Before using this information and the product it supports, read the information in "Notices" on page 87.

Product Information
This document applies to IBM Cognos Business Intelligence Version 10.2.1 and may also apply to subsequent releases.

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# Contents

**Introduction** .................................................. vii

**What’s New?** .................................................. ix
New features in version 10.2.1 .................................... ix
New features in version 10.1.1 .................................... ix

**Chapter 1. Getting started** ................................... 1
What’s in this manual? ............................................ 1
Launching IBM Cognos Real-time Monitoring Dashboard .......... 2

**Chapter 2. Common features** .................................. 3
Account settings ................................................. 3
Delivery profiles list ........................................... 4
Permissions ....................................................... 4
  Removing permissions ......................................... 5
  Understanding permissions ..................................... 5
Navigation tree ................................................. 6
Associated dashboards .......................................... 6
Initiating processes ............................................. 7
Message center .................................................. 7
Measure filters .................................................. 7
  Measure filter characteristics ................................ 8
  Custom row filters ............................................ 9

**Chapter 3. Dashboards** ........................................ 11
Dashboards at a glance ........................................... 11
Viewing dashboard information .................................. 11
Viewing and editing dashboard properties ......................... 11
Activities menu .................................................. 12
Applying perspectives to a dashboard ............................ 13
  Apply perspectives to a dashboard ............................ 14
  Clear a perspective ........................................... 14
Setting a default dashboard ..................................... 14
Defining dashboard content and layout ......................... 14
Creating a dashboard ........................................... 15
  Create a new dashboard ...................................... 15
  Create a new dashboard from an existing dashboard ......... 16
Bookmarking a dashboard ....................................... 16
Viewing a dashboard object in a separate window .............. 16
Using folders .................................................... 17
  Create a new folder .......................................... 17
  Create a subfolder .......................................... 17
  Move an object to an existing folder ......................... 18

**Chapter 4. Dashboard objects** ................................. 19
About dashboard objects ........................................ 19
Drilling .......................................................... 19
  Drill back to detail ......................................... 20
Navigation tree .................................................. 20
Activities menu ................................................. 20
  Edit activities ............................................... 21
Toolbar .......................................................... 21
  Performing ad hoc analysis .................................. 22
Chart properties ............................................... 23

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### Chapter 10. Process diagrams
- About process diagrams
- Creating a process diagram
- Querying a process status

### Chapter 11. Business rules
- About business rules
- Creating a business rule

### Chapter 12. Alert messages
- Interacting with alerts
- Alert messages list
  - Steps to respond to a raised alert
  - Step to display the notification details in a new window
- Viewing notification details
- Setting notification properties
  - Assigning delivery profile for notification
  - Suspending external notification delivery
  - Unsubscribing from an alert

### Chapter 13. Tasks
- About tasks
- Viewing the task list
- Viewing task details
- Creating tasks
- Managing tasks

### Chapter 14. Watchpoints
- About watchpoints
- Viewing watchpoints
- Watchpoint conditions
- Creating and editing watchpoints
  - Create a new watchpoint
  - Edit an existing watchpoint

### Chapter 15. Dashboard perspectives
- About dashboard perspectives
- Perspective manager
- Working with perspectives
  - Perspective properties
  - Creating a perspective

### Chapter 16. Working with dashboards in IBM Cognos Workspace
- Interoperability between Real-time Monitoring and IBM Cognos Workspace
- Working in IBM Cognos Workspace
  - Workspaces
  - Data streaming

### Appendix. Troubleshooting
- Error when going to a dashboard object report
- Changes to chart properties do not take effect

### Notices

### Index
Introduction

This document is intended for use with IBM® Cognos® Real-time Monitoring Dashboard.

IBM Cognos Real-time Monitoring Dashboard is an easy-to-use interface for the information provided by IBM Cognos Real-time Monitoring. The server receives data about the activities in your business and looks for exceptional events, as defined by your application developers and rule managers. The server also produces aggregated information that is always current to the latest business events and available for presentation on continuously updated metrics in the IBM Cognos Real-time Monitoring Dashboard.

Audience

To use this guide you should have knowledge of your business requirements.

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

Accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products. IBM Cognos Real-time Monitoring Dashboard 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.
What's New?

This section contains a list of new, changed, and removed features for this release. It will help you plan your upgrade and application deployment strategies and the training requirements for your users.

For information about upgrading, see the IBM Cognos Business Intelligence Installation and Configuration Guide for your product.

For information about other new features for this release, see IBM Cognos Business Intelligence New Features.

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 10.2.1 information center (http://pic.dhe.ibm.com/infocenter/cbi/v10r2m1/index.jsp)

For more information about using this product or for technical assistance, this site provides information on support, professional services, and education.

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, web servers, directory servers, database servers, and application servers, visit the IBM Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter/).

New features in version 10.2.1

There are no new features in this release of IBM Cognos Real-time Monitoring Dashboard.

New features in version 10.1.1

Listed below are new features for version 10.1.1.

Closer integration between IBM Cognos Real-time Monitoring Dashboard and IBM Cognos Business Insight

When working with IBM Cognos Real-time Monitoring dashboard objects in IBM Cognos Business Insight, you can:

• convert one display type into another
• change the measure styles in a display
• change specific properties in a display
• use IBM Cognos Business Insight filter widgets

For more information, see the topics about changing display types, measure styles, and chart specific properties, and filtering widgets in the IBM Cognos Real-time Monitoring Dashboard User Guide.

Streaming lookup tables support inline dimensions

By using a streaming lookup table based on an event stream, the values in the lookup table are updated as quickly as the data is processed and can be sourced
from non-JDBC sources such as JMS or WebSphere® MQ. You can now use inline dimensions in cubes and views without the need to create joins back to the dimension - you create the dimension in a lookup table using the same steps as a traditional dimension. For more information, see the topic about creating lookup tables on data streams and views in the *IBM Cognos Real-time Monitoring Workbench User Guide*.

**Support for upsert extended to flat-file and JDBC message service formats**

In version 10.1.0, the upsert functionality, which combines the actions of updating, inserting, and deleting data from data stream tables, was only available for Java™ Database Connectivity (JDBC) data streams. Version 10.1.1 extends support of this feature to flat file streams, JMS streams, and others. For more information, see the topics about enabling upsert for a data stream in the *IBM Cognos Real-time Monitoring Workbench User Guide*. See also the topic about upsert in the *IBM Cognos Real-time Monitoring Workbench Modeling Reference*.

**Search for objects**

In previous releases, finding objects of interest by using sorted lists could be time-consuming. Now, you can search for specific text contained in the XML definition. For more information, see the topic about searching the object library in the *IBM Cognos Real-time Monitoring Workbench User Guide*.

**View object dependencies and requirements**

You can use the Relationships tab to see all dependencies and requirements for an object. For more information, see the topic about object dependencies and requirements in the *IBM Cognos Real-time Monitoring Workbench User Guide*.

**Build an external adapter framework**

You can configure an external adapter to convert data in a previously unsupported format (such as JSON, and RSS Feed) into a format supported by RTM (such as tabular, flat file, XML). For more information, see the topic about adapter frameworks in the *IBM Cognos Real-time Monitoring Workbench Modeling Reference*.
Chapter 1. Getting started

IBM Cognos Real-time Monitoring provides a central location for viewing and responding to the information critical to your business. Key to this tool are dashboards: the customizable presentations of information specific to your business tasks and interests. Within each dashboard are one or more objects that display metrics about your business. You can view the objects together to get the big picture of what is happening, or drill down into any object to reveal more detailed information. Dashboards can list the alert notifications that you have received about exceptional business events, and they can list tasks in which you are participating as they are associated with some exceptional event.

What's in this manual?

This manual describes how to use IBM Cognos Real-time Monitoring Dashboard, and how to create and configure the interface to display the information critical to you. Specifically, this manual describes:

- **Common features** that are used throughout IBM Cognos Real-time Monitoring Dashboard.
- **Dashboards** that are the principal interfaces that collect and display your business metrics, alerts, and tasks.
- **Dashboard objects** that are the individual presentations of specific metrics.
- **Charts** that are graphical presentations for comparing similar data.
- **Indicators** that are graphical presentations for a number's position on a scale of numbers.
- **Tables** that are tabular presentations of numbers.
- **External portlets** that are external to IBM Cognos Real-time Monitoring Dashboard.
- **Thresholds** that are visual elements that allow you to see where a value is in relation to some target or range of values.
- **Process diagrams** that graphically show the steps or actions that accomplish a task, and present statistics about the process instances.
- **Business rules** that monitor events looking for exceptional business conditions, and produce alert messages that describe the conditions when they exist.
- **Alert messages** that are notifications about exceptional business events.
- **Tasks** that allow you and another user to track and manage an event identified by an alert notification.
- **Watchpoints** that send an alert when a value is at or near a target value.
- **Dashboard perspectives** that allow you to apply a data filter to all the objects on a dashboard.
- **Chapter 16, “Working with dashboards in IBM Cognos Workspace,” on page 77**
- **Troubleshooting** information for IBM Cognos Real-time Monitoring Dashboard.
Launching IBM Cognos Real-time Monitoring Dashboard

Before you begin

Before launching IBM Cognos Real-time Monitoring Dashboard, ensure that the following requirements are met:

- The IBM Cognos Real-time Monitoring servers are running.
- Your web browser is supported by IBM Cognos Real-time Monitoring.
- Software that blocks pop-up windows in your web browser is turned off.
- JavaScript is enabled on your web browser.
- You have a user account created by your IBM Cognos Real-time Monitoring administrator.

Note: When safe mode is enabled for IBM Cognos Real-time Monitoring, a banner message displays in IBM Cognos Real-time Monitoring Dashboard indicating that the system is in safe mode and that all events are paused. Data streaming is stopped when the system is in safe mode. For more information, see the topic about safe mode in the IBM Cognos Real-time Monitoring Installation and Configuration Guide.

Procedure

1. In your web browser, type the URL for IBM Cognos Real-time Monitoring, and then press Enter. For example,

   http://servername/cognos/realtime/landing/landingpage.htm

   If you did not use the default port when you installed IBM Cognos Real-time Monitoring, you must specify servername as server:port.

2. In the IBM Cognos Real-time Monitoring Welcome page, click one of the following links:
   - Create my real-time dashboard
   - My real-time dashboards
   - My real-time alerts

3. If the Log on window appears, do one of the following:
   - Log in as an authenticated user: Type your user name and password, and click Login.
   - Log in as the Anonymous user: Click Log in as Anonymous user.

   Note: If single sign-on with IBM Cognos Business Intelligence is enabled and you are logged into IBM Cognos Business Intelligence, then you will not see the Log on window. For more information, see the topic about single sign-on in the IBM Cognos Real-time Monitoring Workbench User Guide.
Chapter 2. Common features

This chapter describes the common features in IBM Cognos Real-time Monitoring Dashboard.

Account settings

The Account Settings page controls your default settings and delivery profiles as well as your log on password.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter a Refresh interval for Alerts and Tasks</td>
<td>How frequently your dashboards look for new or updated alerts and tasks. Do not set this frequency unnecessarily fast because it will impact overall performance. For most situations, every 10 minutes is sufficient.</td>
</tr>
<tr>
<td>User Password</td>
<td>Changes your login password. A password may contain any alpha-numeric text or punctuation characters. You can change your password if your account is a local user account in IBM Cognos Real-time Monitoring. If your account is defined in an LDAP directory or synchronized from IBM Cognos Business Intelligence, then you cannot change your password on the Account Settings page. Note: Your login password is the same for IBM Cognos Real-time Monitoring Dashboard as for IBM Cognos Real-time Monitoring Workbench.</td>
</tr>
<tr>
<td>Confirm User Password</td>
<td>Re-enter your login password to confirm the change.</td>
</tr>
<tr>
<td>Would you like your dashboard Alerts List minimized at login?</td>
<td>Whether or not the Alert messages list appears on your dashboards when you log in. Select Yes to include the list. Select No to minimize the list to an icon. For information about the list, see “Alert messages list” on page 65.</td>
</tr>
<tr>
<td>Would you like your dashboard Tasks List minimized at login?</td>
<td>Whether or not the task list appears on your dashboards when you log in. Select Yes to include the list. Select No to minimize the list to an icon. Note: For information about the list, see “Viewing the task list” on page 69.</td>
</tr>
<tr>
<td>Select a single item to be used as your default dashboard</td>
<td>Whether or not to have a default dashboard. If you have a default dashboard, you specify the dashboard to load as the default. If you have a default dashboard, it is displayed immediately when you log in. Otherwise, you see the list of dashboards available to you. For more information about default dashboards, see “Setting a default dashboard” on page 14.</td>
</tr>
</tbody>
</table>
### Delivery profiles list

The Delivery Profiles List shows your profiles for delivering alerts that you are subscribed to.

In the list, you can see which profiles are automatically assigned to your new alert subscriptions. The list is also where you create and manage your profiles. Delivery profiles are destinations that can receive alert notifications sent to you. The **Dashboard Profile** directs notifications to the Alert Manager. Additional profiles identify external systems, such as e-mail or text messaging.

You can assign specific profiles to use on a per alert basis. For more information about alerts, see "Assigning delivery profile for notification" on page 67.

To manage your profiles, use the following steps.

**Procedure**

1. In IBM Cognos Real-time Monitoring Dashboard, select **Account Settings**.
2. In the **Delivery Profiles List**, click **Create New Profile**.
3. Assign the name and destination properties on the **Delivery Profile Properties** dialog box.
   
   Optionally, select **Automatically assign this profile to new alert subscriptions**. Selecting this option to automatically assigns the profile to new alert subscriptions.
4. Click **OK** to add the profile to the list.
   
   The profile appears in the **Delivery Profiles List** and is immediately available for alert subscriptions.

   **Note:** Your system administrator can create additional delivery profiles for you in IBM Cognos Real-time Monitoring Workbench. For more information, see the IBM Cognos Real-time Monitoring Workbench User Guide.

### Permissions

Permissions identify who may see or edit specific objects (dashboards, charts, indicators, and tables).

When editing an object's properties you see a list of the users and roles that have access to the object and the **Type Level Permissions** that role or user has on the object. If users appear in the list, they have at least Read access to the object. If users are not in the list, they do not have explicit access.

Users who belong to a role are not listed individually, so you cannot assume that a specific user does not have access to the object unless you know that user does not also belong to a role in the list. System administrators define roles and role memberships in IBM Cognos Real-time Monitoring Workbench. For more information, see the topics about managing users and managing roles in the IBM Cognos Real-time Monitoring Workbench User Guide.
Note: The user RTMadmin has full access to all objects and does not appear in any list.

In addition to permission on the dashboard object, the user must also have Read permission on the data source on which the object is defined. When a user does not have permission to see the data in a source view or cube, the user cannot see the data in the dashboard object. When a user does have permission to see a dashboard object, but not the data source, the user sees an error message indicating that the data source is restricted instead of the usual object presentation.

Removing permissions
You can remove users or roles from the list or demote their permissions provided that you do not lower their permission below the class permissions defined in IBM Cognos Real-time Monitoring Workbench for that user or role.

For example, if a user or role has Read permission on all dashboards (as defined in IBM Cognos Real-time Monitoring Workbench), you cannot deny them access to a specific dashboard. Though you can demote them from Read and Edit permission to just Read.

Note: When you attempt to demote a permission below a user's or role's permission, you can save the change without receiving an error, but when you return to the list, you will again see the user or role in the list.

Understanding permissions
In IBM Cognos Real-time Monitoring, permissions can be granted to users and roles on specific objects in IBM Cognos Real-time Monitoring Dashboard and Classes of objects in IBM Cognos Real-time Monitoring Workbench.

Further, users may belong to one or more roles which may have permissions different from those specifically assigned to the user.

To determine a user’s permission on any object, the system uses the greatest permission:
• Assigned to the user
• All roles to which the user is assigned
• The user’s permission for the class of objects
• The user’s specific object permission

If a user has **Type Level Permissions** on the dashboard object that user cannot be deleted from the **Permissions List**. To keep a user from viewing a particular dashboard object, that user would need to have permissions set as follows:
• The user should not have explicit permission on the dashboard object. This is configured in IBM Cognos Real-time Monitoring Dashboard.
• The user should not have type level permission on the dashboard object. This is configured in IBM Cognos Real-time Monitoring Workbench.
• The user should not have type level permissions on the role or roles to which that user belongs. This is configured in IBM Cognos Real-time Monitoring Workbench.

Note: A user always has access to dashboards and dashboard objects that the user creates, even if the type level permission for dashboards and dashboard objects for the user is no access.
**Example for a user**

For example, consider a user named Skyler. By default in IBM Cognos Real-time Monitoring Workbench, Skyler's access permission to the Dashboard Objects class is No Access. If Skyler belongs to no roles and has no permission to any specific dashboards, then Skyler cannot see any dashboards.

In IBM Cognos Real-time Monitoring Dashboard, you can grant permissions to Skyler on any specific dashboard. For example, you can grant Read and Edit permission to a Total Sales dashboard, and he will immediately be able to see and edit that dashboard.

Subsequently, you can demote Skyler’s permission on the Total Sales dashboard to Read, or you can restrict all access by removing him from that dashboard’s permission list. However, if Skyler's access permission to the dashboard class was raised to Read-Only, you would never be able to deny his access to any specific dashboard.

