SSL, import the server certificates of the Web server and application server into the trust store of the JRE that is used by Cognos Lifecycle Manager.

With this change, Cognos Lifecycle Manager will accept all SSL Certificates as valid and be able to connect to ReportNet and IBM Cognos Business Intelligence gateways and dispatchers that are running SSL. However, for a more secure environment, your administrator might want to import the required SSL certificates from the gateway and dispatcher of all source and target systems that will be configured into the Cognos Lifecycle Manager JRE. Using this approach, your administrator can ensure that only valid certificates are used.

Specifying credentials for Cognos Lifecycle Manager
If security settings were not specified when you configured a project, you must specify credentials for your IBM Cognos Lifecycle Manager session. Cognos Lifecycle Manager prompts you to specify credentials when you perform a task that requires connecting to the source or target environment.

Procedure
1. Click Settings > Credentials and then click one of the following options:
   • In a benchmark project, click Cognos.
• In a validation project, to specify credentials for the source environment, click Source.
• In a validation project, to specify credentials for the target environment, click Target.

2. In the Credentials window, type your user name, password, and namespace ID.

3. If you are using a custom Java authentication provider in your environment, click the Add parameters link and add the required values.

4. If you want to use the same credentials for the source and target environments in a validation project, select the Use these credentials for source and target check box.

5. If you want to use the same credentials for the entire Cognos Lifecycle Manager session, select the Save and share through configuration file check box.

After you have generated the report list, a section named General information is created on the Basic tab of the Configure window. When you click Add contents, you will see the content that you selected for the project.
Related tasks:

“Specifying credentials for Cognos Lifecycle Manager” on page 21

If security settings were not specified when you configured a project, you must specify credentials for your IBM Cognos Lifecycle Manager session. Cognos Lifecycle Manager prompts you to specify credentials when you perform a task that requires connecting to the source or target environment.

Modifying the list of reports for a project

After you generate the list of reports for a project, you can later modify the list by adding new content to the project.

Tip: If you performed a report comparison between Run1 and Run2 in a benchmark project and you want to preserve the results, archive the project before adding new content.

Procedure

1. Click Settings > Configure.
2. In the General information section, click Add contents.
3. Select the additional content that you want to include in the report list.

Archiving a Cognos Lifecycle Manager project

Archive a project to preserve changes that you made. For example, if you specified prompt values in reports that have required prompts, archiving the project ensures that you do not have to reenter those values.

Procedure

1. Click Projects > Create Archive.
2. If you do not want to preserve the original project when archiving it, clear the Preserve Existing Project check box.

Results

The project is archived and you can no longer modify it. However, you can create a copy of an archived project when creating a new project.

Importing an archived Cognos Lifecycle Manager project into a new project

You can import the contents of an archived project into a new project.

Importing content from an archived project allows you to reuse configuration settings, report outputs, and validation and execution results.

Procedure

1. Create a new project.
2. Click Configure.
3. On the Basic tab, in the Import Content section, perform the following steps:
   • Click the Project list and select the archived project that you want to import content from.
   • Click the Instance list and choose to import either the source or the target environment content.
If you are importing content from an archived benchmark project, Run1 is considered the source environment and Run2 is considered the target environment.

**Related tasks:**

"Creating a Cognos Lifecycle Manager project" on page 17

You can create either a validation or benchmark project in IBM Cognos Lifecycle Manager.
Chapter 5. Report validation and execution in Cognos Lifecycle Manager

Before IBM Cognos Lifecycle Manager can compare reports in a validation or benchmark project, the reports must be validated and run.

Prompt values in Cognos Lifecycle Manager

If your reports have required prompts, you must provide prompt values before IBM Cognos Lifecycle Manager can run the reports. Prompt values are also required before you can validate your target reports.

If prompt values were saved in IBM Cognos Connection, they are automatically imported when the list of reports from your source environment is generated. In some cases, Cognos Lifecycle Manager can automatically generate prompt values. In other cases, you must manually add prompt values.

You have to add prompt values to only the source or target reports. Cognos Lifecycle Manager will add the prompt values to the other reports.

Automatic prompt value generation

Cognos Lifecycle Manager generates prompt values using the target reports. The following process describes how prompt values are generated:

• If default prompt values are defined in the target report, they are used.
• The query referenced by the prompt control is run, and the first value that is returned for the data item specified in the Display Value property of the prompt is used.
• The query referenced by the prompt control is run, and the first value that is returned for the model query item or the data item specified in the Use Value property of the prompt is used.

For multiple value prompts, only the first five values that are returned when a query is run are used.

Cognos Lifecycle Manager is unable to generate prompt values if the query item referenced by a prompt is a complex expression such as QueryItem1=extract(year, [DateTime]). Such expressions can include more than one query item, and Cognos Lifecycle Manager can only run simple queries against a database field to retrieve a value. In such situations, you must manually add prompt values or save values in IBM Cognos Connection or in the report prior to generating the list of reports from your source environment.

Manually adding prompt values

To manually add prompt values, run the target report in Cognos Lifecycle Manager and then choose the values that you want. Because Cognos Lifecycle Manager does not cache values, there are never any preselected values.
Automatically adding prompt values to reports

With IBM Cognos Lifecycle Manager you can automatically add prompt values to reports.

Procedure

1. Select the check box located to the far right of reports that have the status Prompt Values Missing.
2. Click the drop-down menu at the bottom of the Cognos Lifecycle Manager window and click Automatic Prompt Values Generation.
3. Click Go.

Results

Prompt values are added to the selected reports.

Tip: If you do not want to use the values that Cognos Lifecycle Manager automatically adds, you can manually replace them.

