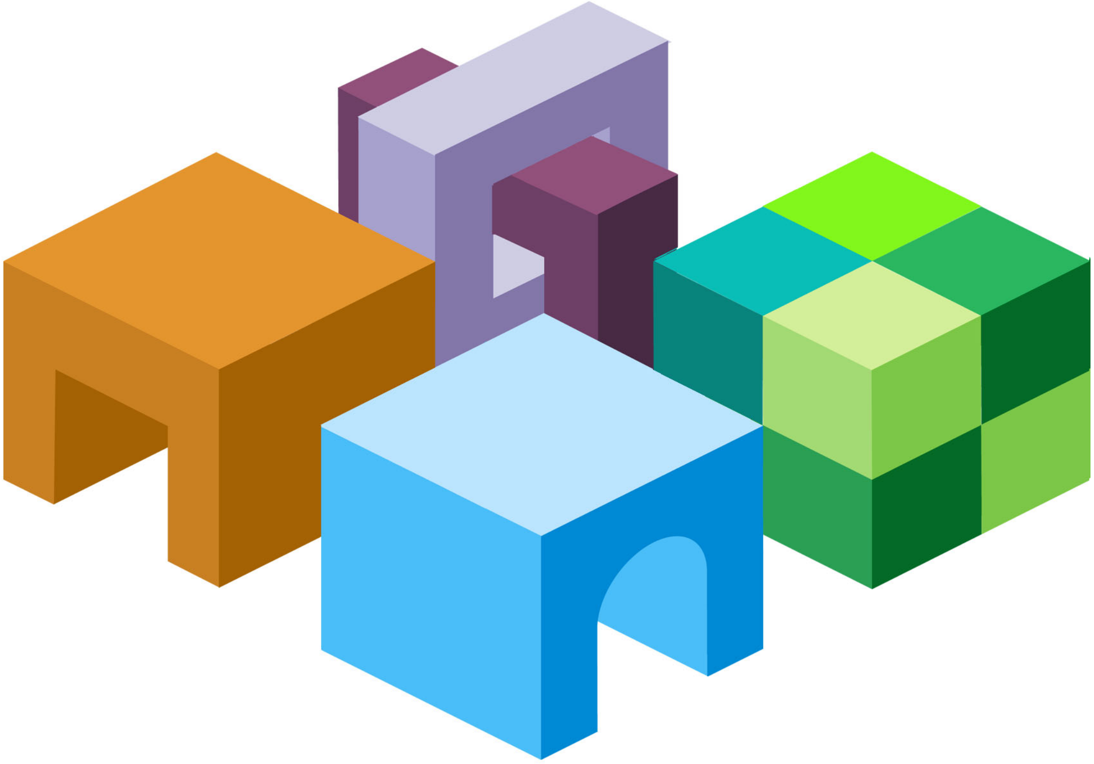

HYPERION® INTERACTIVE REPORTING

RELEASE 11.1.1

OBJECT MODEL AND DASHBOARD DEVELOPMENT SERVICES DEVELOPER'S GUIDE

VOLUME VII: COMPONENT REFERENCE GUIDE

ORACLE®
ENTERPRISE PERFORMANCE MANAGEMENT SYSTEM

Interactive Reporting Object Model and Dashboard Development Services Developer's Guide, 11.1.1

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1

Dashboard Development Services Components

In This Chapter

About Components

Oracle's Hyperion® Dashboard Development Services components are plug-and-play software, which are Oracle's Hyperion® Interactive Reporting documents (BQYs) that can be merged into Dashboard Studio templates and dashboards. See "Merging Components" on page 10.

About Dashboard Studio Runtime Releases

A runtime release is a slender version of an editable source master (ESM) dashboard. It does not contain build time or development structures, and cannot be connected to or modified by the Dashboard Studio wizard interface. A runtime release is usually deployed to users, as it contains identical features and properties as the ESM from which it was created. If no runtime is created, only the ESM release is saved.

Creating Runtime Releases

After setting the dashboard functionalities and style elements with Dashboard Studio, save the document. A message box asks if you want to save a smaller, runtime version of the dashboard.

➤ To create a runtime release:

1 **Using the Dashboard Studio wizard interface, navigate to Step 8: Configure Style, and click ➡ to save and close document.**

2 **In Save As, accept the default file name or specify another name.**

If the specified name exists, save the file with another name.

If the default file name is accepted, an *_esm* suffix is added to the file name. If a file name is specified, the *_esm* suffix is not added.

3 **After naming the dashboard, click Yes when a message is displayed asking to save a slimmer, runtime version of the dashboard.**

Select a Framework Template is displayed.

4 **Alternatively, if the document is closed and a runtime version is saved (using a Release 8.3.8 template or later), select Pack JavaScript to compact the JavaScript and remove all trace statements.**

See “Packing JavaScript Feature” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

New dashboards are saved to the default save location associated with the template from which they were built. Runtime dashboards are saved to a Runtime folder in the location of the saved ESM. Existing dashboards are saved to the location from which they were opened.

Self-Optimizing Runtime Dashboards

When creating runtime documents, unused component sections are deleted to reduce the dashboard size and to improve performance. Therefore, an ESM contains the cooperating components (some components cannot share an Interactive Reporting document with others; for example, Query Limits and Quick Query Limits) without burdening the runtime with unused resources, such as code, language strings, and sections. The ESM is a developer release of the Interactive Reporting document and is less efficient, but the runtime is slim and provides the configured functionality.

Runtimes created for production should use the packing option. See “Packing JavaScript Feature” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Runtimes created for unit testing experimental Interactive Reporting documents, those containing new JavaScript in the form of custom components or in 1100 Custom (see “1100 Custom” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio*), should not be packed as the diagnostics that tracing enables is used.

Note:

The option to pack runtimes has been available since Release 8.3.

Merging Components

The Dashboard Development Services components are Interactive Reporting documents that can be merged with templates or dashboards and configured to perform their unique tasks. Components include buttons, graphics, and other style elements that extend dashboard functionality.

The Dashboard Studio Merge Utility is a module management mechanism that is used to combine a component with a template or dashboard and thus to produce documents that offer a variety of capabilities and features.

➤ To merge a component with a template or dashboard:

1. **Start Oracle's Hyperion® Interactive Reporting Studio, and, on the Welcome dialog, click Cancel.**
2. **Start Dashboard Studio, click ➡, and select Merge, and select Select and Re-order Sections.**
3. **Optional: To consolidate duplicate images into the Resource Manager, select Remove duplicate images from the final document.**

   All instances of an image are changed to reference the single copy of the image in the Resource Manager. The Interactive Reporting document file size and memory footprint are reduced. Thus, loading speed is improved, and reuse of existing images from the Resource Manager is made possible when creating dashboards and reports. See "Resource Manager" in the *Hyperion Interactive Reporting Studio User's Guide.*

4. **Click 📂 (next to Primary Document), and navigate to the template or dashboard that is to be merged with the component.**
5. **Click 📂 (next to Secondary Document), and navigate to** *<componentname>*`_component.bqy`**.**

   A save path is generated.

6. **Optional: To rename the file and change the default save path, click 📂 (next to Save Path).**
7. **Click Merge.**

   Select and Re-order Sections is displayed, with a list of sections from the secondary document.

8. **Move selected sections between Available Sections and Selected Sections by clicking > and <, or move all sections by clicking >> and <<.**
9. **Optional: Reorder Selected Sections by selecting a section and clicking ↑ or ↓.**
10. **Click OK.**

    A report detailing the sections that were merged is presented. Removed duplicate images are reported at the end of the report.

11. **Click Save or OK.**
12. **Click View to view the merged Interactive Reporting document in Interactive Reporting Studio, and click Close.**

Note:

When merging components into Dashboard Studio templates or Interactive Reporting documents, both BMP and GIF files are available.

Applying and Configuring Component Buttons

This topic provides examples of the component objects, buttons, and describes how to add and configure these controls.

Component Buttons

The buttons in Table 1 are available in Oracle's Hyperion® Dashboard Development Services components.