**Note:** Remember too that Skyler additionally needs Read access on the source views or cubes, or Skyler will not see the metrics that the dashboard objects present.

**Example with roles**

Consider the two following roles:
- Director with Read permission to the Dashboard class
- Executive with Read and Edit permission to the class

If you add Skyler to the Director role, he can see all dashboards. Further, adding Skyler to the Executive role allows him to see and edit all dashboards because the Executive’s role has the highest permission. At this point, there is nothing you can do in IBM Cognos Real-time Monitoring Dashboard to deny Skyler's ability to see and edit dashboards. Further, if you edit a specific dashboard’s permissions, you will not see Skyler listed, though you will see the Director and Executive roles.

You can edit the list and remove either or both of those roles, and receive no errors or warnings when you save the change. However, when you return to the list you will again see both of those roles listed because you may not restrict a user or role from an object to which their class permission is greater than No Access.

**Navigation tree**

The Navigation Tree on the left side of all pages controls which managers or objects you see in the contents on the right side of the page. Switch between the managers by choosing them from the drop down menu.

When minimized, the **Navigation Tree** shows only icons of the dashboards that you have bookmarked as being of interest to you. For more information about bookmarking, see “Bookmarking a dashboard” on page 16.

**Associated dashboards**

Associated dashboards present metrics related to the ones that the object presents. Such relationships are arbitrary and do not mean that the object appears on an associated dashboard. Rather, the relationship means that someone has identified the dashboard as having related information.
To see the list of associated dashboards, select **Associated Dashboards** from the **Activities** menu. Select a dashboard from that list to open that dashboard.

Users with Read and Edit permission on an object can associate dashboards when in the object’s **Edit Object Properties** page.

---

### Initiating processes

When viewing an alert message or dashboard object, you can send the item to an external process for handling. For example, the process might distribute the message to other external systems, archive it, or work to correct the condition.

**Procedure**

1. Go to the **Navigation Tree**. Select **Dashboard Objects** if you want to work with a dashboard object. For an alert, go to the **Alert Manager**.
2. Select a dashboard object or an alert, depending on whether you selected **Dashboard Objects** or **Alert Manager**.
3. Click the **Activities** button. Select **Take Action > Initiate Process**.
   
   The **Initiate Process** dialog box appears.
4. Select the process to receive the item.
   
   The available processes are those on which you have Read permission.
5. Define the external process.
6. Assign permissions to the process in the IBM Cognos Real-time Monitoring Workbench as described in the **IBM Cognos Real-time Monitoring Workbench User Guide** and the **IBM Cognos Real-time Monitoring Workbench Modeling Reference**.

**Note:** For detailed information about external processes, including the information sent to the external process, see the **IBM Cognos Real-time Monitoring Workbench Modeling Reference**.

### Message center

The Message Center tells you when you have new alert or task messages.

When new messages are available, the Message Center briefly displays a summary of up to five messages and provides a link to the associated manager. Click on any subject line to read the message, or click **Go to Task Manager** to open the associated manager.

After four seconds, the automatic summary fades away, and the **Message Center** icon continues to slowly flash. At any time you can see which managers have new messages by clicking the **Message Center** icon.

The automatic summary appears only when there are new messages since the automatic summary last appeared. Control how often the Message Center looks for new messages and shows the automatic summary with the **Refresh interval for Alerts and Tasks** setting. For more information, see “Account settings” on page 3.

### Measure filters

Measure filters allow you to filter the data displayed by a dashboard object. IBM Cognos Real-time Monitoring Dashboard provides a number of predefined filters as well as allowing you to create custom filters.
You can select filters by clicking the filter icon at the top of a column in a data grid when viewing a dashboard object in **Detail View** or at **Step Three** while creating or editing an object. The filter selected is applied to the data in the column, but it will only exist while viewing the current dashboard object. (That is, if you leave the current dashboard object and then return, the filter is no longer available.) You can define a measure filter while creating a dashboard object (**Step Three** in the Dashboard Object wizard), and the filter will be the default measure filter for that dashboard object.

**Note:** The terms measure and column are often used interchangeably. In general, the term measure is used when the dashboard object is built on a cube, and the term column is used when it is built on a view.

**Measure filter characteristics**

Measure filters have the following characteristics:

- Filters across measures always have an AND operation applied to the measures or columns. It is not possible to perform an OR operation across columns.
- Creating a new filter deletes the previous filter.
- When creating custom filters, only columns with the same data type can be used as the measuring filter.
- Measure filters are not applicable to pivot tables, pivot combination charts, distribution charts, reports, and process diagrams.
- Only the measuring columns of a cube can be filtered. The category column cannot be filtered. All columns in a view can be filtered, including categories.
- Constant and dynamic threshold ranges cannot be filtered, including their ranges and targets.
- Constant and dynamic threshold targets can be used in a custom filter as a filter value.

The menu for measure filters provides four ranking functions and a custom filter option. See the following table for a description of the menu items.

<table>
<thead>
<tr>
<th>Filter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top N%</strong></td>
<td>A ranking function for selecting the top ( n ) percent of the measures in the column. You can select the top 1, 5, 10, or 20 percent. Use <strong>Custom</strong> to specify a different value for ( n ).</td>
</tr>
<tr>
<td><strong>Bottom N%</strong></td>
<td>A ranking function for selecting the bottom ( n ) percent of the measures in the column. You can select the bottom 1, 5, 10, or 20 percent. Use <strong>Custom</strong> to specify a different value for ( n ).</td>
</tr>
<tr>
<td><strong>Top N</strong></td>
<td>A ranking function for selecting the top ( n ) measures in the column. You can select the top 1, 5, 10, or 20 measures. Use <strong>Custom</strong> to specify a different value for ( n ). <strong>Attention:</strong> If a value immediately following the ( N )th measure in the column has the same value as ( N )th measure, that value will also be returned.</td>
</tr>
</tbody>
</table>
### Filter Description

<table>
<thead>
<tr>
<th>Filter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom N</td>
<td>A ranking function for selecting the bottom n measures in the column. You can select the top 1, 5, 10, or 20 measures. Use Custom to specify a different value for n.</td>
</tr>
<tr>
<td>Custom Filter</td>
<td>Allows you to specify a value other than 1, 5, 10, or 20 for a ranking function or create a custom row filter. For information on how to create a custom filter see &quot;Custom row filters.&quot;</td>
</tr>
<tr>
<td>Clear All</td>
<td>No filters are applied to the data. Selecting Clear All clears any existing filters.</td>
</tr>
</tbody>
</table>

### Custom row filters

When you select Custom Filter from the Measure Filter menu, IBM Cognos Real-time Monitoring Dashboard displays the Create Custom Row Filter dialog screen.

This screen allows you to set a custom value for a ranking function or another column when a comparison function is selected. The comparison functions available are:

- Greater than (>)
- Less than (<)
- Greater than or equal to (≥)
- Less than or equal to (≤)
- Equals (=)
- Not equal (!=)
- Starts with (Strings only)
- Ends with (Strings only)
- Contains (Strings only)
- Does not start with (Strings only)
- Does not end with (Strings only)
- Does not contain (Strings only)
- Between

This operator returns a value between two values, including the specified values. For example, if you have the values 4, 5, 6, 7, 8, 9, 10 and specify Between the values 5 and 7, the operator returns the values 5, 6, 7.

When you select a comparison function (such as Greater than), a column drop-down menu is displayed. This allows you to make a comparison to another column in the data grid instead of a value. However, the columns that you want to compare must have compatible types.

You can perform a logical operation between two filters by clicking the plus (+) icon. (Clicking the minus (-) icon removes the filter you added filter.) Selecting a logical operation displays another comparison drop-down menu, value field, and column drop-down menu below the previous filter. The column drop-down menu allows you to select another column in the data grid. (Only columns with the same metric can be used.) This allows you to perform an AND or OR operation between two values, a value and a column, or two columns.
Chapter 3. Dashboards

A dashboard is a group of dashboard objects which allows you to see related pieces of business information in a central location.

Dashboards at a glance

A dashboard is a group of dashboard objects, such as charts, indicators, or tables. When viewing a dashboard, you can access more detailed information about any of the items.

At the top of the page, every dashboard can list the alert messages that you have received, and the tasks that are assigned to you. Open or hide a list with the associated list button.

Note: If you do not see an alert list or task list, change the configuration in Account Settings. For more information, see “Account settings” on page 3.

Viewing dashboard information

The Navigation Tree on the left side of the page provides access to all dashboards you have permission to see. Click on a name in the tree to open that dashboard.

The dashboards are organized into the following folders:

• **Dashboards**
  This folder lists all of the dashboards to which you have Read permission. For more information about permissions, see “Permissions” on page 4.

• **Bookmarked Dashboards**
  This folder lists the dashboards that have been bookmarked. For information about how to bookmark a dashboard, see “Bookmarking a dashboard” on page 16.

When the Navigation Tree is minimized, it displays one icon for each bookmarked dashboard. Point to an icon to see the name of the dashboard. You provide a name when you create or edit the dashboard. For information, see “Creating a dashboard” on page 15.

Viewing and editing dashboard properties

The dashboard Info button opens a description of the current dashboard.

You can edit this description and other dashboard properties, as listed in the following table.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the dashboard. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the object is listed. For more information, see “Using folders” on page 17.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that appears in the information panel for the dashboard when you click the Info button. This description is used for the dashboard when its name appears in a list.</td>
</tr>
<tr>
<td>Refresh interval</td>
<td>Number of seconds between refreshes of the data. Note: The faster the refresh, the greater the negative impact on overall performance.</td>
</tr>
<tr>
<td>Permissions list</td>
<td>Identifies which users or roles have explicit permission to see or edit the dashboard. Any user or role in the list can see the dashboard. Users and roles with Edit permission can alter the dashboard.</td>
</tr>
</tbody>
</table>

**Procedure**

1. In the **Navigation Tree**, select the dashboard whose description you wish to access.
2. Optionally, click the **Info** button.
   The left panel redisplay to show the description of the selected dashboard.
3. At the top of the dashboard, click **Activities**.
4. Select **Edit > Edit Properties** from the menu.
   The **Edit Dashboard Properties** page displays. It contains the description of the selected dashboard.
5. Modify the text for the dashboard name and description as desired.
6. Modify additional properties as desired.
7. When finished, click **Save**.
   The dashboard page redisplay.

**Activities menu**

The Activities menu provides actions for dashboards.

The activities you can perform are described in the following table:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit</td>
<td>Edit the dashboard content <a href="#">&quot;Defining dashboard content and layout&quot; on page 14</a> or properties <a href="#">&quot;Viewing and editing dashboard properties&quot; on page 11</a>. This option is available when you have edit permission on this object or class of objects.</td>
</tr>
<tr>
<td>Save As</td>
<td>Makes a copy of the object and saves it with a different name.</td>
</tr>
<tr>
<td>Perspectives</td>
<td>Apply a perspective to a dashboard <a href="#">&quot;Applying perspectives to a dashboard&quot; on page 13</a>.</td>
</tr>
<tr>
<td>Take Action</td>
<td>Track and manage events <a href="#">&quot;Chapter 13: Tasks,&quot; on page 69</a> and alert messages <a href="#">&quot;Initiating processes&quot; on page 7</a>.</td>
</tr>
</tbody>
</table>
**Activity** | **Description**
--- | ---
Add Bookmark | Bookmark a dashboard “Bookmarking a dashboard” on page 16.

### Applying perspectives to a dashboard

Perspectives allow you to apply dimension filters to a dashboard. Perspectives make it possible for your dashboard objects to present specific information.

For information on how to create a perspective, see “Creating a perspective” on page 76.

After you create perspectives, in the dashboard you can click Activities > Additive Perspectives to apply additive perspectives.

A perspective is partially applied where an object has fewer values than those specified in the perspective. A perspective is only applied to those values that match. If there is a conflict between a value in the object and the perspective, the value in the perspective takes precedence.

For example, you have a dashboard that plots two dashboard objects: the number of abandoned calls against the location at a city level for the state of Arizona, and the number of handled calls against the location at a city level for the state of Arizona. If you then apply a standard perspective for the same data against the location at a city level for the state of Florida, the existing filter for the state of Arizona is removed and the filter of perspective takes the precedence, that is, only the data for Florida is now displayed.

However, you can override this behaviour by applying additive perspective, which displays a union of the existing filter and the perspective filter. If you have the data for Arizona displayed and then click Additive Perspectives to add the data from Florida, the existing filter for the state of Arizona remains and an additional filter for Florida is applied so that the data for all three states is displayed. You can also use additive perspective to retain information when you add data from a different level. For example, you have a dashboard that plots the number of abandoned calls against the location at a city level and a state level. You can click Additive Perspectives to add the data against the business name level of another city and state. The existing filter for original data remains and an additional filter for the particular business name is applied.

**Attention:** You must have at least one existing perspective before you can use additive perspectives.

If a perspective cannot be applied to a dashboard object, then an information icon ![Information Icon] displays for the dashboard object. Perspectives are not applied to dashboard objects built on views and the following types of dashboard objects: report, density chart, process diagram.

A perspective persists until you clear it.
Apply perspectives to a dashboard

Procedure
1. At the top of the dashboard, click Activities.
2. Select Perspectives from the menu. Your perspectives are listed in the menu.
3. Select the perspective to apply from the list of perspectives or click Public to select a public perspective.

The perspective is applied to the objects on the dashboard. The name of the currently applied perspective is displayed in the upper left corner of the dashboard, and the background of the dashboard changes color. You can view the definition of the perspective by clicking the button to the right of the name of the perspective.

After you create perspectives, in the dashboard you can click Activities > Additive Perspectives to apply additive perspectives.

Clear a perspective

Procedure
1. At the top of the dashboard, click Activities.
2. Select Perspectives from the pop-up menu.
3. Select Clear Perspectives.
4. Select the perspective to clear.

The perspective is removed from the dashboard.

Setting a default dashboard

You can specify a specific dashboard to display as the default view when you log in to IBM Cognos Real-time Monitoring Dashboard.

Procedure
1. Open the Account Settings page.
2. Select the dashboard you want.
3. Save the settings.

The next time you log in, the default dashboard will be the first page you see.

Defining dashboard content and layout

You can define the objects to include on your dashboard through the Select Dashboard Content and Layout page.

Note: The number of dashboard objects that you can have on a dashboard depends on the following factors:
- Network speed.
- Processor speed of the computer on which your web browser resides.
- Amount of memory on the computer on which your web browser resides.

Procedure
1. In the Navigation Tree, select the dashboard whose content or layout you wish to modify.
2. At the top of the dashboard, click Activities.
3. Select **Edit > Edit Dashboard Content** from the menu. The **Edit Dashboard Content and Layout** page appears, listing all of the objects that you may place on a dashboard. These are the objects on which you have Read permission.

4. Select the objects to include on your dashboard. If you have objects in folders, click the **Choose Folder** button to select them. For information about folders, see "Using folders" on page 17.

5. Use the Dashboard Layout Editor, which is located directly below the object list, to determine the position and size of the objects on your dashboard. To position and size an object, do any of the following:
   - Position objects by dragging the object's title bar to the new location.
   - Size objects by dragging an edge or corner.

6. Release the object.
   The object snaps into place with the new position or size. If the change does not fit at the location, the object snaps back to its original location and size.

7. To remove objects from the Layout Editor, do one of the following:
   - Deselect them in the content list.
   - Click the close button in the upper right corner of the object.

8. When finished, click **Continue**.
   The **Edit Dashboard Properties** window displays.

9. Save or modify the properties as described in "Viewing and editing dashboard properties" on page 11.

---

### Creating a dashboard

You can create a dashboard, or copy an existing dashboard and modify the parameters, and then save it as a new dashboard.

Before creating a dashboard, you must have the following permissions:
- Create permission for the dashboard class of objects, and that is defined in IBM Cognos Real-time Monitoring Workbench.
- Read permission for all the dashboard objects that you want to include on the dashboard.

For more information, see the topic about Permissions in the *IBM Cognos Real-time Monitoring Modeling Reference*.

---

### Create a new dashboard

**Procedure**

1. In the **Navigation Tree**, select the **Dashboards**.
2. In the right pane, click **Create Dashboard** at the top of the page.
   The **Select Dashboard Content and Layout** page displays.
3. Select objects from the list.
   The selected objects display in the Dashboard Layout Editor below the objects list.
4. Position and resize the objects.
   For more information, see "Defining dashboard content and layout" on page 14.
5. Define a name for the dashboard, description, refresh rate, and access permissions.
   
   For more information, see "Viewing and editing dashboard properties" on page 11.

6. When you are finished, click Continue.
   
   The Edit Dashboard Properties window displays.

7. Set and save the properties as described in "Viewing and editing dashboard properties" on page 11.

   Note: If you assigned access to other users, this dashboard will appear in their All Dashboards folder the next time they access their list of dashboards.

Create a new dashboard from an existing dashboard

Procedure

1. In the Navigation Tree, select the dashboard that will serve as the starting point for the new dashboard.

2. In the right-hand panel, click the Activities button at the top of the page.

3. Select Save As from the pop-up menu.

   The Save as New Dashboard page displays.

4. Complete the following:
   
   • Enter a name for the new dashboard.
   