Related tasks:

“Using a command line to perform Cognos Lifecycle Manager tasks” on page 39

You can perform prompt, validation, execution, and output comparison tasks by using a command line interface instead of the IBM Cognos Lifecycle Manager interface.

Manually adding prompt values to reports

You can manually add prompt values in reports as well as clear existing values.

Procedure

1. Navigate to the report that you want to add a prompt value for.
2. Under the Options column, click the view properties icon.
3. Click the Prompt Values tab.
4. To remove existing prompt values, click Clear All Prompt Values.
6. Choose the values that you want, and click Finish.

Validating models and reports in Cognos Lifecycle Manager

Validate your models and reports to determine whether the reports can be run successfully.

When validating reports, IBM Cognos Lifecycle Manager verifies whether report specifications are syntactically correct.

Before you begin

If some of your target reports contain required prompts, you must first add prompt values to these reports.

Procedure

1. If you are working in a validation project, in the Tasks pane, click Validate in Source or Validate in Target.
2. If you are working in a benchmark project, in the **Tasks** pane, click **Validate in Run1** or **Validate in Run2**.

   **Validate in Run2** displays only when you have set the baseline for a benchmark project.

3. If you want to validate a specific object, in the work area, click the validate icon beside the object that you want to validate.

   You might need to navigate to the object first. For example, to validate a specific report, you might need to open the folder that the report is located in.

   If you validate the folder, Cognos Lifecycle Manager validates all reports contained in the folder.

4. If you want to validate a group of objects, perform the following steps:
   - Select the check box to the far right of each object.
     
     To select all check boxes, select the check box located in the column bar. If you do not want to validate an object within the group, change its status to **Out of Scope**.
   - Ensure that **Validate models/reports** displays in the list at the bottom of the Cognos Lifecycle Manager window.
   - Click **Go**.

**Results**

The **Status** column indicates whether an object is valid. If an object is invalid, click the object's view properties icon to view validation warnings and errors. You can use this information to fix the object. In addition, you can click the search icon to the right of each validation message to view articles and documents on IBM Support web pages written for the message. If there are no problems with the object and the object is invalid because of an issue in IBM Cognos Business Intelligence, you can create a test case archive to help the Cognos Customer Center resolve the issue.

**Note:** A report that is invalid might still run and produce output for output comparison. For example, a ReportNet feature that is not supported in IBM Cognos BI might produce a warning during validation, but the report can still run.

**Related tasks:**

- [“Setting the master for benchmark projects in Cognos Lifecycle Manager” on page 29](#)

  After you have validated models and reports and you have run reports for Run1 of a benchmark project, set the run as the master for the project to create a new run for comparison purposes.

- [“Using a command line to perform Cognos Lifecycle Manager tasks” on page 39](#)

  You can perform prompt, validation, execution, and output comparison tasks by using a command line interface instead of the IBM Cognos Lifecycle Manager interface.

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**Running reports in Cognos Lifecycle Manager**

Run the reports in your source and target environments so that IBM Cognos Lifecycle Manager can compare them. When running reports, Cognos Lifecycle Manager verifies whether report specifications are semantically correct.
Before you begin

If some of your reports contain required prompts, you must first add prompt values to these reports.

Procedure

1. If you are working in a validation project, in the Tasks pane, click Run in Source or Run in Target.
2. If you are working in a benchmark project, in the Benchmark Tasks pane, click Run in Run1 or Run in Run2.
   Run in Run2 displays only when you have set the baseline for a benchmark project.
3. If you want to run a specific report, in the work area, click the run icon beside the report that you want to run.
   You might need to navigate to the report first. For example, you might need to open the folder that the report is located in. If you run the folder, Cognos Lifecycle Manager runs all reports contained in the folder.
   If you configured the project to override format and language choices for children objects, you can choose to run a report in different formats or languages. Click the report to view its properties and, on the Preferences tab, select the formats and languages that you want.
4. If you want to run a group of reports, perform the following steps:
   • Select the check box to the far right of each report.
     To select all check boxes, select the check box located in the column bar. If you do not want to run a report within the group, change its status to Out of Scope.
   • Ensure that Run reports displays in the list at the bottom of the Cognos Lifecycle Manager window.
   • Click Go.

Results

The Status column indicates whether a report ran successfully. If a report did not run successfully, click the view properties icon for the report to view the execution results. You can use this information to determine why the report did not run successfully. If there are no problems with the report and the report did not run successfully because of an issue in IBM Cognos Business Intelligence, you can create a test case archive to help the Cognos Customer Center resolve the issue.
Related tasks:

“Setting the master for benchmark projects in Cognos Lifecycle Manager”
After you have validated models and reports and you have run reports for Run1 of a benchmark project, set the run as the master for the project to create a new run for comparison purposes.

“Using a command line to perform Cognos Lifecycle Manager tasks” on page 39
You can perform prompt, validation, execution, and output comparison tasks by using a command line interface instead of the IBM Cognos Lifecycle Manager interface.

Setting the master for benchmark projects in Cognos Lifecycle Manager

After you have validated models and reports and you have run reports for Run1 of a benchmark project, set the run as the master for the project to create a new run for comparison purposes.

The validation and execution status of all models and reports must be marked Completed before a run can be set as the master.

Procedure

Click Master > Run1.

Results

Run1 is set as the master and Run2 is created.

After validating and running models and reports for Run2, you can make Run2 the master instead of Run1.

Related tasks:

“Validating models and reports in Cognos Lifecycle Manager” on page 26
Validate your models and reports to determine whether the reports can be run successfully.

“Running reports in Cognos Lifecycle Manager” on page 27
Run the reports in your source and target environments so that IBM Cognos Lifecycle Manager can compare them. When running reports, Cognos Lifecycle Manager verifies whether report specifications are semantically correct.