Table 1 Component Buttons

Component	Button	Description
Chart Shade		Load a set of hatched monochrome colors to be used on charts
		Load the classic color palette set by Interactive Reporting Studio or select a custom color palette
Drill Across	→	Drill into target document
	←	Drill back to source document
		Activate the Query Panel
Drill and Slice	↘	Drill down to the next member of the hierarchy
	↖	Drill up to the previous member of the hierarchy (can be configured to reset lower filters)
Ignore Percentile	%X	Present percentile ranges, from which values are discarded, according to the selected range
Metadata		Examine the Data Layout for objects on the frame and filter the metadata results to display only those objects
POV	⟳	Refresh the view
Query Limits		Activate the Query Limits frame
		Find queries, if no variable limits are displayed
		Connect Available Queries
	✕	Disconnect Available Queries

Component	Button	Description
		Process Available Queries
	∨ ∧	Move limits between Required and Optional Limits lists
	↑ ↓	Reorder items within lists
Quick Query Limits		Activate the Quick Query Limit Properties frame
		Reinitialize the Query Panel and repopulate lists with values from configured sources
		Present the specified Home section
		Add, edit, or remove items from the favorites list
		Clear all selected values from limits (does not affect values in hierarchies)
		Apply the selected values to limits (does not affect values in tree hierarchies)
		Process queries (after Process is clicked, you are returned to the Home section)
		Activate the Query Panel
	All	Select all available values
	Clear	Delete all selected values from the list, and clear previously applied values
	Add (list box)	Add custom values to the list
	Rem	Remove values from the list
	Ref	Update or scroll through values in the list
Tree	+/-	Expand and collapse selected nodes in the Tree Limits lists
	Add (tree)	Add selected values from the Tree Limits lists (this button works with query limits and filters)
	Remove	Remove selected values from the Tree Limits lists (this button works with query limits and filters)
	Process	Process selected query sections in the document (added when the dashboard frame contains Tree Limits lists that apply query limits)
	Clear	Remove applied query limits

Component	Button	Description
		Note: To clear filters, click , on the Dashboard Studio toolbar
Webdash		Add dashboard name and associate a frame prototype
		Modify frame prototype
	›	Move selected items to right list box
	‹	Move selected items to left list box
	˄	Move selected items up
	˅	Move selected items down
	Restore	Reload the original settings
	Clear All	Remove all entries
	Clear	Remove the icons from the preview frame
	Apply	Create the dashboard

Toolbar Buttons

The buttons in Table 2 are available on frames.

Table 2 Toolbar Buttons

Button	Description
‹	Return to previous frame
⟳	Refresh the frame
⌂	Present the specified Home section
🖨	Print selected items or frames
➡	Export sections from a dashboard into non-Interactive Reporting Studio formats, such as Excel, tab- or comma-separated, HTML, JPEG, and PDF
	Activate a related document; for example, a file, folder, or URL or an e-mail message

Button	Description
A!	Select the language in which the dashboard text is displayed
?	● Activate help or floating comments and annotations, which detail the main dashboard navigational and functional elements ● Display or hide release information or annotations

Configuration Frame Buttons

The buttons in Table 3 are displayed and used on multiple configuration frames.

Table 3 Configuration Frame Buttons

Button	Description
⟳	Refresh the frame
⌂	Present the specified Home section
?	● Activate help or floating comments and annotations, which detail the main dashboard navigational and functional elements ● Display or hide release information or annotations
> <	Move items left or right between list
↑ ↓	Reorder items within lists
	View the frame, after configuration properties are applied
	Delete an item
	Copy an item
	Paste an item
	Activate the Query Panel or the Query Limits frame
	Rename or modify an item
Browse	Navigate to a location to select a file or item
Apply	Apply configuration settings

Button	Description
Rename	Rename an item
Reset	Return an item to the original setting
Clear	Remove applied settings
Restore	Load the previously applied settings
Add URLs	Append selected URLs to the POV component
Import URLs	Import a list of configured URLs as a text file into the POV component
Export URLs	Export the list of configured URLs to a text file from the POV component
Restore URL	Restore the previously saved selected URL settings in the POV component
Clear All	Remove all configured URLs from the POV component
Change Value Type	Change the selected source for limit values application type
Refresh	Refresh values on the frame

Adding and Configuring Buttons to Dashboards or Templates

This topic describes adding and configuring buttons on dashboard or template frames.

There are three ways to add buttons to dashboards:

- Copy button graphics from the `<`*`componentname`*`>_component.bqy` file
- Use button graphics that are available in the components folders
- Use button graphics in the Resource Manager (see "Resource Manager" in the *Hyperion Interactive Reporting Studio User's Guide*)

All Dashboard Studio buttons contain a line of JavaScript that determines the action to take, and the control handler to call. The code must be entered for buttons, results, or table sections.

➤ To add buttons by copying graphics from `<`*`componentname`*`>_component.bqy`:

1 **In Interactive Reporting Studio, open `<`*`componentname`*`>_component.bqy`.**

Most components have a `<`*`componentname`*`>_component.bqy` file; however, not all components contain or require button graphics.

2 **Locate the buttons on the top panel, and press Ctrl+D to enter Design mode.**

3 **Select a button graphic.**

4 **Optional: To represent the not selectable button state, first select the `component_grey.bmp` or `component_gray.bmp`.**

5 **Right-click and select Copy.**

6 **Navigate to the dashboard frame that will include the button, right-click, and select Paste.**

7 **Position the button on the dashboard toolbar, and double-click it.**

Properties is displayed.

8 **Select Visible and Locked, and click OK.**

9 **If a not selectable button is positioned on the frame, the selectable button is also required. Perform these actions to select and position the selectable button:**

a. Repeat steps 3–8 to select and add the selectable button (without the `_grey` or `_gray` suffix).

b. Select the not selectable and selectable buttons.

c. On the Interactive Reporting Studio toolbar, click **Left** and click **Top** to justify the buttons directly on top of each other.

10 **Press Ctrl+D to exit Design mode and save the dashboard.**

Note:

There is no need to rename the buttons copied from *<componentname>*`_component.bqy`, nor is there any need to configure the properties and scripts for each button, as these are already included.

➤ To add buttons by using graphics in the components folders:

1 **In Interactive Reporting Studio, open a dashboard that contains the component.**

2 **Select the frame on which to add the button, and press Ctrl+D to enter Design mode.**

3 **From the catalog pane, expand Graphics, and drag a picture object onto the frame.**

4 **Optional: If a results or table section is being configured, perform these requirements:**

a. Double-click the results or table section that was dragged onto the frame.

Properties is displayed.

The object name must take the form of *<prefix>*`^Qiq_componentname^`*<suffix>* where *<prefix>* is the results or table name, and *<suffix>* is a unique identifier. An example is, `Table^Qiq_componentname^1`.

b. Select **Active**, and click **OK**.

5 **In Select Image, navigate to the button graphic (BMP), and select Open to insert the button.**

6 **Optional: To represent the not selectable button state, first add the `component_grey.bmp` or `component_gray.bmp`.**

7 **Position the button on the dashboard toolbar, and double-click it.**

Properties is displayed.

8 **Select Locked, and click OK.**

9 **If a not selectable button is positioned on the frame, the selectable button is also required. Perform these actions to locate and position the selectable button:**

a. Repeat steps 3–8 to locate and select the selectable button (without the `_grey` or `_gray` suffix).

b. Select the not selectable and selectable buttons.

c. On the Interactive Reporting Studio toolbar, click **Left** and click **Top** to justify the buttons directly on top of each other.

10 **Double-click the button on top.**

Properties is displayed.

11 **Enter `pic^Qiq_`*`componentname`* as the object name.**

For example, enter `pic^Qiq_chartshade^color` or `pic^Qiq_chartshade^hatch`.

12 **Select Visible and Locked, and click OK.**

Proceed to configuring the button properties and scripts.

➤ To configure the properties and scripts for each button:

1 **On the frame, select the button, right-click, and select Scripts.**

Scripts Editor is displayed.