   • Enter a description for the new dashboard.
   
   • Add permissions by clicking the appropriate button and using the resulting dialog box.

5. When finished, click Save as New.

   The new dashboard displays in the navigation tree.

6. Modify the dashboard.

   For more information, see "Defining dashboard content and layout" on page 14.

   Note: If you assigned access to other users, this dashboard will appear in their Dashboards folder the next time they access their list of dashboards.

Bookmarking a dashboard

You can bookmark dashboards for quick access.

Procedure

1. Open the dashboard to bookmark.

2. At the top of the window, select Activities > Add Bookmark.

Viewing a dashboard object in a separate window

You can use the tear-off feature to open a dashboard object in a new window that you can resize and scale.

If you tear-off a dashboard object from a dashboard, then the tear-off window has the same refresh rate as the dashboard. If you tear-off a dashboard object from the detail view, the tear-off window does not refresh.
Procedure
1. Open a dashboard or the detail view of a dashboard object.
2. Do one of the following:
   • In the dashboard, click the button in the upper right corner of the dashboard object. Select Activities > Tear Off.
   • In detail view of the dashboard object, select the Activities > Tear Off.
3. To resize the new window, drag a corner of it.

Using folders

You can organize dashboards, dashboard objects, reports, and process diagrams into custom folders in the Navigation Tree.

Use the following procedures to create your own folders or to move objects into existing folders.

Create a new folder

Procedure
1. Select Dashboards, Dashboard Objects, or Process Diagrams from the navigation tree.
2. Select Dashboard Objects from the Navigation Tree then select the Dashboard Objects folder.
3. Select an item from the detail list you want to store in a folder.
5. Click the Choose Folder button and select <Create New Folders Here>.
6. In the New Folder window, enter a name for the new folder and optionally a description, then click Create Folder.
7. Click Save.
   The new folder displays in the navigation tree.
   Each time you create a new folder, it is added to the list of folders displayed when <Default Folders> is selected.

Create a subfolder

Procedure
1. Select Dashboards, Dashboard Objects, or Process Diagrams from the navigation tree.
2. Select Dashboard Objects from the Navigation Tree then select the Dashboard Objects folder.
3. Select an item from the detail list you want to store in a folder.
5. If the dashboard object is not already stored in a folder, select a folder name from the <Default Folder> list; otherwise, go to the next step.
6. Click Choose Folder and select <Create New Here>.
7. Enter a name for the subfolder and an optional description, and then click Create Folder.
   The Store in field now shows the folder and subfolder names. When you select the <Default Folder> list, the subfolders are shown when you select a folder name.
8. Click **Save**.
   The new folder displays in the navigation tree beneath its parent folder.

**Move an object to an existing folder**

**Procedure**
1. Select the object to move by selecting **Edit > Edit Properties**.
2. At **Step Four: Edit Object Properties**, click the **Choose Folder** button.
3. Select `<Default Folder>`.
4. From the list of available folders, select the folder to which you want the dashboard object moved.
5. Click **Save**.
Chapter 4. Dashboard objects

This chapter describes dashboard objects, which visually represent data in the form of charts and indicators.

About dashboard objects

Dashboard objects present business metrics graphically as charts or indicators, or as numbers in a table as follows:

- Charts, which are visual presentations of a series of related data values, are useful for quickly seeing comparisons, patterns, and trends in data.
- Indicators, which are visual presentations of a number's position on a scale of numbers, are useful for identifying progress towards a target and for quantity levels within a range.
- Tables, which are columnar arrangements of the current contents of a business view, show all the numbers related to an event, or of the latest aggregation.

Each object presents the data source information stored in a source business view or cube. As data changes in the source, all dependent objects update their presentations to reflect the change. Depending on the type of object, the presentation can represent data from the following:

- One cell only, represented as indicators.
- Several rows in a column, represented as pie charts.
- Multiple rows and columns, represented as tables.

For detailed information about each of the object types, see the following:

- Chapter 5, “Charts,” on page 27
- Chapter 6, “Indicators,” on page 45
- Chapter 7, “Tables,” on page 49

The following sections cover topics general to all dashboard objects:

- “Navigation tree” on page 20
- “Activities menu” on page 20
- “Toolbar” on page 21
- “Chart properties” on page 23
- “Data streaming” on page 25
- “Object error messages” on page 25

Drilling

Drilling allows you to view the details of a data point in a dashboard object that has dimensions defined in the data source.

Drill down into the dashboard object by clicking on a data point in the dashboard object. Each time you drill down, you see the next lower level in the dimension. You can use the features on the toolbar of the dashboard object to undo and redo drill actions, and roll up the levels of a dimension hierarchy. For more information, see “Toolbar” on page 21.
Drill back to detail

Drill back to detail allows you to see the detailed data that makes up the value of the lowest data point in dashboard object.

You must enable drill back to detail on the view on which a cube is built before you can use it in a dashboard object. For information about how to enable drill back to detail, see the IBM Cognos Real-time Monitoring Workbench Technical Reference.

A dashboard object that has drill back to detail enabled displays a magnifying glass icon beside the name of the dashboard object. To see the detailed data, drill down on a data point in the dashboard object until you get to the lowest level in the dimension. Drill down one more time and the Drill Back to Detail window displays and shows the table columns that you can view. Select the table columns that you want to see and click OK.

Navigation tree

The navigation tree on the left side of the IBM Cognos Real-time Monitoring window lists all of the objects for which you have at least Read permission. Open a folder to see the list. Click an object to open it.

The detailed list shows all of the objects available to you. From this list you can create a new object, edit or delete an existing one, make a copy of the selected object by saving it with a new name, or see a preview of the object.

Activities menu

The Activities menu provides actions for dashboard objects. The activities available depend on the type of dashboard object, and your access permissions.

The activities you can perform are described in the following table:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage Watchpoints</td>
<td>Create and manage watchpoints “Viewing watchpoints” on page 71.</td>
</tr>
<tr>
<td>Take Action</td>
<td>Track and manage events Chapter 13, “Tasks,” on page 69 and alert messages “Initiating processes” on page 7.</td>
</tr>
<tr>
<td>Associated Dashboards</td>
<td>Shows dashboards that are related to this dashboard “Associated dashboards” on page 6.</td>
</tr>
<tr>
<td>Copy Data to Clipboard</td>
<td>Copies the data for the current object to the clipboard as tab-separated text.</td>
</tr>
<tr>
<td>Go to Detail View</td>
<td>Opens the detail view of the dashboard object. You can also click on the title of the dashboard object to open the detail view. This activity is available only when you are working with a dashboard object in a dashboard.</td>
</tr>
<tr>
<td>Edit</td>
<td>Opens the dashboard object wizard. This activity is available when you have edit permission on this object or class of objects “Edit activities” on page 21.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save</td>
<td>Save the dashboard object.</td>
</tr>
<tr>
<td>Save As</td>
<td>Makes a copy of the dashboard object and saves it with a different name.</td>
</tr>
<tr>
<td>Tear Off</td>
<td>Opens the dashboard object in a new window.</td>
</tr>
<tr>
<td>Go To</td>
<td>Opens a third party report using data from the dashboard object.</td>
</tr>
</tbody>
</table>

**Edit activities**

Use edit activities to change the basic view of a dashboard object.

When you select **Edit** from the **Activities** menu, you can perform the following activities in the dashboard object wizard:

- **Edit Data Source**
  Change the view or cube used as the source for the dashboard object.

- **Edit Display Type**
  Change the display type or subtype for the dashboard object. The available display types depend on the data source for the dashboard object.

- **Edit Data**
  Change the data used for your dashboard object and set filters. The data available depends on the data source and type of dashboard object.

- **Edit Properties**
  Change the properties for the dashboard object. You can change the permissions for the object and use the column customization tool.

- **Edit Threshold**
  Set or change threshold targets and ranges for the dashboard object. For more information about thresholds, see “About thresholds” on page 57.

Ensure that you save your changes at the end of the wizard.

**Toolbar**

You can use the toolbar features on a dashboard object to make changes to the way the data is displayed in a dashboard object.

The available features are different for each type of dashboard object and depend on whether you are in working in the dashboard or in the detail view of a dashboard object. The following table describes the toolbar features:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Reset" /></td>
<td>Reset data view: Undo unsaved changes to dimensions, measure filters, and dimension filters. Sets the view back to the last saved view. Applies to charts and tables for which the data source is a cube. Available from the dashboard and the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Undo" /></td>
<td>Undo data view: Undo the last drill action, dimension filter, measure filter, or change to dimension. Applies to charts and tables for which the data source is a cube. Available from the dashboard and the detail view.</td>
</tr>
</tbody>
</table>
Performing ad hoc analysis

You can perform ad hoc analysis on an individual dashboard object while working in a dashboard.

Ad hoc analysis includes the following actions:
- Drilling down.
- Redoing or undoing the data view.
- Rolling up one level or rolling up to top.
- Filtering the data.

Procedure
1. From the Navigation Tree, open a dashboard.
2. Change the display of the data for a dashboard object by:
   - Drilling down into the dashboard object. For example, click on a data point in a chart.
   - Clicking on a toolbar icon in the dashboard object.
   A bar appears at the bottom of the dashboard object, indicating that data streaming has stopped.

   Tip: You can make more than one change in a row. For example, you can drill down two times, and then undo the second drill down.
3. If you want to save your changes to the dashboard object, click the icon in the upper right corner of the dashboard object and select **Save**.
4. If you do not want to save your changes, click the play icon, then click **Reset data view**.
Chart properties

Chart properties define the look and feel of a dashboard object. Chart properties include background color, font, decimal precision, and so on. Chart properties vary with the type of dashboard object.

For example, chart styles apply to charts, indicators, and tables. Category axis styles apply only to vertical and horizontal combination charts.

Chart properties include the following styles:

- Chart styles
- Category axis styles
- Primary and secondary axis styles
- Pie chart styles
- "Measure styles" on page 24

Chart styles

You can apply chart styles to charts, indicators, and tables. The following table shows the chart style properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background Color</td>
<td>Background color of the dashboard object.</td>
</tr>
<tr>
<td>Background Opacity (In percentage)</td>
<td>Level of opacity of the background of the dashboard object.</td>
</tr>
<tr>
<td>Show Legend</td>
<td>If selected, a legend displays for the dashboard object.</td>
</tr>
<tr>
<td>Show Tooltips</td>
<td>If selected, a tooltip displays when you pause the pointer over a data point.</td>
</tr>
</tbody>
</table>

Category axis styles

You can apply category axis styles to vertical combination charts and horizontal combination charts. The following table shows the category axis style properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Font Family</td>
<td>Font of category axis values.</td>
</tr>
<tr>
<td>Size</td>
<td>Size of font size for category axis values.</td>
</tr>
<tr>
<td>Color</td>
<td>Color of font for category axis values.</td>
</tr>
<tr>
<td>Color</td>
<td>Color of the category axis.</td>
</tr>
<tr>
<td>Thickness</td>
<td>Thickness of the category axis.</td>
</tr>
</tbody>
</table>

Primary and secondary axis styles

You can apply primary and secondary axis styles to vertical combination charts and horizontal combination charts. The following table shows the primary and secondary axis style properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Font Family</td>
<td>Font of axis values.</td>
</tr>
</tbody>
</table>
### Property Description

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Font Size</td>
<td>Size of font for axis values.</td>
</tr>
<tr>
<td>Font Color</td>
<td>Color of font for axis values.</td>
</tr>
<tr>
<td>Line Color</td>
<td>Color of the axis.</td>
</tr>
<tr>
<td>Line Thickness</td>
<td>Thickness of the axis.</td>
</tr>
<tr>
<td>Minimum</td>
<td>Lowest data value to display on the axis. Data values below this value are excluded from the dashboard object.</td>
</tr>
<tr>
<td>Maximum</td>
<td>Highest data value to display on the axis. Data values above this value are excluded from the dashboard object.</td>
</tr>
<tr>
<td>Prefix</td>
<td>Character to put in front of axis values. For example, if the primary axis is dollars, set this value to $.</td>
</tr>
<tr>
<td>Suffix</td>
<td>Character to append axis values with. For example, if the primary axis is pound sterling, set this value to £.</td>
</tr>
<tr>
<td>Decimal Precision</td>
<td>Number of decimals of precision for axis values.</td>
</tr>
</tbody>
</table>

### Pie chart styles

You can apply pie chart styles to pie charts. The following table shows the pie chart style properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label Position</td>
<td>Location of the data points in text.</td>
</tr>
<tr>
<td>Callout Color</td>
<td>Color of the callouts, if they exist.</td>
</tr>
<tr>
<td>Callout Thickness</td>
<td>Thickness of the callouts, if they exist.</td>
</tr>
<tr>
<td>Wedge Gap</td>
<td>Amount of space between the wedges.</td>
</tr>
<tr>
<td>Start Angle</td>
<td>Rotates the pie chart.</td>
</tr>
</tbody>
</table>

### Measure styles

You can change the way a measure is displayed on a chart. The following table shows the measure style properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column Order</td>
<td>Changes the order of columns displayed in the grid.</td>
</tr>
<tr>
<td>Column Name</td>
<td>Specifies a display name for the measure.</td>
</tr>
<tr>
<td>Column Color</td>
<td>Specifies a color for the measure.</td>
</tr>
<tr>
<td>Display Type</td>
<td>Depends on the source display type of a measure. For example if you click on a measure displayed as columns, you get the option to convert the measure to line, area, or dot display.</td>
</tr>
<tr>
<td>Separator</td>
<td>Specifies whether or not to show a separator.</td>
</tr>
</tbody>
</table>
### Property Description

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decimal Places</td>
<td>Number of decimals of precision for measure values.</td>
</tr>
<tr>
<td>Data Prefix</td>
<td>Character to put in front of measure values.</td>
</tr>
<tr>
<td>Data Suffix</td>
<td>Character to append to measure values.</td>
</tr>
</tbody>
</table>

### Data streaming

In a dashboard, the data streaming into the dashboard objects on a dashboard is refreshed periodically.

When you perform an action on a dashboard object that changes how the data displays, the data streaming into the dashboard object stops. A pause bar appears at the bottom of dashboard object, indicating that the data streaming has stopped. The date and time that the data streaming was paused displays in the bar. The following actions stop data streaming:

- Clicking on the name of a dashboard object from the dashboard.
- Drilling down.
- Redoing or undoing the data view.
- Rolling up one level or rolling up to top.

To change the refresh interval for a dashboard, see “Viewing and editing dashboard properties” on page 11.

### Object error messages

If the object cannot present its usual display, the object will display one of the messages described in the following table.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deleted or Restricted</td>
<td>The object is not available to you because it was either deleted, and the dashboard still references it, or you do not have permission so see it. You need to have Read permission on the object to see it. Having Read permission to the dashboard does not grant you permission to see its objects. For more information about this permission, see “Permissions” on page 4.</td>
</tr>
<tr>
<td>Data source is invalid</td>
<td>The source data object is invalid, possibly because another object that it depends on is invalid or deleted. Use IBM Cognos Real-time Monitoring Workbench to validate the source.</td>
</tr>
<tr>
<td>Data source is not available</td>
<td>The source data object is disabled or not receiving data. Use Real-time Monitoring Workbench to re-enable the source.</td>
</tr>
<tr>
<td>Invalid due to change in data source</td>
<td>The dashboard object is referencing a column that is no longer in the source. Edit the object to correct the reference. Note: This requires Edit permission on the object.</td>
</tr>
</tbody>
</table>
### Setting Description

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data source is restricted</td>
<td>You do not have Read permission to the source view or cube.</td>
</tr>
<tr>
<td></td>
<td>For more information, see “Permissions” on page 4.</td>
</tr>
<tr>
<td>No data available</td>
<td>In tables, the source view or cube is empty. This might be the result of an access filter that restricts you from seeing the data.</td>
</tr>
</tbody>
</table>
Chapter 5. Charts

Dashboard charts are visual presentations of a series of related data values. They help you to quickly see comparisons, patterns, and trends in data. Dashboard charts retrieve the metrics from an underlying business view, where the chart data is in one or more columns in the view, and each row is an element of the chart series.

Types of charts

The following is a list of the types of charts that you can create when designing dashboard objects:

- "Pie charts"
- "Combination charts"
- "Distribution charts" on page 29
- "Pivot combination charts" on page 30
- "Geography map charts” on page 30

Pie charts

Pie charts present a single column of data as a filled-in circle.

In a pie chart each row in the values column is a slice in the circle. Each slice is proportional to a percentage of the sum of whole column. When you create a pie chart, you first identify the values column, and then identify the category column that contains the labels for each slice.

Note: For more information about pie charts, see “Working with pie charts” on page 32

Combination charts

Combination charts are either area charts, line charts, bar charts, dot charts, or any combination. Combination charts may plot data on a single axis or on dual axes. Combination charts can be either vertical or horizontal.

Vertical combination charts

Vertical combination charts map their presentation onto a rectangular area using a horizontal and vertical axis.
In a vertical combination chart, a column of data (a category) is a series of data points or columns along the horizontal axis (or x-axis). The height of the point or column along the vertical axis (or y-axis) represents the value of the category item. For more information about vertical combination charts, see “Working with combination charts” on page 34.

**Horizontal combination charts**

Horizontal combination charts map their presentation onto a rectangular area using a horizontal and vertical axis.