Creating test case archives in Cognos Lifecycle Manager

If you have a report that is invalid or cannot be run due to an upgrade related error in the target report, you can create a test case archive that contains diagnostic information to help the Cognos Customer Center investigate the issue.

By default, PDF output of the report is included in the archive. You can include only English PDF output in test case archives. You can configure IBM Cognos Lifecycle Manager to exclude PDF output when creating test case archives.

If you have a model that is invalid, you can save the source and target model specifications and provide them to the Cognos Customer Center.
Before you begin

Before you can create a test case, you must enable the test case archive function in the source and target environments.

Procedure

1. Navigate to the report that you want to create a test case archive for.
2. Click the report's view properties icon.[image]
3. In the Test Case Archive Info section, click Create Test Case Archive.
4. If the Sensitive Data Warning window displays, click OK to continue.
5. Click Download Archive and save the zip file that is generated.

Results

If the test case archive was fully completed, the message Test Case Archive is Complete displays. The message Test Case Archive is Incomplete displays if the test case was only partially completed. You can click Details to see what was not completed. You can then troubleshoot the problem and regenerate the archive.

Send the test case archive to the Cognos Customer Center for analysis. In addition, you can use the archive to extract additional information from target reports.

Related concepts:

- “Incomplete test case archives” on page 45
- When trying to create a test case archive, IBM Cognos Lifecycle Manager creates only a partial test case archive.

Related tasks:

- “Enabling the test case archive function” on page 12
- The test case archive function in IBM Cognos Lifecycle Manager creates files containing diagnostic information that can help the Cognos Customer Center resolve issues. If the source environment is IBM Cognos Business Intelligence, you must modify two files before the test case archive function can work.
- “Configuring a Cognos Lifecycle Manager project” on page 17
- After you create a project, you must configure it to work with your IBM Cognos environment.
- “Saving model specifications in Cognos Lifecycle Manager” on page 31
- If you have an invalid model that fails validation after upgrade, you can save the model specification and provide it to the Cognos Customer Center for investigation and analysis.
- “Extracting information from target reports” on page 32
- In addition to creating test case archives in IBM Cognos Lifecycle Manager, you can extract additional information from target reports to help the Cognos Customer Center fix problems and then test the fixes.
- “Comparing output in Cognos Lifecycle Manager” on page 37
- Compare the output between source and target reports in a validation project or between different runs in a benchmark project to check for differences in data and layout.

Test case archive contents

In an IBM Cognos Lifecycle Manager validation project, the contents of a test case archive are organized into two files at the root level and two folders, source and target.
The source folder contains all information generated from the source report. The target folder contains all information generated from the target report.

In a benchmark project, the contents of a test case archive are identical to that of a validation project, except that only one folder is created, and it is named Run 2.

**Files at the root level**

- README.txt
  This file describes the contents of the source and target folders.
- reportInfo.xml
  This file contains Cognos Lifecycle Manager diagnostic information about the report. Cognos Customer Center uses this information to troubleshoot problems.

**Source and target folders**

The source and target folders contain the following files. Some files are located in subfolders.

- **pdfOutput.pdf**
  PDF output of the report.
- **defects.xml**
  The defects returned during validation.
- **validationSql.xml**
  The SQL generated during validation.
- **reportSpec.xml**
  The report specification for the report.
- **modelSpec.xml**
  The model used by the report.
- **c10ServerArchive.zip**
  Zip file containing various files generated during the execution or validation of the report. In the source folder, the zip file is produced only for IBM Cognos BI source reports. The files are located in various subfolders and include the following content:
  - runtime models
  - all standard IBM Cognos Business Intelligence log files as well as log files for various IBM Cognos BI components and, where applicable, SAP BW, DB2®, and Microsoft Analysis Services (MSAS) data sources
  - log files for the action (execution or validation) performed

  **Tip:** If the report was run in the dynamic query mode, log files specific to the dynamic query mode are included.
  - versions of the installed IBM Cognos BI components

---

**Saving model specifications in Cognos Lifecycle Manager**

If you have an invalid model that fails validation after upgrade, you can save the model specification and provide it to the Cognos Customer Center for investigation and analysis.
Procedure
1. Click the model to view its properties page.
2. To save the model specification, do one of the following:
   - In a validation project, to save the source model specification, click Download Source Model Spec.
   - In a validation project, to save the target model specification, click Download Target Model Spec.
   - In a benchmark project, click Download Model Spec.

Related tasks:
"Creating test case archives in Cognos Lifecycle Manager" on page 29

If you have a report that is invalid or cannot be run due to an upgrade related error in the target report, you can create a test case archive that contains diagnostic information to help the Cognos Customer Center investigate the issue.

Extracting information from target reports
In addition to creating test case archives in IBM Cognos Lifecycle Manager, you can extract additional information from target reports to help the Cognos Customer Center fix problems and then test the fixes.

The extraction process extracts from the database all information that is relevant to a report, including the data in the report. A database dump file is created that the Cognos Customer Center can then use to create a mini database to run the report. Creating a mini database lets you share only the information that is relevant to a report, and it is quicker than recreating your entire database.

Before you begin
Before you can extract all information from a report, you must create a test case archive for the report.