2 **In Scripts Editor, perform an action:**

- Enter this line of code

  ```
  ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
  (this.Parent,this)
  ```

  (In some template versions, `ActiveSection` replaces `this.Parent`. This does not affect the execution of the code)

- Copy and paste the line of code from another button on the toolbar to avoid data entry errors

3 **Click OK.**

4 **Perform an action:**

- Editing a dashboard—Add the button to every frame
- Editing a template—Copy the button to each frame so the feature is available, regardless of the frame in use

5 **After the button is configured, press Ctrl+D to exit Design mode.**

➤ To add button graphics from the Resource Manager:

1 **In Interactive Reporting Studio, press Ctrl+D to enter Design mode.**

2 **From the catalog pane, expand Resources.**

3 **Select, drag, and position a graphic on the dashboard frame.**

4 **Right-click the graphic, select Properties, and select Visible and Locked.**

5 **Click OK.**

6 **Repeat steps 3–6 for the `_grey` or `_gray` equivalent button.**

7 Align the buttons directly on top of each other, right-click, and select **Properties.**

8 Select **Visible**, **Locked**, and click **OK.**

Additional steps are required to add buttons to templates.

➤ To add buttons to templates:

1 In Interactive Reporting Studio, open a template.

2 To display the available frame prototypes, select **View**, then **Unhide Section.**

3 **Optional:** To display custom frame templates, select **View**, then **Unhide Section.**

4 Repeat the procedures in:

a. To add buttons to dashboards

b. To configure the properties and scripts for each button

5 Select each template frame or prototype individually, and select **View**, then **Hide Section.**

6 Save the template.

The custom template including the buttons is ready to be used as a basis for a dashboard.

2 Customizing Plug-and-Play Components (Programmers Only)

In This Chapter

About Plug-and-Play Components

A component is a combination of one or more Interactive Reporting document sections, that contain related configuration information, data models, GUIs, and JavaScript service functions required for performance. The Dashboard Studio Merge Utility is used to combine these sections and produces reusable templates that offer a variety of capabilities and features.

Components are standalone entities that may rely on a framework and other components into which they can be plugged. The framework is a Dashboard Studio template that exports services through the Globals_EIS section. See “Template Structure” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

The framework looks for components that contain a known set of characteristics or fingerprints. If these characteristics are found, the component is included as part of the regular processing cycle. See “Component Fingerprints” on page 22.

Although JavaScript and Interactive Reporting Studio are not pure Object Oriented (OO) environments, they offer many of the OO features. If these attributes are carefully used, many benefits of OO can flow through to Interactive Reporting Studio JavaScript development.

One component may interact with another through published interfaces. Interfaces are pure JavaScript functions or JavaScript functions implemented as objects that are added to the Interactive Reporting Studio dynamic runtime object model. If components interact with each other, they must be able to degrade gracefully and operate in a standalone mode if their peer component does not exist.

If a component requires the presence of the peer component, the two components are combined. JavaScript provides a Boolean test mechanism for determining the existence of objects and properties alongside the usual try-and-catch facilities.

Component Fingerprints

This topic describes the characteristics of a component. A blank component (`Blank_component.bqy`) is provided and installed with Dashboard Studio. The blank component is used to implement the core of a component. See Chapter 23, "Dashboard Studio Blank Component."

These properties are used to identify Dashboard Studio frames from other dashboard sections. The FrameType property is the key property that marks a dashboard as the core of a component.

`FrameType.Text`—A text string used by the framework to identify dashboard sections where JavaScript services and properties for the component are defined. Value = 1020.

`txlMe.Text`—A text string used by JavaScript routines to set the context of their declarations and definitions. Value = dashboard section name.

`VersionInfo.Text`—A string separated by a carriage return. Component builders can change the first five elements: the identifiers for `VersionMajor`, `VersionMinor`, `VersionRevision`, `VersionBuild`, and `VersionCheckin`. However, some elements are reserved for system and future use and should not be changed.

```
VersionMajor=x
VersionMinor=x
VersionRevision=x
VersionBuild=x
VersionCheckin=x
InterfaceMajor=2
InterfaceMinor=0
GUID={C1282A7B-9455-48dc-BBBB-46C2EB525AF5}
```

`gtxlLanguageStrings.Text`—A set of keywords or value pairs that hold language-sensitive values used on buttons and in messages. Loaded by the framework into an associative or hashed array when the document starts up or the language is changed. The array can be accessed using JavaScript of the form:

```
ActiveDocument.Qiq_harConstants[<keyword>]
```

where *`<keyword>`* is derived from the values in the text label. Examples of two language strings that can be placed in the text label are:

```
HOME=ENUS~Home|FRFR~Acceuil|DEDE~Homepage
FILTERS=ENUS~Filters|FRFR~Filtres|DEDE~Filter
```

The framework creates two entities in the hashed array indexed by the string values `txlMe.Text+"HOME"` and `txlMe.Text+"FILTERS"`, as the keywords to reference the entries in the array. The use of `txlMe` ensures uniqueness. The language text must be in escaped form if it contains a carriage return (\r\n), equals (=), tilde (~), or pipe (|).

`gtxlToolTip.Text`—A set of keywords or value pairs used to hold language-sensitive values for floating comments displayed in Help mode. The value must match the control name it describes. `gtxlToolTip.Text` uses identical syntax to `gtxlLanguageStrings.Text`. Loaded by the framework into an associative or hashed array when the dashboard starts up or the language is changed. The array can be accessed using JavaScript of the form:

```
ActiveDocument.Qiq_harToolTip[<keyword>]
```

where *<keyword>* is the name of the control that is clicked. For example, `txlMe.Text +"TOOLTIP_"+myControlName` is used to find a control floating comment. The language text must be in escaped form if it contains a carriage return (\r\n), equals (=), tilde (~), or pipe (|). If a floating comment keyword is not found using this method, the framework calls the component `Qiq_initToolTip` function to return the correct floating comment.

`txlParent.Text`—The component name from which features are inherited. Reserved for future use.

`PrototypeName.Text`—Not used in FrameTypes under 1100.

`Implements.Text`—Not used in FrameTypes under 1100.

`CloneImplements.Text`—Not used in FrameTypes under 1100.

See "Template Structure" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Functions and Method Prototypes

During document startup, the Dashboard Studio template framework causes the `OnClick()` event of every command button on a FrameType 1020. Each event is preconfigured with JavaScript that declares or instantiates functions that can be called by the clients of the component. This pattern of JavaScript declares the function and instantiates it as part of the Interactive Reporting Studio dynamic runtime object model.

```
var trl=0
var thisSection=this.Parent
Qiq_trace("In " + txlMe.Text+"."+ this.Name,trl,thisSection)
var cnAD=ActiveDocument
var cnClass=cnAD.Sections[txlMe.Text]
var Qiq_clsGlobals=cnAD.Qiq_clsGlobals

function Qiq_service(in_clsCaller){
//==============================
  Qiq_trace("In "+txlMe.Text+".Qiq_service()",trl+1,thisSection)
  Qiq_trace("Out "+txlMe.Text+".Qiq_service()",trl+1,thisSection)
}
cnClass.Qiq_service=Qiq_service

Qiq_trace("Out " + txlMe.Text+"."+ this.Name,trl,thisSection)
```

A line by line explanation follows:

```
// set the base trace level
// create a reference to the section on which this control is found
// trace the start of the event that instantiates the functions
// create a reference to the ActiveDocument
// create a reference to the Class that  hold our functions
// create a reference to the Globals class

// declare the function header
//==============================
  // trace the start of the function call
  // trace the end of the function call
// terminate the function
// create a property in cnClass that references the function

// trace the end of the event that has instantiated the functions
```

Standard Component Methods

The Dashboard Studio template framework recognizes and calls the functions listed in the JavaDoc that is installed with this program.

For details on the Standard Component Methods, see the JavaDoc files.

Reverting to a Template

A template cannot be tested in its raw form. It is a mechanism by which reusable elements can be delivered to non-programmers. Before a component is constructed, an application must be created from which a template can be derived. Use Dashboard Studio to take generalized templates and turn them into applications.

➤ To use the typical development process:

1. **In Dashboard Studio, merge `Blank_component.bqy` into an editable source master (ESM) for testing.**

   Use the Dashboard Studio Merge Utility. See "Merging Components" on page 10.

2. **Change the name of the blank merged component, and add language strings, constants, and JavaScript.**

   Include code in the `Qiq_reset` function.