In a horizontal combination chart, a column of data (a category) is a series of data points or columns along the vertical axis (or y-axis). The length of the point or column along the horizontal axis (or x-axis) represents the value of the category item. For more information about horizontal combination charts, see “Working with combination charts” on page 34.
Distribution charts

Distribution charts are based on plot point distributions on a grid. The grid squares are colored based on the density of points that fall within them.

You can create distribution charts only when the specified data source is a view with two measures and a category. For more information, see "Working with distribution charts" on page 37.
Pivot combination charts

Pivot combination charts map their presentation as a three dimensional figure with a series of data points or columns displayed as values along all three axes. Pivot combination charts can be area charts, line charts, or bar charts.

You can create pivot combination charts only when the specified data source is a cube with two dimensions and a category. For more information, see "Working with pivot combination charts" on page 39.

Geography map charts

Geography map charts map their presentation onto a geographic map. Locations on the map that have data associated with them are indicated with different colors to show different levels of accuracy.

You can create geography map charts only when the specified data source is a cube with exactly one dimension where geo categories have been enabled. For more information, see "Working with geography charts" on page 41.

Viewing charts

When you open a dashboard, all charts are sized to fit inside the dashboard. From this view, you can open a detail view of a chart and see details about the data in the chart.

This section describes:
- "Default, tear-off, and detail views" on page 31
- "Viewing details of the data in charts" on page 31
- "Categories" on page 31.
Default, tear-off, and detail views

You can view charts in the following ways:

- **Default view**
  When first displayed in a dashboard, charts are reduced to fit into the area of the dashboard.

- **Tear-off view**
  You can open a chart in a separate window where you can enlarge or reduce the chart size by changing the size of the window. For more information, see “Viewing a dashboard object in a separate window” on page 16.

- **Detail view**
  For information about chart details, see “Viewing details of the data in charts.”

Viewing details of the data in charts

You can view detailed information directly from the dashboard as it displays when selected or drill down to a more detailed view.

When you define a chart, you identify a source view or cube that sources the data that will appear in the chart and the column that contains the value or values to represent on the chart. You also identify a category column for views or dimensions for cubes that identifies what to chart.

You can see details about the data by positioning the mouse cursor over a data point.

You can open a detail view of the chart that shows a table containing the data in the view on which the chart is sourced. Click **Show or Hide Data Grid** on the toolbar of the chart.

You can update the data in the chart by clicking the chart in the dashboard or navigation tree. Both chart and table update to show new data with a frequency defined by the refresh rate.

To go to the detail view of a chart from a dashboard, do one of the following:

- Click the name in the title bar of the dashboard object.
- Click the down arrow in the title bar and select **Go to Detail View** from the pop-up menu.

Categories

Categories are used to select the level at which the dimension is displayed.

For example, if the category is time, the levels can be year, month, and week. Category controls are only available if the data source for the chart is a cube. To set the category, click **Change categories** on the toolbar of the chart.

Categories identify what to display, and are determined by the selected dimension level. When you create a cube chart, you select the dimension level to display as the default category. For more information, see “Creating a combination chart” on page 36.
Dimension filters

Dimension filters limit the categories by showing only the result for items matching the filter conditions.

Dimension filters are available only if the data source for the chart is a cube. To select a filter, click **Dimension Filters** on the toolbar of the chart. This displays a dialog window that shows the available dimensions and items with the dimensions as a hierarchical tree. You can expand and collapse the dimension by clicking the arrow next to the name of the dimension. Select the levels you want in your chart by clicking the check box next to the level. You can select all the levels within a dimension by clicking the check box next to that dimension. An **Others** item is included as a selection within a dimension when selecting dimension filters. Use the **Others** selection when items within a level may be updated dynamically. By selecting **Others**, new items will be included automatically in the filter. If you select only some levels the check box is filled instead of displaying a check mark. Click **Apply Filter(s)** to apply the filters to the chart.

The dimension filters applied to your chart are displayed in the **Applied Filter(s)** window. If there are any measure filters currently applied to a column, those filters are also displayed in the window. For information about measure filters, see "Measure filters" on page 7.

Working with pie charts

This section describes the following:

- "Pie chart properties."
- "Creating a pie chart" on page 33.

Pie chart properties

Pie charts have the following properties.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the dashboard object. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the object is listed. For more information, see “Using folders” on page 17.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that can contain any text characters. This description appears at the top of the Object Details page when users view the details.</td>
</tr>
<tr>
<td>Display type</td>
<td>Always Chart for this object type.</td>
</tr>
<tr>
<td>Display subtype</td>
<td>Always Pie Chart for this type of object.</td>
</tr>
<tr>
<td>Permission list</td>
<td>Identifies which users or roles have explicit access permission to the object. For more information about permissions, see “Permissions” on page 4.</td>
</tr>
<tr>
<td>Trend column or customize column</td>
<td>Use Customize Column to change the name of the value columns, hide a column, or define formatting of the numeric value.</td>
</tr>
</tbody>
</table>
Creating a pie chart

This topic describes how to create a pie chart.

Charts represent information from one of two types of columns:
- Value columns, which contain the numbers to represent, such as the total sales or average quantity.
- Category columns, which contain the names associated with each row in the source, such as product names, months of sales, or business regions.

If a chart has a view as its data source, then the category name comes from a column in the view. If a chart has a cube as its data source, then the category is a dimension in the cube, and the default value is a level in the dimension. For cubes, you can also define filters to apply by default to the data. For more information, see "Dimension filters" on page 32.

Before you can create a pie chart, you must have:
- Create permission for dashboard objects.
- Read permission on the view or cube that you want to create a chart for.
- Read permission on all dimensions used by the cube.

Procedure

1. Open the Dashboard Objects navigation tree and select the Dashboard Objects folder.
2. Click Create Object and select Create Dashboard Object.
3. Select the view or cube that contains the data this chart will report on, and click Continue.

   Note: You can see the data currently in the source by clicking the preview button to the right of the view’s description.
   - Select Chart as the display type.
   - Select Pie as the subtype for the object.
   - Click Continue.
4. Select the columns from the view that contains the data to chart, and click Continue.
5. Set the following object properties. See "Pie chart properties" on page 32 for more information.
• Assign a name, the location where you want to store the object, and an optional description. See “Using folders” on page 17 for information about how to create folders.

• Customize column values and add any trend columns.

• Set the permissions for dashboard access. Permissions determine who can see the chart and to what extent they can access it. For more information, see “Permissions” on page 4.

• Set any dashboard associations with your dashboard object. Associations are dashboards that contain related metrics. For more information, see “Associated dashboards” on page 6.

• Optionally, you can include percentages for the chart legend, include labels in the chart, or add a prefix or suffix for numerical values.

6. Save the chart.

Working with combination charts

Combination charts map their presentation onto a rectangular area using a horizontal and vertical axis, where a column of data (a category) is a series of data points or columns along the horizontal axis, and where the height of the point or column represents the value of the category item. Combination charts are either area charts, line charts, bar charts, dot charts, or any combination. Combination charts may plot data on a single axis, or on dual axes.

When viewing a chart, hover over a data point to see the value it represents. On a dashboard, to see a more detailed presentation, click the object name, or select Go to Detail View from Activities menu of the dashboard object.

Combination chart properties

Combination charts have the following object properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the dashboard object. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the object is listed. For more information, see “Using folders” on page 17.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that can contain any text characters. This description appears at the top of the Object Details page when users view the details.</td>
</tr>
<tr>
<td>Display type</td>
<td>Always Chart for this object type.</td>
</tr>
<tr>
<td>Display subtype</td>
<td>Always Combination Chart for this object type.</td>
</tr>
<tr>
<td>Permissions list</td>
<td>Identifies which users or roles have explicit access permission to the chart. See “Permissions” on page 4 for a complete discussion of permissions.</td>
</tr>
<tr>
<td>Customize column</td>
<td>Use Customize Column to change the name of the value columns, hide a column, or define formatting of the numeric value.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Associated dashboards</td>
<td>Dashboards that present metrics related to the object. See “Associated dashboards” on page 6 for details.</td>
</tr>
<tr>
<td>Include labels</td>
<td>Displays the labels for each item below the category axis. The label values come from the category column definition.</td>
</tr>
<tr>
<td>Include markers</td>
<td>Displays the line markers in the chart.</td>
</tr>
<tr>
<td>Numeric prefix</td>
<td>Text to appear immediately before all numbers on the chart. Useful for currency notations.</td>
</tr>
<tr>
<td>Numeric suffix</td>
<td>Text to appear immediately after all numbers on the chart. Useful for currency notations.</td>
</tr>
<tr>
<td>Horizontal combination (grid) lines</td>
<td>Count of horizontal combination lines to display between the bottom and top of the chart, and behind the bars or lines. The default is 4.</td>
</tr>
<tr>
<td>Custom axis labels</td>
<td>Labels to identify the horizontal (x-axis) and vertical (y-axis) axes. Omit the value to leave the label display blank.</td>
</tr>
<tr>
<td>y-axis minimum and maximum values</td>
<td>Upper and lower range limits of the vertical scale. When references are defined for the chart, they may exceed these limits and thereby force a larger range on the scale. Omitting limits and references uses best-fit values, with zero (0) as the base line.</td>
</tr>
<tr>
<td>Custom label for second y-axis</td>
<td>Label to identify the second y-axis of your chart.</td>
</tr>
<tr>
<td>Custom numeric value for second y-axis</td>
<td>Custom upper and lower range limits of the second y-axis.</td>
</tr>
</tbody>
</table>

**Combination chart thresholds**

Thresholds are visual elements on charts that allow you to quickly see where the presented value is in relation to some target or range of values.

See Chapter 9, “Thresholds,” on page 57 for more information.

Thresholds have these appearances on combination charts:

- **Line Overlays:** Horizontal lines in entire chart (constant value) or just the columns of the category item being plotted (dynamic values).
- **Range Overlays:** Two reference lines and the area between them. When the reference values are dynamic (data-driven), the lines are connected by a vertical line to present an I-beam on top of the category column. When the values are constant, the lines are behind the columns and fill the width of the chart.

**Note:** When a reference value exceeds either of the y-axis minimum and maximum values, the chart size automatically adjusts to accommodate the reference.
Creating a combination chart

When you create a combination chart you identify the values column (or columns for combined charts), and then identify the category column that contains the labels for each point or bar.

Before you can create a combination chart, you must have:

- Create permission for dashboard objects.
- Read permission on the view or cube that you want to create a chart for.
- Read permission on all dimensions used by the cube.

Procedure

1. Open the Dashboard Objects navigation tree and select the Dashboard Objects folder.
2. Click Create Object and select Create Dashboard Object.
3. Select a data source by selecting the view or cube that contains the data this chart will report on, and click Continue.
   
   Note: You can see the data currently in the source by clicking the preview button to the right of the view’s description.
   - Select Chart as the display type.
   - Select Vertical Combination Chart or Horizontal Combination Chart as the display subtype.
   - Click Continue.
4. Select the columns from the view or cube that contain the data to chart. You must select one or more values to chart. You can also select one or more values to chart on the second y-axis.
   
   Chart value (y-axis) columns contain the numbers to represent, such as the total sales or average quantity. For each column on the y-axis, select a chart type to display:
   - Line
   - Bar (for horizontal combination charts)
   - Column (for vertical combination charts)
   - Area
   - Dot
   - Stack: In a stack you can specify values to be stacked by selecting Stack, Group <#>. Items with the same group number will be stacked together. To create multiple stacks, select a different group number. Each time a group number is selected, the group numbers available increase by one. For example, as soon as you select Group 1, Group 2 will be available the next time you access the submenu.
   
   Note: Group numbers automatically adjust downward. For example, if you assign some values to Group 1 and others to Group 4, but none are assigned to Group 2 or Group 3, the Group 4 assignments will display as Group 2 assignments if you edit the data settings.
5. Select a chart category for the x-axis. Category columns contain the names associated with each row in the source, such as product names, months of sales, or business regions. When the chart is based on a view, the category name comes from a column in the view. When the chart is based on a cube, the category is a dimension in the cube, and the default value is a level in the dimension.
6. Optionally, for cubes, define any filters to apply to the data. See "Dimension filters" on page 32 for more information.

7. Click Continue.

8. Set the following object properties. See "Combination chart properties" on page 34 for more information.
   - Assign a name, the location where you want to store the object, and an optional description. See "Using folders" on page 17 for information about how to create folders.
   - Customize column values.
   - Set the permissions for dashboard access. Permissions determine who can see the chart and to what extent they can access it. For more information, see "Permissions" on page 4.
   - Set any dashboard associations with your dashboard object. Associations are dashboards that contain related metrics. For more information, see "Associated dashboards" on page 6.
   - You can choose to include labels and markers for lines in the chart, you can add a prefix or suffix for your numerical values, and define the number of horizontal grid lines that you want to display in the chart.
   - You can also enter custom labels for your first and second x-axis and y-axis, as well as custom minimum and maximum numeric values for your first and second x-axis and y-axis.


10. Save the chart.

**Working with distribution charts**

This section describes the following:
- "Distribution chart properties."
- "Creating a distribution chart" on page 38.

**Distribution chart properties**

Distribution charts have the following object properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the dashboard object. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the object is listed. For more information, see &quot;Using folders&quot; on page 17.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that can contain any text characters. This description appears at the top of the Object Details page when users view the details.</td>
</tr>
<tr>
<td>Display type</td>
<td>Always select Chart for this object type.</td>
</tr>
</tbody>
</table>
### Property Description

**Display subtype**
Always select **Distribution Chart** for this type of object.

*Note:* If this option is not available, check the data source you selected. This option is only available when the data source is a view with two measures and a category. It is not available for cubes.

**Permission list**
Identifies which users or roles have explicit access permission to the object. See "Permissions" on page 4 for a complete discussion of permissions.

**Trend column or customize column**
Use **Customize Column** to change the name of the value columns, hide a column, or define formatting of the numeric value.

**Associated dashboards**
Dashboards that present metrics related to the object. See "Associated dashboards" on page 6 for details.

**Custom label for distribution scale**
This property enables you to create a label for your distribution scale.

**Intervals**
Set the number of intervals for the distribution scale.

**Decimal places (for selected column)**
Sets the number of decimal places to display. Use the column customization tool to set this property.

### Creating a distribution chart
Before you can create a distribution chart, you must have:
- Create permission for dashboard objects.
- Read permission on the view that you want to chart.

**Procedure**
1. Open the **Dashboard Objects** navigation tree and select the **Dashboard Objects** folder.
2. Click **Create Object** and select **Create Dashboard Object**.
3. Select a data source by selecting the view or cube that contains the data this chart will report on, and click **Continue**. For a distribution chart you must choose a view data source. You cannot create a distribution chart based on a cube data source.

   *Note:* You can see the data currently in the source by clicking the preview button to the right of the view’s description.

4. In the top panel, select the following:
   - Select **Chart** as the display type.
   - Select **Distribution Chart** as the subtype.
   - Click **Continue**.
5. Select numeric columns for the y-axis and x-axis.
6. Select a column for the chart category, and click **Continue**.
7. Set the following object properties. See "Distribution chart properties" on page 37 for more information.
- Assign a name, the location where you want to store the object, and an optional description. See “Using folders” on page 17 for information about how to create folders.
- Customize column values and add any trend columns.
- Set the permissions for dashboard access. Permissions determine who can see the chart and to what extent they can access it. For more information, see “Permissions” on page 4.
- Set any dashboard associations with your dashboard object. Associations are dashboards that contain related metrics. For more information, see “Associated dashboards” on page 6.
- Enter a custom label for the distribution scale key that appears above the chart.
- Select the number of intervals to appear on the chart.
  The default is 5.
8. Click Save when finished.

The new chart is immediately available for use in dashboards.

---

**Working with pivot combination charts**

This section describes the following:

- “Pivot combination chart properties.”
- “Creating a pivot combination chart” on page 40.

Pivot combination charts allow you to rotate a chart by clicking the button located in the lower right corner of the data grid for the chart. When you click the button, the chart pivots, allowing you to see the chart from a different angle.

**Pivot combination chart properties**

Pivot combination charts have the following object properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the dashboard object. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the object is listed. For more information, see “Using folders” on page 17.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that can contain any text characters. This description appears at the top of the Object Details page when users view the details.</td>
</tr>
<tr>
<td>Display type</td>
<td>Always Chart for this object type.</td>
</tr>
<tr>
<td>Display subtype</td>
<td>Always Pivot Combination Chart for this object type.</td>
</tr>
<tr>
<td>Permission list</td>
<td>Identifies which users or roles have explicit access permission to the chart. See “Permissions” on page 4 for a complete discussion of permissions.</td>
</tr>
<tr>
<td>Trend column or customize column</td>
<td>Use Customize Column to change the name of the value columns, hide a column, or define formatting of the numeric value.</td>
</tr>
</tbody>
</table>
**Creating a pivot combination chart**

Before you can create a pivot combination chart, you must have:

- Create permissions for dashboard objects.
- Read permission on the view or cube that you want to create a chart for.
- Read permission on all dimensions used by the cube.