Procedure
1. Open the archive.
2. Extract the uda_trace.log file to the c10_location\bin directory.
   - The log file is located in a zip file within the test case archive. The zip file is named c10ServerPackage.zip.
   - You can also generate the uda_trace.log file for ReportNet reports.
3. Open a command window.
4. Navigate to the c10_location\bin directory.
5. Type the following command and press the Enter key.
   readudatrace uda_trace.log name of output file name of script file used to generate final output.xml database password
   For example, readudatrace uda_trace.log output.log extract.xml GOSALES
6. Type the following command and press the Enter key.
   udaxtest.exe -o name of script file.xml

Results
The final output file with a name such as extract.out.xml is generated, which the Cognos Customer Center can use to load data into a database.
Data trace log files for ReportNet reports

If you have ReportNet reports that are invalid or cannot run, you can generate a data trace log file for the reports to help the Cognos Customer Center troubleshoot the problem. The steps to generate the data trace log file depends on the operating system that you are using.

If ReportNet was installed in a distributed environment, you must perform one of the following tasks on the Report Server computer.

Related tasks:
“Extracting information from target reports” on page 32
In addition to creating test case archives in IBM Cognos Lifecycle Manager, you can extract additional information from target reports to help the Cognos Customer Center fix problems and then test the fixes.

Generating data trace log files on Windows

If you are running ReportNet on the Microsoft Windows operating system, follow these steps to generate a data trace log file.

Procedure

1. On the desktop, right-click My Computer and click Properties.
2. On the Advanced tab, click Environment Variables.
4. In the Variable name box, type TRACE_FILE
5. In the Variable value box, type crn_location\logs\uda.log
6. Click OK.
7. Repeat steps 3 to 6 to create another variable with the name TRACE_LAYER_DMD_SQLAPIRW and with the value 0x002.
8. Stop and restart the ReportNet service.
9. Run the reports for which you want to generate a data trace log file.
   The file uda.log is generated in the crn_location\logs directory. Send this file along with the corresponding test case archive to IBM Cognos Support.
10. Stop the ReportNet service.
11. Delete the two environment variables and restart the ReportNet service.
    If you do not delete the environment variables after you are done, ReportNet performance may be reduced.
Generating data trace log files on UNIX

If you are running ReportNet on the UNIX operating system, follow these steps to generate a data trace log file.

Procedure

1. Log in as the user that runs ReportNet.
2. Create the following two environment variables for the user.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Variable value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRACE_FILE</td>
<td><code>crn_location\uda.log</code></td>
</tr>
<tr>
<td>TRACE_LAYER_DMD_DQLAPIRW</td>
<td><code>0x002</code></td>
</tr>
</tbody>
</table>

You can create the two variables by typing the following command in your shell prompt:

```
export TRACE_FILE="crn_location\uda.log"
TRACE_LAYER_DMD_DQLAPIRW=0x002;
```

3. Run the reports for which you want to generate a data trace log file.

   The file `uda.log` is generated in the `crn_location\logs` directory. Send this file along with the corresponding test case archive files to the Cognos Customer Center.

5. Delete the two environment variables and restart the ReportNet service.

   You can delete the two variables by typing the following command in your shell prompt:

   ```
   -unset TRACE_FILE TRACE_LAYER_DMD_SQLAPIRW
   ```

   If you do not delete the environment variables after you are done, ReportNet performance may be reduced.

Viewing validation and execution results

In IBM Cognos Lifecycle Manager, you can view a summary of validation and execution results to see the status of your reports. The summary includes information such as the number of reports that were successfully validated and run, and the time it took to run each report.

The report execution time that displays in the summary depends on the default format and language that you selected when you configured the project. Viewing report execution times in the summary results page allows you to quickly compare the execution times of source and target reports. For example, if you ran one set of reports using the dynamic query mode and those reports took less time to run than the other set, the faster execution times can help you decide to enable the dynamic query mode for the upgraded packages in IBM Cognos Connection.

Two different views of the results are available: a Flash-based enhanced summary and an HTML version. By default, IBM Cognos Lifecycle Manager is configured to allow Flash-based content, allowing you to see an enhanced results summary. Clicking an item in the Task Summary section shows more detailed information for the item.
Procedure

In the left pane, under Dashboards, click Tasks Summary.

Results

In either view, you can export the task summary page. In the Flash-based view, the exported file is in .swf format which you can open in a Web browser with Adobe Flash Player 9.0 or higher. You can also print the task summary page. In the non-Flash view, the resulting HTML file is specific to each tab in the task summary page.

To view the Flash file, you might need to allow blocked content.

Related tasks:

“Configuring a Cognos Lifecycle Manager project” on page 17
After you create a project, you must configure it to work with your IBM Cognos environment.

“Enabling the dynamic query mode in IBM Cognos BI” on page 41
If you ran reports with the dynamic query mode enabled and you are satisfied with the comparison results, you can enable the dynamic query mode (DQM) for packages in IBM Cognos Business Intelligence from within IBM Cognos Lifecycle Manager.
Chapter 6. Report comparison in Cognos Lifecycle Manager

After you validate and run your reports, you can compare their output to check for differences. If differences are found, you can decide whether to accept them or reject them and have the Cognos Customer Center investigate.

Comparing output in Cognos Lifecycle Manager

Compare the output between source and target reports in a validation project or between different runs in a benchmark project to check for differences in data and layout.

Some differences might not be due to an upgrade problem.

Before you begin

Two output compare tools are available. By default, IBM Cognos Lifecycle Manager is configured to allow Flash-based content, allowing you to use the advanced output compare tool that has more interactive features.