3. **Test the custom component, and update the JavaScript until the component functions correctly.**

4. **Make Dashboard Studio visible, and click Reset.**

   This calls `Qiq_isSystem` for the component before it removes any section. If the component requires a section to be kept, return *true* in this function. The framework removes these sections:

   - All query sections, and all other sections that depend on it
   - All sections with FrameType >= 1100, where the value in prototype labels is not the frame name or if the value *Is Null*

5. **The framework calls `Qiq_reset` so that lists, labels, drop-down lists, and other controls are made clean.**

Creating Plug-and-Play Components

Components that plug into a template or an ESM come in two formats:

- Components saved into an Interactive Reporting document (Sections that constitute the component are selected in the Dashboard Studio Merge Utility)

- Each component saved into individual Interactive Reporting documents (These documents are merged using the Dashboard Studio Merge Utility)

This procedure refers to creating a plug-and-play component at a high-level. The instructions are directed at programmers.

➤ To create and test a plug-and-play component:

1 **Use Dashboard Studio and Interactive Reporting Studio to create and test the application.**

2 **From the ESM, revert to template status, and test creating an application from the template.**

3 **When the template functions correctly, place it under configuration management.**

In this high-level example, configuration management refers to saving the template into a repository, and applying the associated repository functions.

4 **Copy and name the template.**

For example, `componentname_component_`*`xxxx`*`.bqy` (where *xxxx* is the release number).

5 **Open and delete all sections, except those that constitute the component.**

6 **Save the component.**

3

Dashboard Studio Chart Shade Component

In This Chapter

Chart Shade Component

The Chart Shade component enables you to switch the internal color palette used by charts to a set of custom predefined colors. The custom colors are loaded from a Dashboard Studio palette file (PAL). A set of hatched monochrome colors are available for black and white printing or color blind users.

The component is extended to enable these options:

- End users apply alternate color schemes to color charts at runtime
- Dashboard developers define one or more palettes to be available at runtime

The component is extended to define multiple palettes on top of the existing hatched monochrome palette. Palettes can also be concatenated if a chart contains many bars or segments. A repeating cycle of color values occurs if all palettes are exhausted.

Sets of colors in one or more palettes are defined by using the Color Palette Properties frame. See “Using the Color Palette Properties Frame” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

The component includes button graphics that must be added to dashboard frames and configured. See “Component Buttons” on page 12.

Using a Runtime Release of the Chart Shade Component

Dashboards that include the Chart Shade component should contain two additional buttons on the top panel. The buttons determine whether the charts use the standard colors applied by Interactive Reporting Studio, or a set of color palettes applied by the dashboard developer, or a hatched monochrome palette. However, to conserve space on the dashboard toolbar, dashboard developers can choose to configure only one button. Therefore, you can toggle between the options by clicking that button. See “Configuring Chart Shade Buttons” on page 29.

The Chart Shade component enables users at runtime to select from multiple color schemes to color charts.

See “Setting Color Palettes in the Chart Shade Component” on page 30.

Note:

If no custom palette is configured, clicking the buttons switches between the standard color applied by Interactive Reporting Studio and hatched monochrome palette. If multiple palettes are selected and 📊 or 📊 are clicked, a drop-down list is displayed that contains the entries set in the Chart Shade Properties frame.

Caution!

Shading charts can cause a dashboard to run slowly and inefficiently.

➤ To use the Chart Shade component:

1 **In Interactive Reporting Studio, open a dashboard that is configured with the Chart Shade component.**

2 **Perform an action depending on the available button.**

a. Click 📊 to apply the palette.

The colors on the chart are changed to a set of hatched monochrome colors. The option is provided for monochrome printing or color blind users.

b. Click 📊 to apply the palette.

The classic color palette applied by Interactive Reporting Studio, or custom color palette specified by the dashboard developer are displayed in a drop-down list. See “Setting Color Palettes in the Chart Shade Component” on page 30.

The Chart Shade feature changes the color of all charts in the dashboard. However, it does not affect pivots, charts configured with the Chart Spotlighting feature, nor maps configured with the Maps component, as spotlighting takes precedence over Chart Shade configurations. See “Using a Runtime Release of the Maps Component” on page 99.

Drilling down may revert a chart back to the classic color palette assigned by Interactive Reporting Studio. Click 📊 to reactivate the custom colors. Similarly, if filters are set and custom colors applied, when those filters are removed, some bars in the chart may use custom colors and some may use the classic Interactive Reporting Studio color palette. If this occurs, click 📊 to reactivate the custom colors.

The Chart Shade component works with the Checkpoint control to store or restore the current palette on a dashboard. See “Using Checkpoint Control” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio*.

In Dashboard Studio Release 8.3.2 and earlier, the Chart Shade buttons had other names. They were *Custom Colors* and *Standard Colors,* which are now *Hatch* and *Color,* respectively. If a dashboard developer uses the previous button names, they still operate in this release. That is, using `pic^Qiq_chartshade^custom` to define the Custom Colors button still works, as does `pic^Qiq_chartshade^standard` to define the Standard Colors button.

Configuring the Chart Shade Component

To configure the Chart Shade component:

1. Merge the component. See “Merging Components” on page 10.
2. Add and configure 📊 and 📊.
3. Specify a color palette.

Configuring Chart Shade Buttons

Before you can set the color palette for the Chart Shade component, add and configure 📊 and 📊. After the component is configured, the buttons enable you to manipulate chart shading.

➤ To add and configure the Chart Shade buttons:

1 **In Interactive Reporting Studio, open a dashboard that contains the Chart Shade component.**

2 **Select the frame on which to add the buttons, and press Ctrl+D to enter Design mode.**

3 **From the catalog pane, expand Graphics, and drag a picture object onto the frame.**

4 **Navigate to** `chartshade_custom.bmp` **in the Chart Shade component directory, and position the button on the dashboard toolbar.**

5 **Double-click the button.**

Properties is displayed.

6 **Enter** `pic^Qiq_chartshade^hatch` **as the object name, and click OK.**

7 **On the frame select the button, right-click, and select Scripts.**

Scripts Editor is displayed.

8 **In Scripts Editor, perform an action:**

- Enter this line of code

```
ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
(this.Parent,this)
```

- Copy and paste the line of code from another button on the toolbar to avoid data entry errors

9 **Click OK.**

10 **Repeat steps 3–9 to select** `chartshade_standard.bmp`**, and enter** `pic^Qiq_chartshade^color` **as the object name.**

11 **Optional: Add, configure, and name the corresponding gray buttons for the not selectable state.**

12 **Press Ctrl+D to exit Design mode.**

The buttons are configured and can be tested.

13 **Save the dashboard.**

Note:

The Chart Shade component works only on associated charts. If charts have not been associated, open Dashboard Studio, and move to the Associate step, and click to associate the embedded objects (buttons).

Optional: An alternative way to configure the images is to select **View**, then **Unhide Sections**, and select `Qiq_chartshade`. Enter Design mode, copy the buttons from the toolbar, and paste them onto the dashboard frames that will utilize the buttons. Exit Design mode and save the dashboard.

Proceed to configuring the color palettes for the component.

Setting Color Palettes in the Chart Shade Component

Dashboard Studio contains color palettes that are used to configure the look and feel of dashboard frames. To configure and apply color palettes, use the Chart Shade Properties frame. Color palettes to use for Chart Shade can be configured in the Color Palette Properties frame. See “Using the Color Palette Properties Frame” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

➤ To use the Chart Shade Properties frame:

1 **Use the Interactive Reporting document from the Configuring Chart Shade Buttons procedure, and navigate to Chart Shade Properties.**

To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

2 **Optional: From Palette Configuration, select Concatenate Palettes to enable a cycle of color schemes.**

For example, if a user specifies a color palette that contains 16 color values and a bar chart that contains more than 16 bars, the color of the seventeenth bar is the first color of the next palette. A repeating cycle of color values occurs if all palettes are exhausted.

The 16 colors of a palette are displayed in the 16 squares under Available Palettes and Selected Palettes.

3 **Move selected palettes between Available Palettes and Selected Palettes by clicking > and <.**

4 **Optional:** Reorder **Selected Palettes** by selecting a palette and clicking ▲ or ▼.

5 Perform an action:

- To discard selected palettes and reload the original settings, click Restore
- To remove Selected Palettes, click Clear
- To remove all entries, click Clear All
- To load the palettes, click Apply

6 Navigate to the Interactive Reporting document from the Configuring Chart Shade Buttons procedure, and click either 📊 or 📊.

If multiple palettes are selected, a drop-down list is displayed.