**Procedure**

1. Open the **Dashboard Objects** navigation tree.
2. Click **Create Object** and select **Create Dashboard Object**.
3. Select a data source by selecting the cube that contains the data this chart will report on, and click **Continue**. For a pivot combination chart you must choose a cube data source. To see available cube data sources, click **Choose Folder**, then select **Cubes**.

   **Note:** You can see the data currently in the source by clicking the preview button to the right of the view’s description.

4. Select display type **Chart** and display subtype **Pivot Combination Chart**.
5. Click **Continue**.
6. Select one category, then choose **Bar** as the **Chart Type** value for the object.
7. Select a dimension and a dimension level from the source cube for the horizontal axis.

   The list shows all available dimensions defined in the specified data source. You can only choose one dimension.

---

**Property** | **Description**
---|---
Associated dashboards | Dashboards that present metrics related to the object. See “Associated dashboards” on page 6 for details.
Include labels | Indicates whether or not to display the labels for each item below the horizontal axis. The label values come from the category column definition.
Include legend | Indicates whether or not to display the legend for each item.
Numeric prefix | Text to appear immediately before all numbers on the chart. Useful for currency notations.
Numeric suffix | Text to appear immediately after all numbers on the chart. Useful for currency notations.
Horizontal pivot combination (grid) lines | Count of horizontal pivot combination lines to display between the bottom and top of the chart, and behind the bars or lines. The default is 4.
Custom axis labels | Label to identify the x-axis, and y-axis. Omit the value to leave the label display blank.
Custom numeric values | The minimum and maximum numeric values for the y-axis.
Display totals and subtotals | Indicates whether to display totals and subtotals.
8. Select a dimension and a dimension level from the source cube for the vertical axis.

   Note: The dimension for the vertical axis must be different from the dimension for the horizontal axis.

9. Optionally, define filters to apply by default to the data. For more information about filters, see “Dimension filters” on page 32.

10. Click Continue.

11. Assign a name, the location where you want to store the object, and an optional description. See “Using folders” on page 17 for information about how to create folders.

12. You can set the following object properties. See “Pivot combination chart properties” on page 39 for more information.
   - Customize column values and add trend columns.
   - Set the permissions for dashboard access. Permissions determine who can see the chart and to what extent they can access it. For more information, see “Permissions” on page 4.
   - Set dashboard associations with your dashboard object. Associations are dashboards that contain related metrics. For more information, see “Associated dashboards” on page 6.
   - Define labels and legends in the chart, add a prefix or suffix for numeric values, and define the number of horizontal grid lines to display in the chart.
   - Define labels for the x-axis and y-axis, and minimum and maximum numeric values for the x-axis and y-axis.
   - Display totals and subtotals in the chart.

13. Click Save.

   The new chart is immediately available for use in dashboards.

---

**Working with geography charts**

Geography charts map their presentation onto a geographic map using location information, where a column's data (a category) is displayed on the map according to the geographic location with which the data are associated. Geography charts can display the geographic information at several levels of accuracy.

Locations with data are indicated by color and marker shape. If you use the default marker shape, low geographic accuracy (for example, state) is indicated by a blue circle and high geographic accuracy (for example, address) is indicated by a red push pin. If you use a custom marker shape and you have a watchpoint defined, the color of the marker is determined by the watchpoint. If you use a custom marker shape and there is no watchpoint defined or the watchpoint has not been triggered, the color of the marker is grey. If you have more than one watchpoint defined for a dashboard, and there are overlapping ranges, the color for the first threshold to be reached displays. The color does not change if the threshold for the subsequent watchpoint is reached. When you define more than one watchpoint for a dashboard, ensure that the thresholds do not overlap.

Placing the pointer over a marker displays a balloon with the data for that geographic location inside it.

This section describes the following:
- “Geography chart properties” on page 42
**Creating a geography chart.**

**Geography chart properties**

Geography charts have the following object properties.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the dashboard object. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the object is listed. For more information, see &quot;Using folders&quot; on page 17.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that can contain any text characters. This description appears at the top of the Object Details page when users view the details.</td>
</tr>
<tr>
<td>Display type</td>
<td>Always Chart for this object type.</td>
</tr>
<tr>
<td>Display subtype</td>
<td>Always Geography Chart for this object type.</td>
</tr>
<tr>
<td>Permission list</td>
<td>Identifies which users or roles have explicit access permission to the chart. See &quot;Permissions&quot; on page 4 for a complete discussion of permissions.</td>
</tr>
<tr>
<td>Trend column or customize column</td>
<td>Use Customize Column to change the name of the value columns, hide a column, or define formatting of the numeric value.</td>
</tr>
<tr>
<td>Associated dashboards</td>
<td>Dashboards that present metrics related to the object. See &quot;Associated dashboards&quot; on page 6 for details.</td>
</tr>
<tr>
<td>Marker shape</td>
<td>Sets the icon used to mark locations on the Geography Map chart. The default selection is none, which will display the default icon for the locations on the map.</td>
</tr>
</tbody>
</table>
| Marker size               | Sets the marker size. Values are:  
- Small  
- Medium  
- Large  
- Extra Large  
You cannot select a marker size if the marker shape is set to none. |

**Geography chart thresholds**

Thresholds are visual elements on charts that allow you to quickly see where the presented value is in relation to some target or range of values.

See "Chapter 9, “Thresholds,” on page 57" for a detailed discussion. Define geography map chart thresholds in step five of the chart's editor. The threshold information is displayed in the balloon when a location bubble is selected.

**Creating a geography chart**

Before you can create a geography chart, you must have:

- Create permissions for dashboard objects.
- Read permission on the view or cube that you want to create a chart for.
- An available data source that is a cube.
• A cube with exactly one geo-mapped dimension.
• Read permission on the geo-mapped dimension used by the cube.

For more information, see the topic about Permissions in the IBM Cognos Real-time Monitoring Modeling Reference.

A geography-mappable dimension is a dimension that has been enabled for geography charts and has Geo Categories set to a category other than Not Used. The Geo Categories are configured in IBM Cognos Real-time Monitoring Workbench.

For more information, see the topic about geography maps in the IBM Cognos Real-time Monitoring Workbench User Guide and the topic about geo categories in the IBM Cognos Real-time Monitoring Modeling Reference.

**Procedure**

1. Open the Dashboard Objects navigation tree and select the Dashboard Objects folder.
2. Click Create Object and select Create Dashboard Object.
3. Select a data source by selecting the cube that contains the data this chart will report on, and click Continue. For a geography chart you must choose a cube data source. You cannot create a geography chart based on a view data source. To see available cube data sources, click Choose Folder, then select Cubes.
   
   **Note:** You can see the data currently in the source by clicking the preview button to the right of the view’s description.
4. In the top panel, select the following:
   - Select Chart as the display type.
   - Select Geography Chart as the subtype.
   - Click Continue.
   The bottom panel updates to show a sample display based on the above selections.
5. In the top panel, select the data for the chart.
6. Select a dimension from the source cube and a default level (such as region, state, or city). The dimension must be a dimension with geo mapping.
7. Optionally, you can define any filters to apply by default to the data.
   
   **Note:** For more information, see “Dimension filters” on page 32.
8. Click Continue.
9. Set the following object properties. See “Geography chart properties” on page 42 for more information.
   - Assign a name, the location where you want to store the object, and an optional description. See “Using folders” on page 17 for information about how to create folders.
   - Customize column values and add any trend columns.
   - Set the permissions for dashboard access. Permissions determine who can see the chart and to what extent they can access it. For more information, see “Permissions” on page 4.
   - Set any dashboard associations with your dashboard object. Associations are dashboards that contain related metrics. For more information, see “Associated dashboards” on page 6.
You can also set the geo marker shape and size.

10. Optionally, define a threshold to appear on the chart. See “Combination chart thresholds” on page 35 for examples. Continue to the next step.

11. Click Save when finished.

The new chart is immediately available with geo mapping for use in dashboards.

Editing charts

You must have update permissions for a chart before you can edit it.

Procedure

1. Open the Dashboard Objects navigation tree and select the Dashboard Objects folder.

2. You can edit a chart in the following ways:
   - If the chart is displayed in Detail View, click Activities, then select Edit > type of setting from the drop-down menu.
   - If the chart is displayed in a dashboard, click the down arrow in the upper right corner, then select Edit > type of setting from the drop-down menu.
   - If the Dashboard Objects view is displayed in the main panel, click a chart name in the list, click Edit Object > type of setting from the drop-down menu.

   Each method takes you to the same screen that was used to define the chart.

3. Modify the settings.

4. Click through to the last screen and click Save.
Chapter 6. Indicators

A dashboard indicator is a visual representation of a number’s position on a scale. Indicators are useful for identifying progress towards a target and quantity levels within a range.

Viewing indicators

You can use the following types of indicators:

- Speedometers present a radial scale.

- Thermometers present a horizontal or vertical linear scale.

- Traffic lights present a vertical three state scale.
The detail view of an indicator contains a table that shows the value in the source that the indicator is built on. The value represented is a single cell in the source view or cube.

**Note:** In views, when there are multiple rows in the source, the value is the latest (most recently added) in the column. In cubes, the indicator applies to the face of the cube on which the indicator is defined.

## Indicator properties

Indicators have the following object properties.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the indicator. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the object is listed. For more information, see “Using folders” on page 17.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that may contain any text characters. This description appears at the top of the Object Details page when users view the details.</td>
</tr>
<tr>
<td>Permission list</td>
<td>Identifies which users or roles have explicit access permission to the indicator. See “Permissions” on page 4 for a complete discussion of permissions.</td>
</tr>
<tr>
<td>Trend column or customize column</td>
<td>Use Customize Column to change the name of the value columns, whether to hide a column, as well as separating thousands with a comma, for example 1000 appears as 1,000. Also set the number of decimal places that you want to display.</td>
</tr>
<tr>
<td>Associated dashboards</td>
<td>Dashboards that present metrics related to the object. See “Associated dashboards” on page 6 for details.</td>
</tr>
<tr>
<td>Scale angle</td>
<td>Speedometers only. Angle of the arc of the indicator's display.</td>
</tr>
<tr>
<td>Numeric prefix</td>
<td>Text to appear immediately before numbers on the indicator. Useful for currency notations.</td>
</tr>
<tr>
<td>Numeric suffix</td>
<td>Text to appear immediately after numbers on the indicator. Useful for currency notations.</td>
</tr>
<tr>
<td>Intervals</td>
<td>Speedometers and thermometers only. Count of major steps in the scale. Intervals include a numeric value describing the value of the step on the scale.</td>
</tr>
<tr>
<td>Marks</td>
<td>Speedometers and thermometers only. Count of minor steps between interval steps on the scale.</td>
</tr>
</tbody>
</table>
### Indicator thresholds

Thresholds are visual elements that allow you to quickly see where the presented value is in relation to some target or range of values. On indicators, thresholds have the appearances described in the following table.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Threshold Targets</th>
<th>Threshold Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speedometers and thermometers</td>
<td>Marks in the scale.</td>
<td>Filled areas between upper- and lower-limits, or to the extent of the scale.</td>
</tr>
<tr>
<td>Traffic light</td>
<td>Turn on the associated lamp when the data value exactly matches the target.</td>
<td>Turn on the associated lamp when its data value is within the range, inclusive.</td>
</tr>
</tbody>
</table>

Define indicator thresholds in step five of the indicator’s editor, which is accessed by clicking the Create Threshold button in step four. For a detailed discussion about thresholds and their behaviors, see Chapter 9, “Thresholds,” on page 57.

### Creating an indicator

To create an indicator you must have the following permissions:

- Create permission for dashboard objects.
- Read permission on the view or cube that you want to create an indicator for.
- Read permission on all dimensions in the cube.

For more information, see the topic about Permissions in the IBM Cognos Real-time Monitoring Modeling Reference.

**Procedure**

1. Open Dashboard Objects navigation tree and select the Dashboard Objects folder. Click Create Object, and select Create Dashboard Object.
2. Select a data source:
   - Select a view or cube that contains the data this indicator will report on.
   - Click Continue.

   **Note:** You can see the data currently in the source by clicking the preview button to the right side of view’s description.
3. Select Indicator as the display type for the object, and select Speedometer, Thermometer, or Traffic Light as the subtype, and click Continue.
4. Select the column from the view that contains the data value to chart, and click Continue.
5. Set the following indicator properties. See “Indicator properties” on page 46 for more information.
• Assign a name, the location where you want to store the object, and an optional description.
• Customize column values.
• Set the permissions for dashboard access. Permissions determine who can see the indicator and to what extent they can access it. For more information about permissions, see “Permissions” on page 4.
• Set any dashboard associations with your dashboard object. Associations are dashboards that contain related metrics. For more information, see “Associated dashboards” on page 6.
• Set the appearance properties for the indicator. For more information about appearance type properties, see “Indicator properties” on page 46.

6. Select Create Threshold to define thresholds to control the appearance of the indicator. For examples, see “Indicator thresholds” on page 47.

7. Click Save.
   The indicator is immediately available for use in dashboards.
Chapter 7. Tables

Tables show the contents of a business view or a cube. As data in the view or cube changes, the table updates to reflect the new values.

A scorecard is a type of table that allows you to monitor multiple indicator metrics by displaying the status and trends of a number of metrics at one time. For more information about scorecards, see “Scorecards” on page 50.

Pivot tables allow you to view a single measure against two dimensions in a cube. You can drill down and up, and change the dimensions on the axes. Click the button in the lower right corner of the first column of the table to switch the horizontal and vertical axes. For more information about pivot tables, see “Creating a pivot table” on page 52.

Table properties

The following table lists the available table properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the table. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the table is listed. For more information, see “Using folders” on page 17.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description. This description appears at the top of the Object Details page when you view the details.</td>
</tr>
<tr>
<td>Trend Column</td>
<td>Used to compare the values of one column to the values of another column. Typically used to show the direction of a metric. To do this you must create an appropriate comparison field in Cognos Real-time Monitoring Workbench.</td>
</tr>
<tr>
<td>Permissions List</td>
<td>Identifies which users or role have explicit access permission to the table. For a complete discussion of permissions, see “Permissions” on page 4.</td>
</tr>
<tr>
<td>Associated Dashboards</td>
<td>Dashboards that present metrics related to the object. For more information about associated dashboards, see “Associated dashboards” on page 6.</td>
</tr>
</tbody>
</table>

Working with tables

When you create a table, you first identify the underlying business view, and then select which columns from the table to include in the display.

When viewing a table, you can change the order of the items in the list by clicking the column heading. If you have permission to create dashboard objects, you can copy the table with the Save As button. If you have read-write permission on the table, you can alter it with the Edit Object button.

Tables based on view data sources

A table that has a view as its data source shows each row of the current view. By default, a view shows only the rows associated with the most recent event.
Tables based on cube data sources

A table that has a cube as its data source contains one row for each category (element in the current dimension level) as defined in the cube. You can select the dimensions and levels to present. You can define filters that limit the data presented into a two dimensional table from a multi-dimensional cube. The data source for a pivot table must be a cube with two or more dimensions.

Scorecards

A scorecard allows you to monitor multiple indicator metrics by displaying the status and trends of a number of metrics at one time. The primary feature of a scorecard is its ability to show the current relative status of many rows in a table while you are viewing the current trend of many measures simultaneously.

You can create a scorecard by defining the following columns in a table:

Scorecard indicator

A scorecard indicator uses an icon to show the status of a scorecard. The status of the scorecard is indicated by the color and the shape of the icon. For example, a warning is indicated by a red square; a caution is indicated by a yellow triangle; and satisfactory is indicated by a green circle. When you create a scorecard, you specify the value or range of values that determine a particular status. The value or range of values is set by defining thresholds. You can include one scorecard indicator per table.

Trend indicator

A trend indicator shows how the value of one column compares to the value of another column. The trend indicator shows if the value is greater than, unchanged, or less than the other value. You can have trend indicators for each column in a table.

Categories

Categories are the general values to report on. They are determined by the selected dimension level. When you create a table, you select the dimension level to display as the default category.

Filters

Filters limit the categories by showing only the result for items matching the filter conditions.

Creating a table or a scorecard

Before you can create a table or scorecard, you must have the following permissions:

- Create permission for dashboard objects.
- Read permission for the view or cube that you want to use in the table.
- Read permission on all dimensions in the cube.

For more information, see the topic about Permissions in the IBM Cognos Real-time Monitoring Modeling Reference.
Procedure

1. Open the Dashboard Objects navigation tree.
2. Click Create Object and select Create Dashboard Object.
3. Select the view or cube that contains the data this table will report on.

   Note: You can see the data currently in the source by clicking the preview button to the right of the view or cube's description.

4. Click Continue.
5. In step 2, select display type Table and display subtype Scorecard / Basic Table.
6. Click Continue.
7. In step 3, select the columns to include in the table.
8. To create a scorecard, click Add Scorecard Indicator.
9. If the data source is a view, select a category column or select No Categories.
10. If the data source is a cube, do the following:
    • Select one dimension for the category column and set a default level for it.
    • Optionally define dimension filters by clicking Dimension Filters.
11. Optionally apply measure filters.
12. Click Continue.
13. In step 4, assign a name, location, and an optional description for the table.
14. To customize the column values, do the following:
    • Click the column name.
    • Click Customize Column.
    • You can change the column name, hide the column, and specify numeric formatting for the column.
    • Click OK.
15. To set a trend indicator for a column, do the following:
    • Click the column name.
    • Click Add Trend Column.
    • Optionally, change the name of column.
    • Select the Display an icon as the column header check box.
    • Select a column to compare this column to or specify a numeric value to compare it to.
    • Specify numeric formatting for the column.
    • Select colors for the trend indicators.
16. To specify who can access the table, click Add Permissions, and add users and roles to the permissions list. For more information about permissions, see “Permissions” on page 4.
17. To associate dashboards with the table, select one or more dashboards from the list. For more information about associated dashboards, see “Associated dashboards” on page 6.
18. To create a threshold target or threshold range, click Create Threshold. For information about how to create a threshold, see “Creating thresholds” on page 58.