Procedure

1. In the left pane, click Output Compare.
2. If you want to compare the output for a specific report, in the work area, click the compare source and target for this entry icon beside the report that you want.
   You might need to navigate to the report first. For example, you might need to open the folder that the report is located in. If you do a comparison on the folder, Cognos Lifecycle Manager will do a comparison on all reports contained in the folder.
3. If you want to compare a group of reports, perform the following steps:
   • Select the check box at the far right of each report.
   • To select all check boxes, select the check box located in the column bar. If you do not want to validate a report within the group, change its status to Out of Scope.
   • Ensure that Compare reports displays in the list at the bottom of the Cognos Lifecycle Manager window.
   • Click Go.
   After Cognos Lifecycle Manager completes the output comparison, the Status column indicates whether differences were detected.
4. Click the view properties icon for a report.
   The Status tab shows the results of the output comparison. The results you see depend on the output format and language options selected when you configured the project.
5. On the Status tab, click a report output.
6. If you are comparing PDF output, perform one of the following steps:
   • To compare the output using Adobe Acrobat, click Launch PDF Output Compare Tool.
• To compare the output using the Flash compare tool, click **Launch Flash Output Compare Tool**.

7. Review the layout for both reports.
   If you are using the Flash output compare tool, you can quickly see layout differences by clicking the single overlay view icon [ ] . You can then use the target transparency slider to adjust the gradient of the transparency on the target report, which is overlaid on the source report. This helps you detect subtle differences in the layout such as letterhead positioning and chart formatting.

8. To do a data comparison when comparing PDF output, click the Text view icon.
   Differences between the two reports are highlighted. Use the arrow buttons to navigate through the differences, and use the search function to quickly locate specific text.

   **Tip:** The comparison ignores the execution date/time of the source and target reports.

9. If you want to accept the changes detected, click **Approve**.
   The status for the report changes to Approved, and you are prompted to add a note to document your decision.

10. If you do not want to accept the changes detected, click **Reject**.
    The status for the report changes to Rejected, and you are prompted to add a note to document your decision.

    If you reject a comparison, in the **Test Case Archive** section, click the **Create Test Case Archive** link to create a test case archive so that the Cognos Customer Center can investigate the changes.

**Related concepts:**
”Output differences that are not upgrade problems” on page 45
When comparing reports, IBM Cognos Lifecycle Manager may report differences that are not the result of an upgrade problem.

**Related tasks:**
”Configuring a Cognos Lifecycle Manager project” on page 17
After you create a project, you must configure it to work with your IBM Cognos environment.

”Creating test case archives in Cognos Lifecycle Manager” on page 29
If you have a report that is invalid or cannot be run due to an upgrade related error in the target report, you can create a test case archive that contains diagnostic information to help the Cognos Customer Center investigate the issue.

”Using a command line to perform Cognos Lifecycle Manager tasks” on page 39
You can perform prompt, validation, execution, and output comparison tasks by using a command line interface instead of the IBM Cognos Lifecycle Manager interface.

**Viewing output comparison results in Cognos Lifecycle Manager**

You can view a summary of output comparison results to see the status of your reports.

Two different views of the results are available: a Flash-based enhanced summary and an HTML version. By default, IBM Cognos Lifecycle Manager is configured to
allow Flash-based content, allowing you to see an enhanced results summary.
Clicking an item in the Task Summary section shows more detailed information
for the item.

**Procedure**

In the left pane, under Dashboards, click Tasks Summary.

**Results**

In either view, you can export the task summary page. In the Flash-based view, the
exported file is in .swf format which you can open in a Web browser with Adobe
Flash Player 9.0 or higher. You can also print the task summary page. In the
non-Flash view, the resulting HTML file is specific to each tab in the task summary
page.

To view the Flash file, you might need to allow blocked content.

---

**Using a command line to perform Cognos Lifecycle Manager tasks**

You can perform prompt, validation, execution, and output comparison tasks by
using a command line interface instead of the IBM Cognos Lifecycle Manager
interface.

You can also create a batch file containing tasks that you want to perform. You can
then use a third party scheduling tool to run the batch file at a specific time.

You can perform the following tasks in a command line interface. For more
information, see the file ExecuteLCM.bat, which is located in the install_location\bin
folder.

**Note:** For all validation, execution, and comparison tasks, Cognos Lifecycle
Manager will first check for missing prompts. Prompts that are missing will be
generated.

```
all
   Performs all tasks (prompt capture, validation, execution, and compare) in
   a project.

sourceAutoprompt/run1Autoprompt
   Generates prompts for reports in the source environment (validation
   project) or in run1 (benchmark project).

targetAutoprompt/run2Autoprompt
   Generates prompts for reports in the target environment (validation
   project) or in run2 (benchmark project).

sourceValidate/run1Validate
   Validates reports in the source environment (validation project) or in run1
   (benchmark project).

targetValidate/run2Validate
   Validates reports in the target environment (validation project) or in run2
   (benchmark project).
```

**validate**
Validates all reports in a project.

**sourceRun/run1Run**

Runs reports in the source environment (validation project) or in run1 (benchmark project).

**targetRun/run2Run**

Runs reports in the target environment (validation project) or in run2 (benchmark project).

**run**

Runs all reports in a project. Generates missing prompts if required.

**compare**

Compares report outputs in a project.

### Before you begin

You must start Cognos Lifecycle Manager before you can perform tasks in a command window, and you can perform tasks only in a project that is configured and the list of reports already generated.

### Procedure

1. To run a batch file containing the tasks that you want to perform, type the following command:
   
   ExecuteLCM -file batch file name

2. To perform a single task, type the following command:
   
   ExecuteLCM -p project name-a action-s search path-h host:port

   In *action*, specify the task that you want to perform. If an argument contains blank spaces, enclose it in double quotation marks.

   **Tip:** If you do not specify the -h parameter, the default is *localhost:4797*.

### Results

A log file showing the results of the tasks performed is generated.
Related tasks:

“Automatically adding prompt values to reports” on page 26
With IBM Cognos Lifecycle Manager you can automatically add prompt values to reports.