7 Select a palette.

The chart color properties change to reflect the selection.

Optional: Select **Refresh all charts if Refresh After Process**. Selecting **Chart**, then **Refresh Data**, and then **After Process in Interactive Reporting Studio** causes all charts in Interactive Reporting Studio to be refreshed after a process operation. When charts are refreshed columns could change. If a column is added to a chart, it is added with the previously applied color scheme or hatching. Therefore, if all charts are refreshed, that is, **Refresh Data**, then **After Process** is selected, and the user opens a report that contains that chart, the extra unshaded column is displayed. Selecting Refresh all charts if Refresh After Process in the Chart Shade component eliminates that situation at the cost of refreshing all charts in the system when a user changes a section, and both conditions are met. The process can be slow if there are multiple sections and charts.

Notes on Performance

The Chart Shade component changes the legends for charts in a dashboard. As a result, if a large number of charts are present, the Chart Shade function may take longer to execute.

This performance issue affects embedded charts in reports. Groupings in reports can result in multiple charts being generated from one chart section. These charts must be painted or shaded individually, resulting in changes to shading taking a noticeable amount of time.

Test Cases

These are test case results.

Test Case 1: Interactive Reporting document with 4 charts and empty report section.

Test Case 2: Interactive Reporting document with 4 charts and a report that contains Chart A (no items on z-axis).

Test Case 3: Interactive Reporting document with 4 charts and a report that contains Chart B (contains items on z-axis).

Test Case 4: Interactive Reporting document with 4 charts and a report that contains Chart A with group headers.

Test Case 5: Interactive Reporting document with 4 charts and a report that contains Chart B with group headers.

Test Case 6: Interactive Reporting document with 4 charts and a report that contains Chart A and Chart B with group headers that result in many charts.

Test Results

The recorded times in Table 4 are estimates.

Table 4 Test Results

	Apply Hatching	Apply Color Palette
Case 1	<= 1 second	<= 1 second
Case 2	<= 2 seconds	< 2 seconds
Case 3	< 2 seconds	<= 2 seconds
Case 4	<= 5 seconds	<= 6 seconds
Case 5	<= 42 seconds	<= 43 seconds
Case 6	<= 60 seconds	<= 64 seconds

Setting Filters

When using the Chart Shade component in combination with setting filters in dashboards, Interactive Reporting Studio Release 6 may return a message that the chart contains bad data. The problem is intermittent and was resolved in Release 8.

Updating Interactive Reporting Documents that Contain the Chart Shade Component

Updating an Interactive Reporting document that includes the Chart Shade component, updates the code but does not add the Chart Shade Properties frame, because the Dashboard Development Services Update Utility does not enforce the addition of component sections. Therefore, the user must merge the component configuration frame into the document. See "Merging Components" on page 10. After the component is merged, the code is updated and recognizes the configuration frame.

4

Dashboard Studio Conditional Navigation Properties Frame

In This Chapter

Conditional Navigation Properties Frame

The Conditional Navigation Properties frame provides a mechanism to configure the navigational structure of dashboards based on selected query limits values. The component extends navigation, which is set in Step 5: Configure Navigation of Dashboard Studio by enabling users to specify fixed and conditional navigation items. Fixed navigation items are displayed on every section. Conditional navigation items are displayed only if the appropriate query limits have been set.

Conditional Navigation Properties enables sections to be hidden that contain no data if a query is processed with restrictive query limits selected. For example, a dashboard that contains an analysis called *Rental Returns,* is not blank if *rr* is selected for the query limits called *Actions.* In *Actions,* if *del* is selected, and the query is processed, you can use the Conditional Navigation Properties frame to suppress the *Rental Returns* section.

Note:

Configuration frames are part of the design process and are only available in templates and ESMs; therefore, they are not available in runtime releases.

Configuring with the Conditional Navigation Properties Frame

The Conditional Navigation Properties frame enables users to dynamically create a uniform navigation structure for dashboards, by enabling only specific frames to be visible when certain query limits are selected.

To configure the Conditional Navigation Properties, the component must first be merged with an Interactive Reporting document (see "Merging Components" on page 10). And query limits must be available.

➤ To create the query limits:

1 **Merge the component, `Conditionalnavigation_component.bqy` with an ESM; for example, `Sample_en_esm.bqy`.**

See "Merging Components" on page 10.

2 **From Sections, select a query.**

For example, select Sales Query.

3 **Drag columns from the topics onto the Filter line; for example, select and drag State.**

Filter is displayed.

4 **Optional: If Sample.oce is displayed, click OK without entering any data.**

5 **In Filter, click Show Values and select one or more values.**

For example, select AZ and CA.

6 **Click OK.**

7 **Click Process on the Interactive Reporting Studio toolbar.**

The results are displayed and query limits are set.

➤ To use query limits to create conditional navigation:

1 **Use the Interactive Reporting document that contains query limits, and navigate to Conditional Navigation Properties.**

To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

2 **From Query Limits, select an option.**

- All query limits—Displays all query limits
- Configured query limits—Displays only query limits for which at least one conditional navigation specification exists
- Unconfigured query limits—Displays only query limits for which no conditional navigation specifications exist

These options filter query limits that are displayed in Select a Query Limit, which is created when searching for query limits in queries, data models, and appended queries.

3 **Select a query limit in preparation for configuring how a selected value will dynamically change the navigation structure.**

4 **Optional: Select an option:**

- Enter one or more Query Limit Values separated by ++, and manually enter the values
- Select an existing Query Limit Value, and from the drop-down list, select a value

5 **Control the types of Available Sections by selecting or clearing the section check boxes.**

Available Sections are not displayed in the navigation structure of the dashboard.

6 Move selected sections to be set as **Fixed Navigational Items** by clicking › (next to Fixed Navigational Items).

Fixed Navigational Items are displayed in the navigation structure no matter which query limits are selected.

7 Move selected **Available Sections** to associate with the entered or selected query limit value, by clicking › (next to Conditional Navigation Items).

Conditional Navigation Items display in the navigation structure if the associated query limit is selected. These items are added only if a query limit is selected and if a value for that query limit is specified. See steps 4 and 5 in this procedure.

Query Limit _:_ Limit Value _:_ Section refers to the query limit chosen in Select a Query Limit, the limit values specified in Enter a new Query Limit Value or Select an existing Query Limit Value, and the dashboard frame that is displayed.

8 **Optional:** Reorder selected items in **Fixed Navigational Items** or **Conditional Navigation Items** by selecting an item and clicking ⌃ or ⌄.

9 Perform an action:

- To discard all current entries and to reload the original settings, click Restore
- To remove the items from the Fixed Navigational Items and Conditional Navigation Items, click Clear
- To load the navigational settings, click Apply

Note:

Configuration frames are part of the design process and are only available in templates and ESMs; therefore, they are not available in runtime releases.

5 Dashboard Studio Conditional Sub-Queries Component

In This Chapter

Conditional Sub-Queries Component

The Conditional Sub-Queries component enables you to sort through numerous detailed transactions, highlighting low-level exceptions and identifying the small number that fail to meet the threshold.

Sifting through a sales database with numerous daily consumer transactions to find exceptions is inefficient. To discover these exceptions, data must be sorted at a detailed level—transaction by transaction. Sorting involves reading all transactions and applying exception criteria. Tools that undertake this task, must load the transactions into memory and take time to read the data. If the data is cached in a document; such as, an Interactive Reporting document, time is required for the document to open and exceptions to be viewed. Users do not want to wait for their documents to open, and system managers do not want their resources to be used inefficiently, in this case; reading, saving, and shipping large information volumes over the network.

The Conditional Sub-Queries component provides a solution by dividing the process into two queries—the primary query and the sub-query.

Primary Query

The primary query (multiple queries can exist in an Interactive Reporting document) is scheduled and runs in the scheduler. It reads only the columns needed to identify exceptional transactions, and produces a table of *key* values that identify those transactions. The table is the *Limit Lookup Table.* Unlike most scheduled queries, the primary query results are not saved, because the data is mostly of little interest and increases the Interactive Reporting document size.

Sub-Query

The sub-query (multiple sub-queries can exist in an Interactive Reporting document) is not scheduled, but is executed programmatically by the component after the scheduler runs the primary query. The Conditional Sub-Queries component transfers key values from the Limit

Lookup Table and applies them as filters to the sub-query, processed by the component. The sub-query retrieves exceptional transaction details, and saves the results.