   Note: If you added a scorecard indicator to the table, you must create a threshold target or threshold range for it.
19. Click Save.
Creating a pivot table

The data source for a pivot table must be a cube with two or more dimensions. To create a pivot table you must have the following permissions:

- Create permission for dashboard objects.
- Read permission for the cube that you want to use in the table.
- Read permission on all dimensions in the cube.

For more information, see the topic about Permissions in the IBM Cognos Real-time Monitoring Modeling Reference.

Procedure

1. Open the Dashboard Objects navigation tree and select the Dashboard Objects folder.
2. Click Create Object and select Create Dashboard Object.
3. Select a cube as the data source.

   Note: You can see the data currently in the source by clicking the preview button to the right of the view or cube's description.

4. Click Continue.
5. In step 2, select display type Table and display subtype Pivot Table.
6. Click Continue.
7. In Step 3, select a measure to display in the pivot table.
   The table values are the measures that will display in the table. For example, the total number of sales for a product.
8. Select the horizontal dimension and level.
   The horizontal dimension determines the names of the columns in the table. For example, if a cube has a product dimension with a family level that contains product categories, the table could display columns of hardware and lumber if they are in the family dimension of the cube.
9. Select the vertical dimension and level.
   The vertical dimension determines the names used for each of the rows in the table. For example, if a cube has a location dimension with a city level that you use for your vertical dimension, the table will have a row in the table for each city.
10. Optionally, select any default filters. For more information about filters, see “Filters” on page 50.
11. Click Continue.
12. In step 4, assign a name, location, and optional description for the table.
13. To customize the column value, do the following:
   - Click the column name.
   - Click Customize Column.
   - In the Customize Column window, you can change the column name and specify numeric formatting for the column.
   - Click OK.
14. To specify who can access the table, click Add Permissions, and add users and roles to the permissions list. For more information about permissions, see “Permissions” on page 4.
15. To specify dashboards that are related to this table, select the check box beside the name of a dashboard.
16. To display totals and subtotals in the table, select the **Yes** radio button.
17. Click **Save**.
Chapter 8. External portlets

External portlets are objects external to IBM Cognos Real-time Monitoring. In IBM Cognos Real-time Monitoring Dashboard, you can provide a link to these objects so that they can be displayed in your dashboards.

External portlet properties

External portlets have the following object properties.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the external portlet. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Store in</td>
<td>Specifies the folder in the Navigation Tree where the table is listed. For more information, see “Using folders” on page 17.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that may contain any text characters. This description appears at the top of the detail page for the object when users view the details.</td>
</tr>
<tr>
<td>External Portlet URL</td>
<td>URL that specifies the location of the external portlet you want to access from Cognos Real-time Monitoring Dashboard. Note: In some cases, the location specified by the URL may occupy the entire frame of your browser. This depends on the scripts that the location might be running.</td>
</tr>
<tr>
<td>Single sign-on</td>
<td>Passes dashboard log-in information to the external portlet for single sign-on.</td>
</tr>
<tr>
<td>Permission list</td>
<td>Identifies which users or role have explicit access permission to the external portlet. See “Permissions” on page 4 for a complete discussion of permissions.</td>
</tr>
<tr>
<td>Associated dashboards</td>
<td>Dashboards that present metrics related to the object. See “Associated dashboards” on page 6 for details.</td>
</tr>
</tbody>
</table>

Creating an external portlet

To create an external portlet you must have create permission for dashboard objects.

For more information, see the topic about Permissions in the IBM Cognos Real-time Monitoring Modeling Reference.

Procedure

1. Open the Dashboard Objects in the Navigation Tree and select the Dashboard Objects folder, click Create Object, and select Create External Portlet.
2. Set the following properties. See “External portlet properties” for more information.
• Assign a name.
• Select a folder in which to place the external portlet object by clicking the Choose Folder button.
• Optionally, enter a description for your external portlet.
• Enter the URL for the external portlet.
• Set the permissions for dashboard access. Permissions determine who can see the external portlet and to what extent they can access it. See “Permissions” on page 4 for details.
• Set any dashboard associations with the external portlet. Associations refer to dashboards that contain related metrics. See “Associated dashboards” on page 6 for details.

3. Click Save.

The external portlet is immediately available for use in dashboards.

Note: External portlets do not refresh automatically. They refresh each time a dashboard object is requested.
Chapter 9. Thresholds

This chapter describes thresholds, which are visual elements and indicators on charts.

About thresholds

Thresholds are visual elements on charts and indicators that allow you to quickly see where the presented value is in relation to some target or range of values.

For example, this bar chart shows a target line and a target range, each applying to the entire chart.

Note: Thresholds are not available for pivot combination charts or pivot tables. For these dashboard objects, consider using watchpoints. See Chapter 14, “Watchpoints,” on page 71 for details.

Threshold values

Threshold values are numbers that are either the same (constant) for all categories on the chart or dynamic (data driven) to the categories being presented:

- Constants
  A constant threshold value is the same for all presentations, regardless of the values of the category items. For example, on a grid chart a constant region or line appears behind the bars and applies to the entire chart.

- Dynamic
  A dynamic value is specific to the category item being presented, and the value is retrieved from a data source when the item is drawn. To use a dynamic value, you first must have threshold relationships associated with the source cube or view in the IBM Cognos Real-time Monitoring Workbench. See the “Dynamic threshold values” on page 58 for details about creating threshold relationships.

The following table summarizes the differences between the two types of values.
### Dynamic threshold values

Dynamic values allow thresholds to be specific to the category item being presented, unlike constant values which are applied to the entire set of category items. When the dashboard draws the chart or indicator it retrieves the value of each item to display. Further, when the item has an associated dynamic threshold, the threshold value is retrieved and presented as well.

For example, when charting the total sales for a set of products, you can also show the sales targets for each product as a threshold target. When the dashboard draws the chart, the threshold values for each product are presented as well.

**Note:** To use a dynamic value, you first must have a threshold relationship associated with the measure to chart. Associate threshold relationships with measures to chart by creating them in the source cube or view in IBM Cognos Real-time Monitoring Workbench. For more information about creating relationships, see the topic about viewing threshold relationships in the *IBM Cognos Cognos Real-time Monitoring Workbench User Guide*.

When you create a dashboard object, you select the data source and select the data to present, such as the values to chart. If the values to chart have associated threshold data, those thresholds appear in the **Edit Thresholds** page of the object editor. To include a data driven threshold, create a threshold target or range and select the threshold from the dynamic data list.

### Scorecard indicators

When you add a scorecard indicator to a table, you must define a threshold for it. The threshold determines the status displayed by the scorecard indicator.

For more information about scorecards, see “Scorecards” on page 50.

### Creating thresholds

Before creating a threshold, you must have the following permissions:

- Read and edit permission for the dashboard object.
- Read permission on the view or cube that will be the source data for the threshold.
- Read permission on all dimensions in the cube.
For more information, see the topic about Permissions in the *IBM Cognos Real-time Monitoring Modeling Reference*.

Optionally, to create a dynamic threshold, you need an existing threshold relationship defined with the source view or cube. For more information, see “Dynamic threshold values” on page 58.

### Procedure

1. Open the threshold editor for the object.
   - When creating or editing the object, go to **Create Thresholds**.
   - When viewing the object, select **Activities, Edit, Edit Threshold**.
   - When viewing the object name in the Dashboard Objects list, select the object and select **Edit Object, Edit Threshold**.
2. To create a threshold target, click **Add Threshold Target**.
3. To create a threshold range, click **Add Threshold Range**.
4. Assign a label that identifies the threshold within the object.
5. If you do not want the column to appear in the data grid, select the **Hide this threshold column** check box. The data for the column will still appear in the chart.
6. If you are defining a threshold for a scorecard indicator, do the following:
   - Select the **Represent this threshold as a status indicator** check box.
   - Select the measure to monitor from the drop-down list.
   - Select one of the following comparison operators:
     - `=`: Value is within the range (including the range minimum and range maximum) or equal to the target value.
     - `>:` Value is greater than the range maximum or target value.
     - `<:` Value is less than the range minimum or target value.
     - `>=:` Value is greater than or equal to the range maximum or target value.
     - `<=`: Value is less than or equal to the range minimum or target value.
     - `<>`: Value is less than the range minimum or greater than the range maximum or not equal to the target value.
   - Select an icon to display when the threshold is crossed.
7. Specify the threshold data:
   - For a dynamic value, select from the list.
   - For a constant value, enter a numeric value.
   - For a range, specify a range minimum value and a range maximum value.
8. If available, select the color for the threshold on the object’s presentation.

   **Note:** For traffic lights, the three colors correspond to the lamps in the light: red, yellow, or green.
9. Click **OK**.
10. Click **Save**.

    The threshold is immediately applied to the object.
Chapter 10. Process diagrams

This chapter describes process diagrams that show steps or actions that accomplish a task.

About process diagrams

Process diagrams graphically show the steps or actions that accomplish a task, such as a four-step process for making an approval request, where an approval is requested (step 1), approved or rejected (step 2), reviewed (step 3), and completed as an approved or rejected approval (step 4). Below each diagram is a table of statistics about each step in the process. You can also view the statistics for a specific task by pointing to it in the diagram.

A real transaction through a process (such as a specific request for approval) is called a process instance. To query the status of a specific process instance, see "Querying a process status."

Note: For information about processes and how they work in IBM Cognos Real-time Monitoring, see the Cognos Real-time Monitoring Workbench documentation.

Creating a process diagram

You create process diagrams in the Process Diagram Manager.

The following prerequisites apply:

- Process definitions must already be defined in IBM Cognos Real-time Monitoring Workbench. A process definition tells Cognos Real-time Monitoring Dashboard the steps to diagram and associates the diagram with the source view or cube that provides the process statistics.
- You need at least Read permission on the view or cube that determines the process instance statistics.

For more information, see the topic about permissions in the IBM Cognos Real-time Monitoring Workbench Modeling Reference.

Procedure

1. Open the Process Diagram Manager and click Create Diagram.
2. Select the process definition to use.
3. Identify the columns from the source view or cube to include in the statistics table and the individual step-statistics in the diagram.
4. Name the diagram, and optionally, provide a description.
5. Save the process diagram.

The new diagram immediately appears, and the statistics update as process instance details arrive in the system.

Querying a process status

When enabled, you can query the status of a specific process instance.
**Procedure**

1. At the top of the process diagram detail view, click **Activities**.
2. From the pop-up menu, select **Search for Process Instance**.
Chapter 11. Business rules

This chapter describes business rules for monitoring data streams and producing messages that describe alert conditions.

About business rules

Business rules monitor data streams looking for exceptional business conditions and produce alert messages that describe the conditions when they exist. Further, rules can monitor a found condition and identify when it no longer exists.

In IBM Cognos Real-time Monitoring Dashboard, you can create business rules from templates that predefine conditional logic. You pick the rule condition and identify the values to test. The system notifies you whenever the condition is met. For example, with the rule "When order total is greater than amount" you identify the value of amount, then receive notifications every time an order is larger than the amount you chose.

This section covers creating business rules from templates and managing the rules in Cognos Real-time Monitoring Dashboard. Rule templates allow an advanced user to create a complex rule condition and define parameters for certain values so that Cognos Real-time Monitoring Dashboard users can create customized instances of the template. For example, a user wants to instantiate a business rule where the sales amount is greater than $20,000, whereas another user wants to be notified for any sales order greater than $5,000. Business rule templates are created in Cognos Real-time Monitoring Workbench. For more information, see the IBM Cognos Real-time Monitoring Workbench User Guide.

Attention: IBM Cognos Real-time Monitoring supports another kind of business rule: rules defined and managed entirely by the Scenario Modeler in IBM Cognos Real-time Monitoring Workbench. For more information, see the technical documentation for the workbench.

The Business Rule Manager lists the rules available to you and is where you create, manage, and delete them.

Deleting a business rule does not affect alert messages in the Alert Manager. Any messages in the Alert Manager generated from a business rule remain in the Alert Manager until removed.

Creating a business rule

You create business rules in the Business Rule Manager.

You need at least Read permission to the business activity in the Scenario Modeler where the rule template is defined.

For more information, see the topic about permissions in the IBM Cognos Real-time Monitoring Workbench Modeling Reference and the topic about working with rule templates in the IBM Cognos Real-time Monitoring Workbench User Guide.
Procedure
1. Open the Business Rule Manager and click Create Business Rule.
2. Select the rule template to use.
3. Identify the parameter values for the rule.
4. Name the rule, and optionally provide a description.
5. Save the new rule.

The new rule appears in the Business Rule Manager, and the new rule immediately starts looking for new exceptional conditions.

Attention: Business rules are based on the definition of the rule template at the time of creation. Any subsequent changes to the template (including its alert message or reportlet) do not affect the existing business rules created from that template.
Chapter 12. Alert messages

Alert messages are notifications of exceptional events in your business activities. They can be a simple message indicating that an event has occurred, or they can be detailed with contextual information that describes why the event happened or provide options for responding to the exception.

Interacting with alerts

The IBM Cognos Real-time Monitoring Dashboard provides two places for interacting with alerts:

- Every dashboard can list the alert notifications that you have received. Hide or open the list by clicking the alert list icon . When the list is open, double-click a notification to read its message in a new window.

  You can specify whether to show or hide the list by default when you log in with your Account Settings. For more information, see “Account settings” on page 3.

- The Alert Message Manager lists and displays messages and is where you change your notification profiles and define each alert's external delivery options. Click a notification in the navigation tree to list just the messages received for that alert, or click All Alerts to list all of the messages that you have received.

  When viewing a message, you can open a task to manage the exception, delete the message, and if available, acknowledge it. See “Viewing notification details” on page 66 for information about how to respond to an alert notification.

Alert messages list

The Alert Messages List on dashboards and the Alert Manager shows the alert notifications that you have received.

Unread messages appear in bold. Icons in the first column identify the state and type of the alert. The second column lists the subject of the alert. The third column identifies the severity of the alert. The fourth column displays the time at which the alert was activated. The last column indicates notifications that need to be acknowledged or that have been acknowledged.

The three types of alerts messages are:

- Raised alert
  A raised alert Indicates when a threshold is crossed. Subsequent alert messages will not be sent until this specific alert is reset or lowered.

- Lowered alert
  A lowered alert resets a raised alert condition that may or may not be the same threshold as the raised alert defined.

- Send an alert each time a condition is met
  An alert is triggered when a threshold is crossed and automatically reset on each trigger. If more conditions exist which continue to exceed the threshold condition, additional alerts are generated on each event update.
Attention: This type of alert is marked as acknowledged upon receipt. The number of alert instances that are displayed is configurable, as described in the IBM Cognos Real-time Monitoring Workbench Modeling Reference. The default is to display the first 200 messages.

Steps to respond to a raised alert

Procedure
1. Open the message and click the link in the message body.
2. Select Activities, Acknowledge when viewing the notification.
3. Click the acknowledgment button next to an alert in the list.
   In the Alert Message Manager, you can filter the list to show only the notifications that belong to a specific alert by clicking the alert in the navigation tree. Further, selecting a notification in the list displays its message below the list.

Step to display the notification details in a new window:

Procedure
In either a dashboard or the Alert Manager, double-click the notification.

Viewing notification details

The notification details window, which appears when you double-click a notification, displays the alert notification message and provides options for responding to the alert. From this window, you can:

- View the message when it is activated (or, for a lowered alert, when it was reset).
- Permanently delete the message.
- Assign a task to the message. Tasks allow you and another user to track and manage an event identified by an alert notification. For more information, see Chapter 13, "Tasks," on page 69.
- Initiate a process by sending the message to an external web service method for handling. For more information, see "Initiating processes" on page 7.
- Acknowledge a message requiring acknowledgment. For more information, see "Alert messages list" on page 65.

Note: Deleting a message permanently removes it from your list. If you do not delete the message, the system will eventually purge it based on the limit of days defined by your system administrator. For more information, see the IBM Cognos Real-time Monitoring Workbench documentation.

Setting notification properties

The Notification Properties page lists the business rules and alerts available to you, which of them you are currently subscribed to, and identifies where their notifications are sent.

You can access the Notifications Properties page by clicking the Edit Notifications Properties button in the Alert Manager.
There are two kinds of notifications:

- Mandatory
  You always receive mandatory notifications.

- Optional
  You can unsubscribe and not receive these notifications.

**Procedure**

Edit the associated alert using the **Scenario Modeler** in IBM Cognos Real-time Monitoring Workbench.
For more information, see the topic about the Scenario Modeler in the *IBM Cognos Real-time Monitoring Workbench User Guide*.