“Validating models and reports in Cognos Lifecycle Manager” on page 26
Validate your models and reports to determine whether the reports can be run successfully.

“Running reports in Cognos Lifecycle Manager” on page 27
Run the reports in your source and target environments so that IBM Cognos Lifecycle Manager can compare them. When running reports, Cognos Lifecycle Manager verifies whether report specifications are semantically correct.

“Comparing output in Cognos Lifecycle Manager” on page 37
Compare the output between source and target reports in a validation project or between different runs in a benchmark project to check for differences in data and layout.

---

Enabling the dynamic query mode in IBM Cognos BI

If you ran reports with the dynamic query mode enabled and you are satisfied with the comparison results, you can enable the dynamic query mode (DQM) for packages in IBM Cognos Business Intelligence from within IBM Cognos Lifecycle Manager.

**Procedure**

1. Click the package view icon.
2. For each package that you want to enable the dynamic query mode for, in the **Options** column, click **DQM**.

**Results**

**DQM** is bolded in IBM Cognos Lifecycle Manager to indicate that the dynamic query mode was enabled for the package in IBM Cognos BI.
Appendix. Troubleshooting

Use this troubleshooting reference to help you solve specific problems you may encounter during or after installation of IBM Cognos Lifecycle Manager or when using Cognos Lifecycle Manager.

Problems are characterized by their symptoms. You can trace each symptom to one or more causes by using specific troubleshooting tools and techniques. After identifying each problem, you can fix them by implementing a series of actions.

When you are troubleshooting, log files can help you. Another valuable troubleshooting tool are IBM Technotes, which are available on the IBM support pages.

When you cannot resolve a problem, the final resource is your technical support representative. To analyze a problem, your technical support representative requires information about the situation and the symptoms that you are experiencing. To help isolate the problem, collect the necessary data before you contact your representative.

Log files

Log files can help you troubleshoot problems by recording the activities that occur when you work with a product.

Operations performed by IBM Cognos Lifecycle Manager are recorded in various log files for tracking purposes. For example, if you experienced problems installing Cognos Lifecycle Manager, consult the transfer log file to learn what activities the installation wizard performed while transferring files.

Installation log files

The installation wizard creates two log files in the install_location\instlog directory: the transfer log file and the transfer summary-error log file. The log file names include the product name, version, build number, and timestamp.

The transfer log file records the activities that the installation wizard performed while transferring files. The following is an example of the file name format:

tl-UPGRADEMANAGER-10.1.4704.2-20100505_1113.txt

The transfer summary-error log 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 following is an example of the file name format:

tl-UPGRADEMANAGER-10.1.4704.2-20100505_1113_summary_error.txt

Uninstall log file

The uninstallation log 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 Cognos Lifecycle Manager.

**Cognos Lifecycle Manager log file**

Any errors encountered when working in Cognos Lifecycle Manager are logged in `install_location\logs\upgradeManager.log`. The maximum size of the log file is 10 MB. The logging capacity is filled in the following order:

- Errors
- Warnings
- Information
- Debug messages

By default, the logging level is set to debug, the highest level of logging available. Maintain this logging level to capture all errors that may occur. If you want to make changes, the following files in the `install_location\webapps\WEB-INF\configuration` folder allow you to change the logging level:

- `log4j.um.server.error.xml`
- `log4j.um.server.warn.xml`
- `log4j.um.server.info.xml`
- `log4j.um.server.debug.xml`

To change the logging level, rename the appropriate file to `log4j.um.server.xml`. For example, if you want to set the logging level to warning, rename the `log4j.um.server.warn.xml` file.

---

**Fixing problems with starting Cognos Lifecycle Manager**

When you try to start IBM Cognos Lifecycle Manager, an error message displays.

The following error displays when the default startup port that Cognos Lifecycle Manager uses is not available. This error also displays when the default shutdown port is not available. In this case, the value that displays in the error message is 4799. To resolve the problem, specify a different startup or shutdown port.

```
StandardServer.await: create[4797]: java.net.BindException: Address already in use: JVM_Bind
java.net.BindException: Address already in use: JVM_Bind
```

**Procedure**

1. Using a text editor, open the `install_location\webapps\LifecycleManager\WEB-INF\server.xml` file.
2. To specify a different startup port, modify the following line:
   ```xml
   <Connector className="org.apache.coyote.tomcat4.CoyoteConnector" port="4797" minProcessors="5" maxProcessors="75" enableLookups="true" redirectPort="9443" acceptCount="100" debug="0" connectionTimeout="60000" useURIVisualizationHack="false" disableUploadTimeout="true"/>
   ```
3. To specify a different shutdown port, modify the following line:
   ```xml
   <Server port="4799" shutdown="SHUTDOWN" debug="0">
   ```
4. Save the file.
Related tasks:
“Installing and starting Cognos Lifecycle Manager” on page 11
The installation wizard leads you through the process of installing IBM Cognos Lifecycle Manager on your computer.

Problems with prompt values generated for dimensional data sources

When working with dimensional data sources, the prompt values generated when you run the automatic prompt generation function do not work when the report is run.

The automatic prompt generation function generates the actual prompt value instead of the full path value. For example, the function generates "Canada" instead of

[Automobile_C01].[Geography MSB01].[Geography MSB01].[Country or Region]->[MO].[[Geography]].[MSB01].[Continent].&[AMERICA].&[CANADA]]

The report requires the full path value in order to run.

To resolve the problem, manually add the prompt values to the report.

Incomplete test case archives

When trying to create a test case archive, IBM Cognos Lifecycle Manager creates only a partial test case archive.