Applying filters to the sub-query, enables the sub-query to generate only exception details that require action. The end result is the slimmest Interactive Reporting document with the full detail required to manage and analyze exceptions.

The Conditional Sub-Queries component also enables dashboards to activate sub-queries based on a user event; for example, when a user selects an item from a drop-down list. In this case, a custom event, such as `<Dropdown Selection>` as defined by the dashboard developer, replaces the primary query. When the component receives the custom event, it activates the sub-query associated with the event. The Limit Lookup Table associated with the custom event defines the sub-query filters.

Other regular queries may be available in the Interactive Reporting document.

Conditional Sub-Queries Component Example

Example: Working with `Conditionalsubqueries_component.bqy`.

Note:

For `Conditionalsubqueries_component.bqy` to work correctly, it must be first merged with another Interactive Reporting document; for example, `Sample_en_esm.bqy`. See "Merging Components" on page 10.

➤ To use `Conditionalsubqueries_component.bqy`:

1 Merge `Conditionalsubqueries_component.bqy` and `Sample_en_esm.bqy`.

See "Merging Components" on page 10.

2 In Interactive Reporting Studio, from **Sections**, right-click **Sales Query** and select **Duplicate section.**

Sales Query2 and Sales Results2 are created.

3 Rename Sales Query2 to be **Secondary Query**, and Sales Results2 to be **Secondary Result.**

4 Select **Sales Query**, and drag State to the Filter line.

Filter is displayed.

5 **Optional:** If the `Sample.oce` dialog box is displayed, click **OK** without entering any information.

6 Select **Show Values**, and select **AZ** and **CA.**

7 Click **OK**, and select State on the Filter line.

8 Select **Query**, then **Variable Filter.**

9 From **Sections**, select **Secondary Query**, and drag State to the Filter line.

10 For **Secondary Query**, repeat steps 5-7, but do not set as a variable filter.

Proceed with setting the component properties and processing the queries.

➤ To set the component properties and process the queries:

1. **From Sections, select Conditional Sub-Queries Properties frame.**
2. **From Available Queries, select Sales Query and click > to move it to Primary Events.**
3. **From Event Name, select Sales Query.**
4. **From Limit Lookup Table, select Sales Results.**
5. **From Available Queries, select Secondary Query and click > to move it to Sub-Queries.**
6. **Click Apply.**
7. **From Sections, select Sales Query, and click Process.**

   Filter is displayed with AZ and CA selected. Click OK. Sales Results displays data only for AZ and CA.
8. **From Sections, select Secondary Results.**

   The data from the primary query is returned in the sub-query; that is, the data is displayed only for AZ and CA.

Activating Sub-Queries with the Conditional Sub-Queries Component in a Runtime Release

Two ways to activate and run a sub-query are:

1. Using a primary query.
2. Using a custom user event.

➤ To run a sub-query using a primary query:

1. **In Interactive Reporting Studio, open the sample Conditional Sub-Queries component document (`Conditionalsubqueries_sample_esm.bqy`).**

   Process Event Example displays the primary query results and the results of the attached sub-query. Primary Query Results (Limit Lookup Table) is empty to conserve space, as the results are not saved with the document.
2. **Click Process Selected values in Primary Query, and launch Sub-Query to get detailed results.**
3. **If the Filter dialog box is displayed, select filter values, and click OK.**

   For example, select **Store Type**, then **Computer**, and then click **OK**. Select **OS**, then **SCSI**, and then click **OK**.

   Primary Query Results (Limit Lookup Table) displays the key values identifying the items of interest; for example, Store Type and Os.

   The Conditional Sub-Queries component detects a primary query was processed and activates the attached sub-query, by using the Limit Lookup Table as a filter. As a result, Sub-Query Results is updated to reflect the values in the Primary Query Results (Limit Lookup Table).

➤ To run a sub-query using a custom user event:

1 **In Interactive Reporting Studio, open the sample Conditional Sub-Queries component document (`Conditionalsubqueries_sample_esm.bqy`).**

2 **From Sections, select User Event Example.**

The section displays information about under-performing stores whose transactions are below a certain amount. The Limit Lookup Table is the results section of a regular query, that is saved with the document and displayed when opened.

3 **From with transactions below $, select a value.**

For example, select $200 to enable the filter in the Limit Lookup Table to display keys that identify stores with daily sales below $200. The action also passes a `<Dropdown Selection>` custom event to the Conditional Sub-Queries component, which launches the associated sub-query.

Sub-Query Results (Details of underperforming stores) displays the stores with daily sales below $200.

In these instances, there is no need to embed a results section or a Limit Lookup Table in dashboard sections for the component to work. The sections are illustrations only. Charts, pivots, or tables created from sub-queries can be embedded to provide more information for end users.

Configuring the Conditional Sub-Queries Component

To configure the Conditional Sub-Queries component:

1. Merge the component. See "Merging Components" on page 10.
2. Build component entries by creating an item:
   - a primary query
   - a custom event
3. Schedule the document on the server.

Building Conditional Sub-Queries Component Entries

The Conditional Sub-Queries component enables you to open sub-queries for an event by launching a primary query or defining a custom event and broadcasting the event when it occurs. The component then launches the nominated sub-queries.

Build a Conditional Sub-Queries component entry by creating a primary query or a custom event to execute sub-queries.

Creating Primary Queries that Execute Sub-Queries

➤ To create a primary query that executes sub-queries:

1 **In Interactive Reporting Studio, open a dashboard that contains the Conditional Sub-Queries component.**

2. **Build a primary query to retrieve columns that contain transactions of interest.**

3. **Process the query.**

   Use computed values in the results section filters to limit results and display transactions of interest.

   A sub-query needs keys to identify the transactions. Primary Query Results may contain key and additional information, such as computed items or columns used to analyze transactions; therefore, another table may be required that contains only keys.

4. **Optional: If Primary Query Results contains more than key information, build a Limit Lookup Table that contains only the keys needed to identify the transactions.**

   Each column in the table is transferred as a filter to the sub-query.

5. **Build a sub-query that displays transaction information that is identified in the primary query.**

   For example, to obtain information on under–performing stores, drag the columns; *store location, manager,* and *contact phone number* onto the Request line.

   For each primary query, one or more sub-queries can be built.

6. **Create filters within the sub-query to match columns in the Limit Lookup Table by performing an action:**

   - If the Conditional Sub-Queries component is used, values are transferred from the Limit Lookup Table into the sub-query as filters before processing the sub-query (Because the sub-query contains filters, the component retrieves details for a small number of rows, saving time and disk space)
   - The conventional way of searching for exceptions without using the component, is to obtain details for all transactions and search for exceptions all in one query (A column in the Limit Lookup Table may have no equivalent filter in a sub-query. This scenario is possible if two or more sub-queries are present. In this case, there is no need to add the filter to the sub-query. The component does not apply the missing filter when it executes the sub-query)

7. **Under the File, Save Options, select Save Query Results with document.**

8. **Clear the primary query.**

   Clearing prevents the Interactive Reporting document from becoming too large (by including the primary query results).

9. **After the primary query is processed:**

   a. Open the Interactive Reporting document and navigate to the **Conditional Sub-Query Properties** frame.

      Available Queries displays all queries available in the document.

   b. Move selected queries between **Available Queries** and **Primary Events** by clicking > and <.

      Multiple primary queries can exist in an Interactive Reporting document.

   c. In **Sub-Query Properties**, define the action that the component must perform when the primary query is processed.

d. From **Event Name**, select the primary query added in step b.

The component loads the sub-query that the primary query is to launch. It also displays the Limit Lookup Table from which the sub-query obtains the filter values. As it is the first time that the primary query is defined, the items are blank.

e. **Optional:** Select **Add Custom Event.** See "Creating Custom Events that Execute Sub-Queries" on page 42.

f. From **Limit Lookup Table**, select the results or table that contains values to filter the sub-query.

g. Move selected sub-queries to be launched when the selected primary query is processed, between **Available Queries** and **Sub-Queries** by clicking > and <.

h. Click **Apply**.

After the primary query is created, it must be tested.