**Assigning delivery profile for notification**

Notifications are always sent to at least one of your delivery profiles (such as the Dashboard, e-mail, or text messaging), and can be sent to multiple profiles.

**Procedure**

1. In the **Alert Manager**, click **Edit Notification Properties**.
2. Select a **Notification**, then click **Edit Delivery Profiles**.
3. Assign one or more **Selected Delivery Profiles**.
4. Save the change.

   **Note:** Define your delivery profiles from the **Account Settings** page. For more information, see “Delivery profiles list” on page 4.

**Suspending external notification delivery**

You can temporarily suspend delivery of one or more optional alerts. This is useful if you are going to be away from your message system for a length of time.

**Note:** Notifications are always delivered to the dashboard.

**Procedure**

1. In the **Alert Manager**, click **Edit Notification Properties**.
2. Select a notification then click **Edit Delivery Profiles**.
3. Delete all **Selected Delivery Profiles**.
4. Save the change.

   When you are ready to receive alerts again, reassign delivery profiles to the alerts.

**Unsubscribing from an alert**

Perform the following steps to unsubscribe from an alert.

**Procedure**

1. In the **Alert Manager**, click **Edit Notification Properties**.
2. Select a notification, then click **Edit Delivery Profiles**.
3. Delete all **Selected Delivery Profiles**.
4. Save the change.
**Attention:** Use the alert editor in Cognos Real-time Monitoring Workbench to restore users to an alert's subscription list.
Chapter 13. Tasks

This chapter describes tasks for tracking and managing events.

About tasks

Tasks allow you and other users to track and manage an event identified by either an alert notification or a dashboard object. This collaboration allows you to work on a resolution to the event and to track the status of that resolution.

IBM Cognos Real-time Monitoring Dashboard provides two places for interacting with tasks:

- Every dashboard can list the incomplete tasks that you are tracking. Hide or open the list by clicking the task list icon. The icon is red when you have unread tasks and green when they have all been reviewed. When the list is open, double-click on a task to read its details in a new window.

  You can specify whether to show or hide the list by default when you log in with your account settings. For more information, see "Account settings" on page 3.

- The Task Manager lists and displays tasks. Click a task in the navigation tree to select the task in the task list and to display the task's details below the list. Click a folder to see just the complete or incomplete tasks, or click All Tasks to see all of the tasks you are tracking.

The rest of this topic discusses:

- "Viewing the task list."
- "Viewing task details."
- "Creating tasks" on page 70
- "Managing tasks" on page 70

Viewing the task list

The task list on dashboards and on the Task Manager shows the tasks that you are tracking. Updated tasks (ones with new messages or status changes) appear in bold. Completed tasks have a green icon, while incomplete ones are red. Filter the list to see only the tasks that are complete or incomplete by clicking the appropriate folder in the navigation tree.

Select a task in the list to display its details below the list, or double-click the task to display the details in a new window.

Viewing task details

The task details window displays information about the task and shows the original alert message or dashboard object presentation from which the user initiated the task. From this window you can do the following:

- View the task, its follow-up messages, when it was created and who owns it, its status and severity, and when it was last changed.
- Change task details including the severity, ownership, status, and additional users to include, all from the Activities menu.
• Permanently delete the task from your lists.

**Note:** Deleting a task does not remove the task from the list of the other user also tracking the task. As such, if they subsequently add comments or change the severity, you will not see the change in the list although you will continue to receive notifications of changes.

---

## Creating tasks

Tasks track and manage an event identified by an alert message or dashboard object.

**Procedure**

1. When viewing a dashboard object or alert message, click **Take Action > Assign Task**.
2. Identify the user to own the task and any additional users who will track it. All recipients receive update notifications to their default delivery profiles.

   **Note:** When the user's default profile is a web service (such as when the user is an application receiving messages through the service) the message is sent with data from the alert and the task. Further, when the service acknowledges receipt of the message, the task is marked as complete, and the creator receives that notification.

3. Assign a severity of **Low**, **Normal**, or **High**.
4. Provide a brief description of the task in the **Subject** field and enter the first comment associated with the task.
5. Optionally, identify a deadline for when the task should be completed.
6. Save the task to immediately put it into your list and the other users' Task List. To subsequently change a task, follow the instructions in "Managing tasks."

---

## Managing tasks

As more information about the event being tracked becomes available, use the task details page to modify the task's severity and status, add a comment, or delete the task.

**Procedure**

1. Under **All Tasks** in the **Task Manager**, select **Completed Tasks** or **Incomplete Tasks**.
2. Select **Update Task** from the **Activities** menu.
3. Make changes in the **Update Task** dialog box.
4. Click **OK**.

   When you add a comment, change severity, or change status to complete, the change appears in the other user's session when that user opens the task, or when the user's task list refreshes. For more information about changing the refresh rate, see "Account settings" on page 3.

   When you delete a task, it is permanently purged from your task list. It is not removed from the other user's list. As such, if the other user subsequently adds comments or changes the severity, you will not see the change in the task list although you will continue to receive notification of changes.
Chapter 14. Watchpoints

Watchpoints are business rules associated with dashboard objects that send an alert message, color a cell in a data grid, or both, when a value in the object is at or near a target value.

About watchpoints

Watchpoints monitor the value of the measure of a specific category item of a dashboard object, such as the Sales measure of the Nails item in the Product category. A watchpoint alert message is displayed when the value of a watched measure meets a condition, such as exceeding a specified value by a percent.

Watchpoints can also optionally highlight table cells identified by the rule when the condition exists. Every dashboard object has a table when shown in detail view. A cell with a solid border is being monitored by a watchpoint rule. When the cell exceeds the watchpoint threshold, the background color changes to a color specified when you created the watchpoint.

Attention: Watchpoints created on cubes monitor the default face of the cube only.

Viewing watchpoints

Every dashboard object that can have watchpoints has a Watchpoint Manager where you can create, edit, or delete the watchpoints associated with that object. Some dashboard objects, such as pivot tables, pivot combination charts, and distribution charts cannot have watchpoints.

Procedure

1. In the Navigation Tree, open the Dashboard Objects view.
2. Select the desired dashboard object.
3. From the Activities menu, select Manage Watchpoints > Manage Existing Watchpoints.
   The Watchpoint Manager page displays.
   Attention: For information about creating watchpoints, see “Creating and editing watchpoints” on page 72.

Watchpoint conditions

Watchpoint conditions look for values that are at, above, or below a target value that is either a threshold for the category or a constant value you select. When the target value is a threshold range, a value matches the threshold whenever it is equal to the minimum or maximum values, or between them.

A threshold can also be a percentage of the target. Targets less than 100% are always below the threshold. Targets greater than 100% are always above.
Creating and editing watchpoints

Watchpoints are associated with individual dashboard objects and have the attributes described in the following table.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule parameters</td>
<td>Defines the watchpoint condition. See “Watchpoint conditions” on page 71 for details.</td>
</tr>
<tr>
<td>Name</td>
<td>Name of the watchpoint as it will appear in the Alert Manager list and when you move the mouse over an active watchpoint in a table.</td>
</tr>
<tr>
<td>Availability (Advanced Mode)</td>
<td>Watchpoints can be either private or public. Private watchpoints are only visible to the user that saved the watchpoint. Public watchpoints are visible to all users that can see the dashboard object. By default, watchpoints are private. To make a watchpoint public, select Advanced Mode in Step Two and select Apply this Watchpoint to all users. Notification is set to Do not send me notification when the watchpoint is public. Note: You cannot change the availability of a watchpoint after you have saved it.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description of the watchpoint that appears in the optional alert message.</td>
</tr>
<tr>
<td>Color</td>
<td>Color to display behind the table cell when the watchpoint condition exits.</td>
</tr>
<tr>
<td></td>
<td>On geography map charts, the color is applied to the geography marker. If you have more than one watchpoint defined for a dashboard, and there are overlapping ranges, the color for the first threshold to be reached displays. The color does not change if the threshold for the subsequent watchpoint is reached. When you define more than one watchpoint for a dashboard, ensure that the thresholds do not overlap.</td>
</tr>
<tr>
<td>Alert parameters (Advanced Mode)</td>
<td>How often to generate an alert message for the condition. The options are:</td>
</tr>
</tbody>
</table>
|                                   | • Apply this Watchpoint to all users  
  When selected, the watchpoint is public. Otherwise, it is private.                                                                                                                                     |
|                                   | • Do not send me notification  
  No notification will be sent.                                                                                                                                                                              |
|                                   | • Notify me every time the condition is met  
  A notification is sent every time the watchpoint condition is met.                                                                                                                                     |
|                                   | • Notify me only when the new data causes the condition to be met when it was not met prior to that data  
  When a condition is met consecutive times, only notify once until the condition is no longer met. Then notify the next time the condition is true.                                                                 |
|                                   | Note: An alert cannot be sent from a public watchpoint. If you check Apply this Watchpoint to all users, Do not send me notification is selected.                                                                 |
Create a new watchpoint

You can create a new watchpoint.

Procedure
1. Identify the dashboard object that contains the category item to watch.
2. From the Activities menu, select Manage Watchpoints > Create Watchpoint.
   The Create Watchpoint page displays.
3. Define the watchpoint rule condition parameters.
4. Define the watchpoint name and optional description, and optional color to use when the watchpoint is active.
   Note: To control how often to send alert messages or set availability, select and select the frequency.
5. Save the watchpoint.
   The watchpoint immediately begins monitoring the source data.

Edit an existing watchpoint

You can edit an existing watchpoint.

Procedure
1. Identify the dashboard object that contains the category item to watch.
2. From the Activities menu, select Manage Watchpoints > Manage Existing Watchpoints.
   The Watchpoint Manager page displays.
3. Select the watchpoint you want to modify.
4. Click Edit Watchpoint.
5. Modify the attributes as desired.
   Note: You cannot change the setting of Apply this Watchpoint to all users on an existing watchpoint. You can only change the availability of a watchpoint by deleting and then creating a new watchpoint.
6. Save the watchpoint.
   The watchpoint immediately begins monitoring the source data.
Chapter 15. Dashboard perspectives

This chapter describes perspectives and how to use them on dashboards.

About dashboard perspectives

Perspectives are similar to filters. Filters allow you to filter data on a specific dashboard object. Perspectives allow you to apply a data filter to all the objects on a dashboard. The dashboard indicates when perspectives are applied by changing the background color, and the dashboard displays the name of the currently applied perspective.

When a perspective is applied to a dashboard object, you can manipulate the dashboard object on a dashboard. The perspective applies the default dimension filter to the dashboard object, but manipulation can remove the effects of the perspective.

Perspective manager

The Perspectives manager provides a navigation tree that lists all of the perspectives available to you. The perspectives are contained in the Perspectives folder. This folder contains two subfolders:

- Private
  Private perspectives are perspectives that are only available to the user that created the perspective. When creating a perspective, the default is private. However, you can make a private perspective available to all users after creating it.

- Public
  Public perspectives are available to all users. Once a perspective is created as a public perspective, you cannot make it private.

The detailed list shows all of the perspectives available to you. From this list you can create a new perspective, edit or delete an existing one.

Working with perspectives

This section describes the following:

- “Perspective properties”
- “Creating a perspective” on page 76

Perspective properties

Perspectives have the properties described in the following table.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Identifies the perspective. The name must be unique within the objects in the folder.</td>
</tr>
<tr>
<td>Description</td>
<td>Optional description that appears in the perspective information panel. This is the description for the perspective when its name appears in a list.</td>
</tr>
</tbody>
</table>
Creating a perspective

This section describes how to create a perspective.

Procedure

1. Open the Dashboard Objects navigation tree and select the Perspectives folder.
2. Click the Create Perspective button.
   This action opens the Step One page, listing the available dimensions configured in the IBM Cognos Real-time Monitoring Workbench.
3. Select the dimension or dimensions to use for your perspective.
4. Click Continue.
   This action opens the Step Two page.
5. Click the Dimension Filters button and select a level or levels for the dimension filter.
   Note: You must select at least one filter.
6. Click Continue.
   This action opens the Step Three page.
7. Enter a name for your perspective and optionally a description.
8. Check Make this Perspective available to all users to make the perspective a public perspective.
   Note: If you do not make the perspective available to all users, the perspective is private.
9. Click Save.
   The new perspective is immediately available for use in dashboards.
Chapter 16. Working with dashboards in IBM Cognos Workspace

IBM Cognos Workspace allows you to view, use, and modify dashboard objects that were created in IBM Cognos Real-time Monitoring.

In IBM Cognos Workspace, you can combine dashboard objects that receive data from many different data sources into a single workspace that provides a complete analysis of your business.

Dashboard objects created in Real-time Monitoring Dashboard are shared with IBM Cognos Workspace. When you change a dashboard object in Real-time Monitoring Dashboard, the change appears in IBM Cognos Workspace. This flexibility, combined with single sign-on between Real-time Monitoring and IBM Cognos Business Intelligence, allows you to work in both environments easily and seamlessly.

Note: In IBM Cognos Workspace, the term dashboard is replaced with the term workspace to describe a web page that can contain widgets that graphically represent business data.

Interoperability between Real-time Monitoring and IBM Cognos Workspace

Before you can include IBM Cognos Real-time Monitoring dashboard objects in IBM Cognos Workspace, you must configure Cognos Real-time Monitoring and IBM Cognos Workspace to interact with each other.

- Enable single sign-on between Real-time Monitoring and IBM Cognos Business Intelligence (BI).
- Synchronize the users, roles, and role-user mappings from IBM Cognos Workspace to Real-time Monitoring.
- Configure the system settings in Real-time Monitoring for interoperability with IBM Cognos Workspace.

For more information, see the topic about configuring interoperability between Cognos Real-time Monitoring and IBM Cognos Business Intelligence in the IBM Cognos Real-time Monitoring Workbench User Guide.

Working in IBM Cognos Workspace

The following procedure explains how to launch IBM Cognos Workspace from the IBM Cognos Business Intelligence Welcome page.

For other ways to launch IBM Cognos Workspace, see the topic on launching IBM Cognos Workspace in the IBM Cognos Workspace User Guide.

Procedure
1. Open the IBM Cognos Business Intelligence Welcome page in your browser.
2. Click Create my workspaces.
3. If the namespace Log on page appears, in the Namespace box, select the namespace you want to use.

If single sign-on with Real-time Monitoring is enabled and you are logged into IBM Cognos Real-time Monitoring, then you will not see the Log on page. For more information about single sign-on, see the IBM Cognos Real-time Monitoring Workbench User Guide.

4. Click OK and type your user ID and password, and click OK.

5. To create a new workspace, click Create New.

6. To work with an existing workspace, click Open Existing.

**Workspaces**

The IBM Cognos Workspace Content pane contains workspaces and objects that you can use in a workspace.

The Content pane appears on the right side of the IBM Cognos Workspace window. If you do not see the Content pane, click Content at the top of the IBM Cognos Workspace window to bring the Content pane into view. The Real-time Monitoring dashboard objects are in a folder in the Content pane.

To create a workspace in IBM Cognos Workspace, you add IBM Cognos content by dragging objects from the Content pane onto the workspace. For detailed information about creating workspaces, see the IBM Cognos Workspace User Guide.

**Widgets**

Dashboard objects in a workspace in IBM Cognos Workspace display in widgets.

**Widget Actions button**

You can perform the following actions from the Widget Actions button:

- **Remove from Workspace**: Removes the widget from the workspace. Does not remove it from the Real-time Monitoring folder in the Content pane.

- **Copy Data to Clipboard**: Copies the data for the current object to the clipboard as tab-separated text.

- **Pause**: Stops the data streaming. For more information on data streaming, see “Data streaming” on page 83.

- **Send to Back**: Sets the selected widget to appear behind other widgets when two or more widgets overlap.

- **Properties**: Allows you to change the title of the widget and set the refresh interval. For more information about how to set the refresh interval, see “Setting a refresh interval” on page 83.

  **Attention**: Changing the title of a widget in IBM Cognos Workspace does not change the name of the dashboard object in Real-time Monitoring.

For more information about the Widget Actions features, see the IBM Cognos Workspace User Guide.

**Maximize This Widget**

When you click Maximize This Widget, the widget expands into a larger window and all toolbar features applicable to the widget become available. To restore the widget and view the workspace, click Restore This Widget.
Tip: When you drag a dashboard object onto the workspace, some of the toolbar features may be disabled. To work with all of the toolbar features, maximize the widget.