To resolve the problem, check the following:
• Ensure that other users are not using the source and target systems.
  When using Cognos Lifecycle Manager, no other users should access the source and target systems.
• Ensure that Cognos Lifecycle Manager is properly configured.

After performing the above tests, recreate the test case archive.

You can also send the incomplete test case archive to the Cognos Customer Center for analysis.

Related tasks:
“Creating test case archives in Cognos Lifecycle Manager” on page 29
If you have a report that is invalid or cannot be run due to an upgrade related error in the target report, you can create a test case archive that contains diagnostic information to help the Cognos Customer Center investigate the issue.

Output differences that are not upgrade problems

When comparing reports, IBM Cognos Lifecycle Manager may report differences that are not the result of an upgrade problem.

Reports upgraded from ReportNet do not retain their 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. In IBM Cognos Report Studio, from the File menu, click Report Properties. Then click Report styles and select 1.x styles.

**Differences in PDF output when running upgraded reports**

When you run an upgraded report with PDF output, the report may have narrower columns, the data may wrap differently, and the font size may look smaller.

These changes are due to how PDFs are now rendered. In IBM Cognos Business Intelligence, the column width algorithms are now closer to the HTML standard, resulting in different word wrapping. While font sizes are not changed, the PDF fit-to-page feature may make it seem as if they changed. PDF output and HTML output are now more closely matched.

**Change in line breaking rules**

In IBM Cognos Business Intelligence 10.1.0, there is a change that affects how line breaking occurs in PDFs. Parentheses ( ) and curly brackets { } are now treated as breakable. This change is due to an upgrade made to International Components for Unicode (ICU) formatting.

As a result of this change, minor errors in cell height and weight in Excel output might occur, as Excel uses different word wrap algorithms. These errors would occur only with data that contains parentheses or curly brackets.

**Data differences when comparing reports**

When you compare a report in Cognos Lifecycle Manager, the compare tool might show differences in calculations in the report.

Differences in calculations might occur due to round-off errors, especially in values that have decimal places. Decimal round-off problems are not specific to IBM Cognos Business Intelligence. They can occur in any environment where rounding off occurs. To address such differences, manually inspect each report to ensure that the differences are not significant.

The design of reports, IBM Cognos Framework Manager models, and cubes can cause round-off errors. To minimize the effect, follow the guidelines about unexplained discrepancies in number calculations in the *IBM Cognos Business Intelligence Troubleshooting Guide*.

In addition, there are differences in how IBM Cognos BI 10.2.0 rounds off numbers compared to previous releases. IBM Cognos BI uses the default rounding mode known as half even. The following example shows how 8-digit double numbers are rounded to four decimal places.

<table>
<thead>
<tr>
<th>Input Value</th>
<th>Rounding in previous IBM Cognos BI releases</th>
<th>Rounding in IBM Cognos BI 10.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.326550</td>
<td>27.3266</td>
<td>27.3266</td>
</tr>
<tr>
<td>27.326650</td>
<td>27.3266</td>
<td>27.3266</td>
</tr>
</tbody>
</table>
Table 2. 8-digit double numbers rounded to 4 decimal places in IBM Cognos BI (continued)

<table>
<thead>
<tr>
<th>Input value</th>
<th>Rounding in previous IBM Cognos BI releases</th>
<th>Rounding in IBM Cognos BI 10.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.326651</td>
<td>27.3266</td>
<td>27.3267</td>
</tr>
<tr>
<td>27.326652</td>
<td>27.3266</td>
<td>27.3267</td>
</tr>
<tr>
<td>27.326653</td>
<td>27.3266</td>
<td>27.3267</td>
</tr>
<tr>
<td>27.326654</td>
<td>27.3267</td>
<td>27.3267</td>
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<tr>
<td>27.326655</td>
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<tr>
<td>27.326658</td>
<td>27.3267</td>
<td>27.3267</td>
</tr>
<tr>
<td>27.326659</td>
<td>27.3267</td>
<td>27.3267</td>
</tr>
</tbody>
</table>

The following list explains how the numbers are rounded off.

- For 27.326550, 0.000050 is rounded to 0.0001 due to the odd digit 0.0005.
- For 27.326650, 0.000050 is rounded to 0.0000 due to the even digit 0.0006.
- Half even rounding applies only to the exact half.
- 27.326651 to 27.326659 are rounded up.

**Out of memory errors when running large reports**

When IBM Cognos Lifecycle Manager runs a report that generates a large output, the report execution fails and an error message displays.

An OutOfMemoryError was encountered while performing this action.

A corresponding entry is also logged in the upgradeManager.log file.

To work around this issue, try one of the following:

- If the report uses prompts to filter the report output, use prompt values that will produce a smaller output.
- Increase the memory allocated to Cognos Lifecycle Manager.

**Related tasks:**

"java.lang.OutOfMemoryError message in Cognos Lifecycle Manager log file"

When working with a large number of reports, an error message may display in the IBM Cognos Lifecycle Manager log file.

**java.lang.OutOfMemoryError message in Cognos Lifecycle Manager log file**

When working with a large number of reports, an error message may display in the IBM Cognos Lifecycle Manager log file.

The error message that you see will be similar to the one below:

```
```
To resolve the problem, modify the startup-um.bat file to specify using a different memory configuration. The file contains a memory configuration for computers with 1 GB, 2 GB, and 3 GB of RAM.

If your computer has less than 1 GB of RAM, you can reduce the amount of memory that Cognos Lifecycle Manager uses by lowering the maximum number of connections that Cognos Lifecycle Manager can use to connect to the source and target environments when you configure a project. However, lowering this configuration setting reduces performance.