➤ To test the primary query:

1. **Navigate to the primary query results.**

   The results should be empty.

2. **Process the primary query.**

   The results section is populated.

3. **Navigate to the sub-query results section.**

   The results are updated to reflect the transactions identified in the Limit Lookup Table.

   Import the Interactive Reporting document to the server so it processes more quickly and can be run at a convenient time; for example, overnight in an office environment.

Creating Custom Events that Execute Sub-Queries

A custom event is an event in which sub-queries are launched. Events need not be launched from primary queries. For example, you can execute a sub-query when an item is selected from a drop-down list, or a button is clicked, or where a complex calculation is included in the code. The event is defined, and, when the component receives the event, the component executes the nominated sub-queries by using values from the nominated Limit Lookup Table as query limits.

➤ To define and test a custom event:

1. **In Interactive Reporting Studio, open a dashboard that contains the Conditional Sub-Queries component.**

2. **Build a results or table section that contains columns to be used as filters for the sub-queries.**

   This is the Limit Lookup Table.

3. **Build one or more queries to be launched when the custom event occurs.**

   The queries are later designated as sub-queries.

4. **Create filters within each sub-query by using columns in the Limit Lookup Table.**

When the Conditional Sub-Queries component processes the sub-query, values are transferred from the Limit Lookup Table into the sub-query as filters.

A column in the Limit Lookup Table may have no equivalent filter in a sub-query. This scenario is possible if two or more sub-queries are present. In this case, there is no need to add the filter to the sub-query. The component does not apply the missing filter when it executes the sub-query.

5 **Link the sub-queries and the Limit Lookup Table to the custom event.**

a. Open the Interactive Reporting document and navigate to **Conditional Sub-Query Properties**.

b. From **Sub-Query Properties**, select **Add Custom Event**.

c. In the text box, enter the custom event name, and click **Add**.

The custom event is added to Event Name.

d. In **Sub-Query Properties**, define the action that the component must perform when the custom event is processed.

e. From **Event Name**, select the custom event added in step c.

The component loads the sub-query. It displays the Limit Lookup Table from which the sub-query obtains the filter values. As it is the first time the custom event is defined, the items are blank.

f. From **Limit Lookup Table**, select the results or table that contains values to be used to filter the sub-query.

g. Move selected sub-queries to be launched when the component receives the custom event, between **Available Queries** and **Sub-Queries** by clicking > and <.

h. Click **Apply**.

6 **In the document, add JavaScript to the event.**

For example, in a button handler `OnClick()`, or drop-down list handler `OnSelection()`, or in the code enter this JavaScript:

```
if (ActiveDocument.Hysl_csq) {
   Hysl_csq.Hysl_doSubQuery("<My Event Name>")
}
```

7 **To test, run the event.**

The Conditional Sub-Queries component executes the nominated sub-queries.

Scheduling Conditional Sub-Queries Component Documents on the Server

The Conditional Sub-Queries component works only on server Release 8.2 and earlier.

The component performs chained queries on a desktop computer. However, if millions of transactions are stored, a desktop computer requires an excessive amount of process time. In this case, the Interactive Reporting document can be imported and scheduled to run on a server, preferably when it can run in an uninterrupted environment; for example, overnight.

➤ To schedule an Interactive Reporting document on the server:

1 **On the server, import and schedule an Interactive Reporting document.**

From Query Connections and Processing, select only primary queries and ordinary queries, if available, for scheduling.

Do not schedule sub-queries as they are processed by the Conditional Sub-Queries component using the primary query results.

2 **Run the query.**

3 **If a prompt is displayed asking for variable filters, select the values, and click OK.**

4 **Open the resulting Interactive Reporting document in Oracle Enterprise Performance Management Workspace, Fusion Edition or Oracle's Hyperion® Interactive Reporting Web Client.**

If the scheduling process was run in conjunction with a sub-query that uses a custom user event, the sub-query results in Process Event Example display store details that were specified by the custom user event. See "Activating Sub-Queries with the Conditional Sub-Queries Component in a Runtime Release" on page 39.

6 Dashboard Studio Copy Scale Component

In This Chapter

Copy Scale Component

The Copy Scale component enables you to configure chart axes to behave in an alternate manner to the default behavior applied by Interactive Reporting Studio.

The component is designed to manipulate bar and line charts. A bar and line chart displays facts using pairs of columns. The first column is displayed as a bar, the second is shown as a line. This behavior displays a comparison of two value types.

1. Values that do not use the same scale; for example, Revenue and Rainfall, Revenue and Units Sold, and so on.
2. Values that are similar in scale; for example, Plan versus Actual.

Interactive Reporting Studio independently calculates bar and line chart axes (left and right). The behavior is ideal for example 1, but is problematic for example 2, as it can present a misleading data view. In example 2, the scales on the sides should be identical to show immediately how close the planned value is to the actual value.

The Copy Scale component manipulates chart axes and sets the scales to match. The largest value is set within the visual scope of the chart. The component includes a configuration frame that specifies which charts are to be manipulated and which keep the default behavior.

Using a Runtime Release of the Copy Scale Component

The default behavior in Interactive Reporting Studio is to independently calculate bar and line chart axes (left and right). However, a misleading view of the data can result. In dashboards configured with the Copy Scale component, this feature can be applied to a chart so that the scales on the axes are identical. The result is a more accurate representation of the data.

Figure 1 displays a chart that is not configured with the Copy Scale component, and Figure 2 displays a chart with the Copy Scale feature applied.

Figure 1 Bar and Line Chart Displays Default Behavior

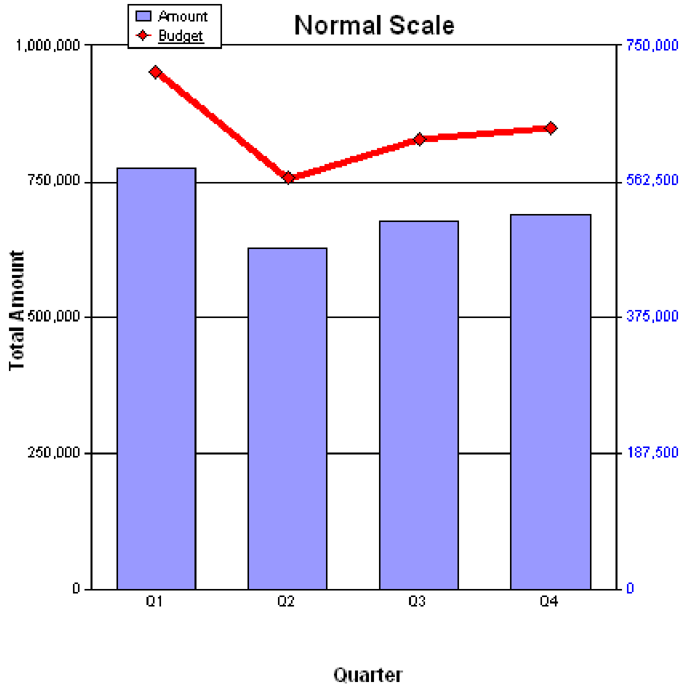
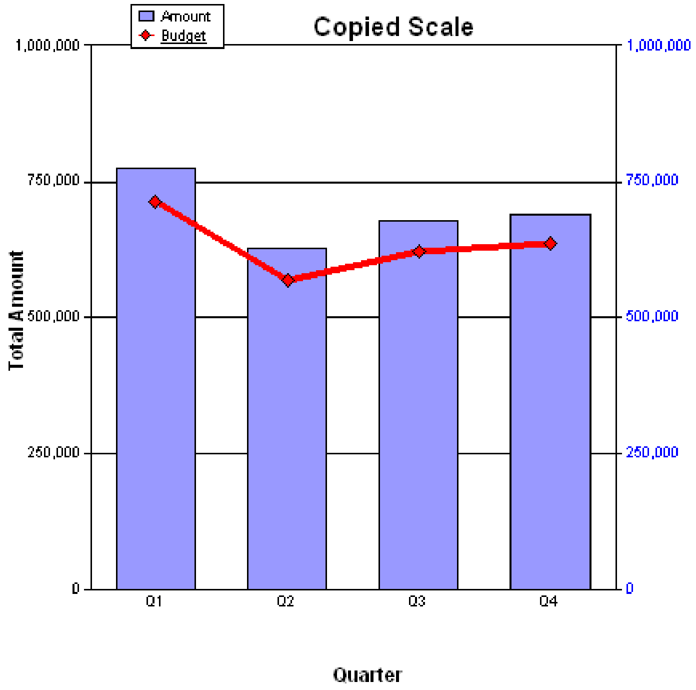


Figure 2 Copy Scale Component Applied to Chart



Configuring Charts for use in the Copy Scale Component

This procedure describes the process of configuring bar and line charts used by the Copy Scale component.