Toolbar

A widget has an on demand toolbar that displays when the widget is selected or in focus. You can use the toolbar features to make changes to the way the data is displayed in a widget. The available features are different for each type of widget and depend on whether the widget is maximized. Maximizing a widget in IBM Cognos Workspace is equivalent to the detail view of a dashboard object in Real-time Monitoring Dashboard. The following table describes the toolbar features:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Reset data view" /></td>
<td>Reset data view: Undo unsaved changes to dimensions, measure filters, and dimension filters. Sets the view back to the last saved view. Applies to charts and tables for which the data source is a cube. Available from the dashboard and the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Undo data view" /></td>
<td>Undo data view: Undo the last drill action, dimension filter, measure filter, or change to dimension. Applies to charts and tables for which the data source is a cube. Available from the dashboard and the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Redo data view" /></td>
<td>Redo data view: Redo the last drill action, dimension filter, measure filter, or change to dimension. Applies to charts and tables for which the data source is a cube. Available from the dashboard and the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Roll Up To Top" /></td>
<td>Roll Up To Top: Display data at the top level of the current dimension hierarchy. Applies to charts and tables for which the data source is a cube. Available from the dashboard and the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Roll Up" /></td>
<td>Roll Up: Display data at the next level of the current dimension hierarchy. Applies to charts and tables for which the data source is a cube. Available from the dashboard and the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Change Categories" /></td>
<td>Change Categories: Change the dimension being displayed. Applies to charts and tables for which the data source is a cube. Available from the dashboard and the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Dimension Filters" /></td>
<td>Dimension Filters: Filter the data by dimension. Applies to charts and tables for which the data source is a cube. Available in the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Show or Hide Data Grid" /></td>
<td>Show or Hide Data Grid: Show or hide the table that shows the data details. The table appears below the dashboard object. Applies to charts and indicators for which the data source is a cube or a view. Available in the detail view.</td>
</tr>
<tr>
<td><img src="image" alt="Chart Properties" /></td>
<td>Chart Properties: See “Chart properties” on page 23. Applies to charts, indicators, and tables for which the data source is a cube or a view. Available in the detail view.</td>
</tr>
</tbody>
</table>

You can change and edit display types, measure styles, and chart properties in IBM Cognos Workspace, similar to Real-time Monitoring Dashboard.

Change Display Types

You can change one type of widget into another.

In a minimized widget, click Change Display Type to show all available compatible widgets for that dashboard object only.
In a maximized widget, after you click **Change Display Type**, you can click **Configure Charts** to change your widget into a widget that is not compatible for the dashboard object and to view the additional information that you must specify.

When you change the display type, IBM Cognos Workspace preserves properties from the original display type, such as static and dynamic threshold targets and ranges.

Depending on the source and target chart type, you might be prompted to select additional dimensions or measures.

**Note:** If you convert a speedometer or thermometer to a traffic light, the traffic light won't glow for threshold values if the threshold color of the source is any other than red, green, or yellow.

When the source display type is a combination chart having a single measure, **Measure Styles** is available in the menu.

All the changes are ad hoc until saved.

**Change Measure Styles**

You can change the way the chart plots columns or displays data.

Maximize the widget and click **Measure Styles**. You can make the following changes:

- Change the measure column positioning
- Change the display type of measure, such as line, bar, area, and so on
- Change the display name
- Change the color
- Add a prefix or suffix to the measure values

For more information, see “Measure styles” on page 24.

You can also specify the number of characters displayed for the values to avoid cutting off the category names.

**Change chart specific properties**

You can change the properties that are specific to different chart types.

Maximize the widget and click **Edit Display Type**. The properties you can change depend on the type of chart.

For more information, see “Chart properties” on page 23.

**Performing ad hoc analysis**

You can perform ad hoc analysis in IBM Cognos Workspace by drilling down into a widget or using the features on the widget toolbar.

**Procedure**

1. Open or create a dashboard that contains Real-time Monitoring widgets.
2. Change the analysis of a widget by:
   - Drilling down into the widget. For example, click on a data point in a chart.
Clicking on a toolbar icon in the widget.

A bar appears in the widget, indicating that data streaming is paused. For more information about data streaming, see “Data streaming” on page 83.

Tip: You can make more than one change in a row. For example, you can drill down two times, and then undo the second drill down.

3. Do any of the following actions:
   - See the results of your changes: Click the play icon.
   - Save your changes: See “Saving changes to a widget.”
   - Go back to the original view of the widget: Click the play icon, and then click Reset data view.

Saving changes to a widget

To save changes to a widget, you must save the workspace that contains the widget. If you have made changes to the widget, a copy of the widget is created and saved in the workspace. If the original dashboard object is changed in Real-time Monitoring Dashboard, the changes are not made to the copy that exists in IBM Cognos Workspace. If you save a widget in a workspace in IBM Cognos Workspace without changing it, the widget is the same object that is in Real-time Monitoring.

To save a dashboard:

Procedure

1. Click the save button on the application bar.
2. If you are saving the dashboard for the first time, specify where you want to save the dashboard, type a file name, and click Save.

To save a dashboard using a different name or location:

Procedure

1. On the application bar, click the Actions Menu button.
2. Click Save As.
3. Specify a file name and location for the dashboard, and click Save.

Deleting a widget

To delete a Real-time Monitoring widget from IBM Cognos Workspace, you must delete the dashboard object from Real-time Monitoring Dashboard. Refresh the Content pane to update the Real-time Monitoring folder in IBM Cognos Workspace.

Tip: To remove a Real-time Monitoring widget from a dashboard, select Widget Actions > Remove from Dashboard from the widget toolbar. The widget remains available in IBM Cognos Workspace for inclusion in other dashboards.

Filtering widgets

IBM Cognos Workspace provides slider filter widgets and select value filter widgets that you can add to a workspace.

When changes occur to these filter widgets, all the other widgets on the canvas respond to these changes, if applicable. For information about slider filter widgets and select value filter widgets, see the IBM Cognos Workspace User Guide.
By default, all IBM Cognos Real-time Monitoring dashboard object widgets subscribe to all filtering widgets available in IBM Cognos Workspace. However, you cannot define a filtering widget in IBM Cognos Workspace using a Real-time Monitoring widget. First, you must create a widget in IBM Cognos Workspace. Then you define the filter widget. When you add Real-time Monitoring dashboard objects to the canvas, these by default subscribe to the filtering widgets and respond accordingly. The behavior of the widget depends on the filter widget.

In the following examples, if the added widget does not contain a column dimension or column measure that matches the filter criteria, there is no change at any time, even if you change the filter value after adding the dashboard object widget.

**Numeric value or range value**

In IBM Cognos Workspace, you define a slider on a column named *Total Sales*. You configure the slider to be a single value or a range of values. When you define the slider, IBM Cognos Workspace applies this filter to the widgets in the workspace.

You now add a Real-time Monitoring dashboard object widget to the workspace.

If the added widget contains a column named *Total Sales*, then it is immediately filtered to the values or range of values specified in the filtering widget. If you change the value, IBM Cognos Workspace updates all the widgets on the workspace.

- For a dashboard object based on a cube that contains a measure named *Total Sales*, the widget filter is the equivalent of a measure filter on that column.
- For a dashboard object based on a cube that contains a dimension level named *Total Sales*, the widget filter is the similar to a dimension filter on that level.
  - For numeric values, if *Total Sales* is the top level, the dimension filter tree displays as normal. If *Total Sales* is not the top level, the dimension filter tree does not display properly.
  - For range values, Real-time Monitoring does not support range filters on dimensions. IBM Cognos Workspace range filters are applied, but the dimension tree is not shown, and text appears in the list of applied filters.
- For a dashboard object based on a view that contains a column named *Total Sales*, this is similar to a measure filter.

For more information about measure filters, see "Measure filters" on page 7.

For more information about dimension filters, see "Dimension filters" on page 32.

**Single value or multiple value string**

You define a slider on a column named *Region*. You configure the slider to be a single value, *Region* = *South*. Or, to filter on multiple values, you configure the slider to be a multiple value, such as *Region* = *South* or *East* or *North*. When you define the slider, IBM Cognos Workspace applies this filter to the widgets in the workspace.

You now add a Real-time Monitoring dashboard object widget to the workspace.

If the added widget contains a column named *Region*, the widget is filtered to the string value or multiple string value. If you change the value, IBM Cognos Workspace updates all the widgets on the workspace.
For a dashboard object based on a cube that contains a dimension level named Region, the widget filter is similar to a dimension filter on that level. If Region is the top level, the dimension filter tree displays as normal. If Region is not the top level, the dimension filter tree does not display properly.

For a dashboard object based on a view that contains a column named Region, the widget filter is similar to a measure filter and can be viewed in the measure filter dialog box.

- For single value strings, the widget filter is applied as a measure filter and can be viewed in the measure filter dialog box
- For multiple value strings, if the number of values is 2, then the filter displays as normal. If the number of values is more than 2 as in this example (South, East, North) then the measure filter window does not show correct results because the limit in Real-time Monitoring Dashboard is 2 filters only.

For more information about measure filters, see “Measure filters” on page 7.

For more information about dimension filters, see “Dimension filters” on page 32.

Data streaming

The data streaming into the widgets on a workspace is refreshed periodically and individually for each widget. When you perform an action that changes how the data displays in a widget, the data streaming into the widget stops. A pause bar appears in the widget, indicating that the data streaming has stopped. The date and time that the data streaming was paused displays in the bar. The following actions stop data streaming:

- Selecting Widget Actions > Pause from the widget toolbar.
- Drilling down.
- Redoing or undoing the data view.
- Rolling up one level or rolling up to top.
- Applying or changing a measure filter or a dimension filter.
- Changing categories.

To start data streaming, click the play icon on the left side of the bar.

Setting a refresh interval

You can change how often the data is refreshed in a Real-time Monitoring widget. The default value is 300 seconds (5 minutes).

Procedure

1. Click a Real-time Monitoring widget on the dashboard to bring it into focus.
2. In the toolbar for the widget, click Widget Actions > Properties.
3. In the Properties window, click the Real-time Monitoring tab.
4. In the Refresh interval (seconds) field, type a refresh interval.
5. Click OK.
Appendix. Troubleshooting

This section describes tasks that can help you to troubleshoot issues in IBM Cognos Real-time Monitoring Dashboard.

Error when going to a dashboard object report

You click on Go To from the Activities menu on a dashboard object, select a drill through target. An error message that you cannot launch Report Studio or Query Studio displays.

To open the report, close the error message window, and click on Go To again.

Changes to chart properties do not take effect

You change the chart properties, but the changes do not take effect in the widget.

After you specify a value for properties such as Minimum, Maximum, Suffix, or Prefix, ensure that you press the Enter key before moving to the next property.
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Index

Special characters

launching 77

A
access 4
account settings 3
activities
editing 21
Activities menu 12, 20
additive perspectives 13
alert messages list 3, 65
alerts 65
alert each time a condition is met 65
icons 65
lowered 65
notification properties 67
parameters 72
raised 65
refresh interval 3
suspending delivery 67
unsubscribing 67
watchpoints 72
area charts 34
associated dashboards 7

B
bar charts 34
bookmarks 11, 16
business rules 63
about 63
creating 64

categories
charts, cube 31
tables, cube 50
category controls 50
chart properties 85
changing 80
charts 27
area charts 34
bar charts 34
category controls 31
combination charts 27, 34
default view 31
detail view 31
distribution charts 29, 37
dot charts 34
drilling 19
editing 44
filter controls 32
geography charts 41
geography map charts 30
horizontal combination charts 28
line charts 34
charts (continued)
measure styles 24
pie chart styles 24
pie charts 27, 32
pivot combination charts 30, 39
properties 23
styles 23
tear-off view 31
types 27
vertical combination charts 28
viewing 30
X axis styles 23
Y and Y2 axis styles 23
combination charts 27, 34
creating 36
properties 34
thresholds 35
content 14
creating
business rules 64
combination charts 36
dashboards 15
distribution charts 38
external portlets 55
geography charts 43
indicators 47
perspectives 76
pie charts 33
pivot combination charts 40
pivot tables 52
process diagrams 61
scorecard 50
tables 51
tasks 70
thresholds 59
watchpoints 72, 73
custom row filters 9

D
dashboard object
and widget 78
dashboard objects 19
about 19
detail view 12, 20
dashboards 11
applying perspectives 13
associated 7
bookmarks 11, 16
charts 27
content 14
creating new 15
default 3
default setting 3
defining content 14
documenting properties 12
info 12
layout 14
Navigation Tree 11
objects 19
perspectives 75

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dashboards (continued)
  profile 4
  saving 81
  setting default 14
  viewing information 11
  viewing objects in a separate window 17
  viewing properties 12
data source
  cube 50
  view 50
data source information 19
data streaming 25
  starting 25
  widget 83
default
  dashboard, setting 3
default dashboard settings 3, 14
default settings 3
deleting
  messages 66
  tasks 70
delivery profiles 3, 4
  assigning 67
Delivery Profiles List 4
detail view 12, 20
  charts 31
diagrams
  process 61
dimension filters 13, 32
display types
  changing 79
distribution charts 29, 37
  creating 38
  properties 37
dot charts 34
  drill down to detail 20
  drilling 19
dynamic values 58

E
  editing
    activities 21
    charts 44
    dashboard properties 12
    data 21
    data source 21
    display type 21
    list of mandatory subscribers to a notification 67
    properties 21
    tasks 70
    thresholds 21
    watchpoints 72, 73
error messages 25
  Data source is invalid 25
  Data source is not available 25
  Data source is restricted 25
  Deleted 25
  Invalid due to change in data source 25
  No data available 25
  Restricted 25
external portlets 55
  creating 55
  properties 55
external process 7

F
  filter controls 50
  filters
    dimension 13, 32
    measure 8
    on tables 50
  filters,
    See perspectives
  folders 17
    moving objects 18

G
  geography charts 41
  creating 43
  properties 42
  thresholds 42
  geography map charts 30
  Go To
  troubleshooting 85

H
  horizontal combination charts 28

I
  IBM Cognos Workspace
    and Real-time Monitoring 77
    content pane 78
    content tab 78
  icons
    alert list 65
    mandatory alert 67
    optional alert 67
  indicators 45
    creating 47
    properties 46
    speedometers 45
    thermometers 45
    thresholds 47
    traffic lights 45
    viewing 45
  Info button 12
  initiating processes 7
  interoperability 77

L
  launching
    77
    Real-time Monitoring Dashboard 2
  layout 14
  line charts 34
  login 2
  login password, changing 3
  lowered alerts 65

M
  managing tasks 70
  mandatory alert message icon 67
  Maximize This Widget button 78
  measure filters 8
measure filters (continued)
  characteristics 8
  custom row 9
measure styles
  changing 80
measures
  styles 24
Message Center 7
messages
  deleting 66

N
Navigation Tree 6, 17, 20
new features
  version 10.2.1 ix
notifications
  assigning delivery profiles 67
details 66
properties 67
subscribing 67
suspending delivery of 67
unsubscribing 67

O
objects
  Activities menu 12, 20
ero error messages 25
optional alert message icon 67

P
password, changing 3
permissions 4
  class level 5
  dashboard 4
  object level 5
  removing 5
  roles example 6
  understanding 5
  user example 6
perspectives 13, 75
  about 75
  applying to a dashboard 14
clearing 14
  creating 76
  manager 75
  private 75
  properties 75
  public 75
Perspectives manager 75
perspectives,
  See filters
pie charts 27, 32
  creating 33
  properties 32
  styles 24
pivot combination charts 30, 39
  creating 40
  properties 39
pivot tables
  creating 52
portlets
  external 55
process diagrams (continued)
  about 61
  creating 61
processes
  external 7
  initiating 7
  querying status 62
profiles
  dashboard 4
delivery 3, 4
properties
  combination charts 34
distribution charts 37
  external portlets 55
geography charts 42
  indicators 46
  notifications 67
  perspectives 75
  pie charts 32
  pivot combination charts 39
tables 49

Q
querying process status 62

R
raised alerts 65
  responding to 66
ranking functions 8
Real-time Monitoring
  and IBM Cognos Workspace 77
URL 2
Real-time Monitoring Dashboard
  launching 2
  login 2
  requirements 2
  refresh interval 3
RTMadmin 4

S
safe mode 2
save
  dashboards 81
scorecard
  creating 50
  scorecard indicator 50, 58
setting notification properties 67
settings
  account 3
  default 3
  speedometers 45
  subfolders 17
  suspending notifications 67

T
tables 49
  based on cubes 50
  based on views 50
category controls 50
  creating 51
  filter controls 50
tables (continued)  
   pivot 52  
   properties 49  
   scorecard 50  
   working with 49  
tables based on cubes 50  
tables based on views 50  
target values 71  
task list  
   viewing 69  
tasks 69  
   about 69  
   creating 70  
   deleting 70  
   editing 70  
   managing 70  
   refresh interval 3  
   viewing details 69  
web service, sent to a 70  
tear-off feature 17  
thermometers 45  
thresholds 57, 71  
   about 57  
   combination charts 35  
   creating 59  
   dynamic values 58  
   geography charts 42  
   indicators 47  
values 57  
toolbar 21  
traffic lights 45  
trend indicator 50  
troubleshooting 85  
   Go To 85  

U  
unsubscribing from alerts 67  
user  
   access 4  
   permissions 4  
   RTMadmin 4  

V  
values  
   dynamic 58  
values (continued)  
   thresholds 57  
vertical combination charts 28  
viewing  
   charts 30  
   dashboard properties 12  
   indicators 45  
   notification details 66  
   task details 69  
   task list 69  
   watchpoints 71  

W  
Watchpoint Manager 71  
watchpoints 71  
   about 71  
   creating 72, 73  
   editing 72, 73  
   target values 71  
   thresholds 71  
   viewing 71  
web service, task receipt 70  
widget 78  
   actions 78  
   changing title 78  
   data streaming 83  
   deleting 81  
   maximizing or minimizing 78  
   refresh interval 83  
   saving changes to 81  
   Widget Actions button 78  
wmarks  
widgets  
   filtering 81  

X  
X axis styles 23  

Y  
Y and Y2 axis styles 23