**Procedure**

1. If Cognos Lifecycle Manager is working, close it by doing the following:
   - Close the browser window in which Cognos Lifecycle Manager is running.
   - From the Start menu, click the program folder you specified during the installation, and click **IBM Cognos Lifecycle Manager Shutdown**.

2. Using a text editor, open `install_location/bin/startup-um.bat`.
   The file contains three lines for memory configuration. Each line is preceded by a comment in the form `rem "for machines with x GB RAM"`. By default, Cognos Lifecycle Manager uses the memory configuration for machines with 1 GB of RAM.

3. Add `rem` to the beginning of the memory configuration line for machines with 1 GB of RAM.

4. Depending on how much RAM your computer has, remove `rem` from the memory configuration line for machines with 2 GB of RAM or 3 GB of RAM.

**Related concepts:**

"Out of memory errors when running large reports" on page 47

When IBM Cognos Lifecycle Manager runs a report that generates a large output, the report execution fails and an error message displays.
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Index

A
action timeout
setting 18
adding
prompt values 25
archived projects
importing 23
archiving
projects 23
audience of document v
automatic prompt generation 25

B
benchmark projects 17
setting the master 29

C
c8ServerPackage.zip 32
changing
shutdown port 44
startup port 44
Cognos Business Insight
changed name 2
Cognos Lifecycle Manager
configuring 18
installing 11
new features in version 10.1.1 2
new features in version 10.2.0 1
new features in version 10.2.1 1
starting 11
supported environments 10
target environment URIs 18
unable to start 44
views 13
workflow 8
command line interface
performing tasks 40
compare options
number of pages to compare at the beginning 18
number of pages to compare at the end 18
comparing output 37
differences due to line breaking changes 46
differences in data 46
using command line interface 40
configuring Cognos Lifecycle Manager
action timeout 18
choosing query mode 18
compare options 18
excluding report output from test case archives 18
items per page 18
maximum number of connections 18
namespace ID 18
search path 23
security settings 18
showing data-sensitive warnings 18
showing out of scope entries 18
source environment URIs 18
target environment URIs 18
configuring Cognos Lifecycle Manager (continued)
test case archive options 18
use Flash tools 18
validation level 18
connections
specifying maximum Cognos Lifecycle Manager can use 18
creating
projects 17
test case archives 30
credentials
session 21
custom Java authentication provider 18, 21

data
differences when comparing reports 46
extracting from reports 32
viewing data comparison results 39
data source signons 12
data trace log file,
See uda_trace.log
data-sensitive warnings
showing 18
decimal round-off
differences between IBM Cognos BI 10.2.0 and previous releases 46
description of product v
dimensional data sources
generated prompt values do not work in report 45
dynamic query mode
enabling 18, 41

e
error view 13
excluding report output from test case archives 18
executing reports 28
using command line interface 40
execution results
viewing 35
extracting information from reports
for fixing problems 32

F
Flash tools 18

G
generating
list of reports 22

I
importing
archived project 23
incomplete test case archives 45

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installing
  Cognos Lifecycle Manager 11
items per page
  setting 18

J
java.lang.OutOfMemoryError 48

L
line breaking rules
  changes that affect output comparison 46
list view 13
lock status 16
log files
  Cognos Lifecycle Manager log file 44
description 43
  installation log file 43

M
master
  setting for benchmark projects 29
maximum number of connections 18
models
  save specifications 32
  validating 26
modifying
  list of reports 23

N
namespace ID 18
namespaces
  specifying 18
notes 15

O
OutOfMemoryError message 47
output
  comparing 37

P
package view 13
PDF output results
  viewing 39
preparing
  source environment 12
target environment 12
priority flag 14
Progress column 15
projects
  archiving 23
  benchmark 17
  creating 17
  importing 23
  validation 17
prompt values
  adding 25
generated values do not work when working with
  dimensional data sources 45
prompt values (continued)
  generating using command line interface 40
purpose of document v

R
ReportNet reports
  formatting changes when upgrading 45
generating uda_trace.log file 33
reports
  choosing query mode 18
  comparing output 37
  executing 28
  extracting information to fix problems 32
  validating 26
running large reports
  OutOfMemoryError 47
running upgraded reports
  PDF output looks different 46

S
search path 23
security
  setting for an Cognos Lifecycle Manager session 21
  security settings 18
  sensitive data warning window 30
session credentials
  specifying 21
showing out of scope entries 18
shutdown port
  changing 44
source environment
  preparing 12
  supported 10
URIs 18
SSO 12
starting
  Cognos Lifecycle Manager 11
  manual prompt capture 25
startup port
  changing 44
startup-um.bat 48
status
  approved 14
  completed 14
  differences 14
  fail 14
  in progress 14
  in scope 14
  invalid 14
  new 14
  out of scope 14
  prompt values missing 14
  rejected 14
  succeeded 14
  valid 14

T
target environment
  preparing 12
  supported 10
URIs 18
test case archives
See also extracting information from reports
test case archives (continued)
  contents 31
  creating 30
  enabling 12
  incomplete 45
  setting wait time 18

troubleshooting
  data differences when comparing reports 46
  generated prompt values do not work 45
  java.lang.OutOfMemoryError message 48
  log files 43
  OutOfMemoryError message 47
  PDF output looks different when running upgraded reports 46
  test case archives 45
  unable to start Cognos Lifecycle Manager 44

U
  uda_trace.log 32, 33

upgrading reports
  formatting not retained 45

URLs
  source environment 18
  target environment 18

V
  validating models and reports 26
    using command line interface 40
  validation levels 18
  validation projects 17
  validation results
    viewing 35
    viewing
      data comparison results 39
      execution results 35
      PDF output results 39
      validation results 35