➤ To configure bar and line charts:

1. **In Interactive Reporting Studio, open a dashboard that contains the Copy Scale component.**
2. **Navigate to QIQ CopyScale Properties.**

   To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

   Use QIQ CopyScale Properties to specify the bar and line charts to which the component function is applied.

   When the component is merged into a dashboard, the default Interactive Reporting Studio behavior is applied to all bar and line charts.
3. **From Default Scale Configuration, select an option.**

   Default Scale Configuration applies the selected option to all bar and line charts (without an applied explicit configuration).

   - Do not adjust the scales—Applies the default Interactive Reporting Studio behavior for all charts
   - Apply maximum scale to both axes—Selects the larger scale of a bar and line chart and applies it to the left and right axes of all bar and line charts
4. **To apply another configuration for charts, from Explicit Scale Configuration, select an option to manipulate chart sections.**
   - All Dashboards—All frames in the dashboard
   - Unconfigured Dashboards—Only frames with the default scale applied
   - Configured Dashboards—Only frames that contain explicit settings
5. **In Explicit Scale Configuration, from the drop-down list, select a frame to be manipulated.**
6. **Optional: Click to view the selected frame.**
7. **From Configure Selected Dashboard, select an option to set the scales to apply to the charts.**
   - Do not adjust the scales—Applies the default Interactive Reporting Studio behavior for selected charts
   - Apply maximum scale to both axes—Enables the scale of the selected chart to be manipulated

   All available chart sections from the selected frame are displayed in Use Default Scale.
8. **Select the chart to be configured, and click > to identify the underlying chart sections on the frame.**

   Charts are listed as Chart1, Chart2, and so on, not as the display names assigned by the dashboard developer.
9. **Click Apply.**

The scales on the selected charts are configured.

The Copy Scale feature takes effect only after the embedded charts are associated through the Associate step in Dashboard Studio.

➤ **Optional:** To determine the name of the chart that is being configured:

1 **Move to the frame that contains the chart.**

2 **Press Ctrl+D to enter Design mode.**

3 **Perform an action:**

- Click the chart and note the name provided on the status bar
- Double-click the chart to view the name in Properties

If the selected section is not a bar and line chart, the scale settings are not applied until the chart type is changed to bar and line.

4 **Press Ctrl+D to exit Design mode.**

7 Dashboard Studio Drill Across Component

In This Chapter

Drill Across Component

The Drill Across component caches data in an Interactive Reporting document, dynamically retrieves un-cached data just-in-time, and drills into the data. The technique is also available in Interactive Reporting Studio as Drill to Detail, and in the Conditional Sub-Queries component.

Using the Drill Across component, you can double-click a cell (using the `OnCellDoubleClick` event) in an embedded active pivot (source embedded pivot or SEP) in a dashboard section. The intersection of the side label and top label values, plus active local filters and query filters becomes the context for the drill across operation, and you are taken to a target embedded pivot (TEP). For example, you are examining a general ledger pivot and you use the drill across operation to navigate to view the contents of a cell value, the underlying invoice, freight costs, and salaries. At any point, you can drill back to the launch point.

Each SEP is configured to have one or more associated TEPs. TEPs can reside in the same document as SEPs or in different documents. The relationship between SEPs and TEPs is through a tabular structure, such as an Excel spreadsheet or a database table. (Replicate the table in all documents that contain SEP and TEP configuration.)

The Drill Across component includes the following sections:

- **Hysl_idc (Inter-document Communication)**—Manages the initiation of drilled-to documents and the passing of information between documents; initiaties drill across and documents responding to drill across requests
- **Hysl_drillAcross (Drill Across)**—Manages the gathering of the drill-point intersection, local filters, and query limits, and makes the drill request to the correct document by using Hysl_idc; administers the configuration of the sources and targets through a table; uses Hysl_queryDatamodel to discover the query limits set in the source; and uses internal structures to execute a subordinate query if responding to a drill request.

Note:

The Drill Across component functions with Interactive Reporting documents in Release 9.0 and later.

Note:

The Drill Across component does not work in EPM Workspace since the `OnCellDoubleClick` event is not available, and it is not possible to communicate between documents. Drilling across to a separate document is not available in Interactive Reporting Web Client since only one document can be active at a time. However, if the SEP and the TEP are in the same document, the feature is available to users of Interactive Reporting Web Client.

Using a Runtime Release of the Drill Across Component

An example using two sample dashboards, sales and costs, is provided in this topic.

The `Sales Dashboard_esm.bqy` and the `Costs Dashboard_esm.bqy` sample files are available with the Drill Across component in this installation.

Example Using Sales and Costs Dashboards

Both documents contain a summary query that can be processed by using the Query Panel and a pivot from which detailed information is obtained using the Drill Across component. You can obtain additional detail for sales or costs using the drill across target in the same document, or by obtaining detailed sales or costs information using the drill across target in the other document. For example, from the sales dashboard you can drill across to the costs dashboard to acquire further information.

Inter-document communication is managed by settings in the IDC Table, which is an imported data file from an Excel spreadsheet, or is created as a query from a central database. The table and column names can be configured or reconfigured through the Drill Across Properties configuration frame. See "Using the Drill Across Properties Frame" on page 54.

Note:

The example uses the sample Access database, sample documents, and data models.

Using Source and Target Dashboards

➤ To use a source and a target dashboard:

1 **Open a source document (for example, Sales Dashboard_esm.bqy)..**

Query panel is displayed.

2 **Select one or more filters, and run the query.**

The Home dashboard is displayed.

3. **Optional:** Click , and process another query using different query limits.
4. **Optional:** Set local filters.
5. **Optional:** Modify the target of the drill operation using .
6. Double-click a cell in a pivot to commence the drill request. These actions are performed:
   - The drill intersection is computed
   - Local filters are gathered
   - Query limits are gathered
   - The Query Panel connection credentials are gathered
   - The drill request is initiated
   - The target document is opened
   - The credentials and limits are applied to the drill query of the target document and the query is processed
   - The target section is displayed
7. **Optional:** Close the document and the source is displayed, or click to display the source.

Drilling Operations

➤ To drill by double-clicking a pivot cell:

1. Open a dashboard that contains the Drill Across component.
2. From the Query Panel, click to process the query.

   A pivot is displayed.
3. Double-click a cell in the pivot.

   A dialog box is displayed asking for confirmation of the target and to drill across.

   Optional: To change the drill target, see the procedure below.
4. Click **OK** to accept the default target and drill across.

   The target is displayed.

➤ To change the drill target:

1. From the dialog box that asks for confirmation of the target and to drill across, select **No**.
2. Click to change the drill target.
3. Double-click the pivot cell again.

➤ To return from a drill operation, click ⇤. The source section, from which the drill was initiated, is displayed.

Configuring the Drill Across Component

Configuring the Drill Across component involves:

- Identifying and configuring Source documents and Target sections
- Merging the necessary components
- Creating an IDC Table and merging it into Source documents
- Configuring Drill Across Properties in Source documents

Source documents contain the pivot that enables you to drill to a target section. Source documents must have the following Dashboard Studio components merged to it. The components must be merged separately.

- Drill Across
- Quick Query Limits

Target documents contain the section drilled into by source documents. (The target document can be the same as the source document). If the target section is in a different document than the Source document, then the document containing the Target section must also have the Drill Across component merged to it.

Note:

The Quick Query Limits component and the Drill Across component must be merged separately.

Building Dashboards

➤ To build dashboards:

1 **Use the Dashboard Studio wizard, or the Webdash Builder component Build Dashboard frame.**

See “Chapter 4, Using Dashboard Studio to Develop Dashboards” for wizard steps in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio,* or Chapter 22, “Dashboard Studio Webdash Builder Component.”

2 **Merge the necessary components to the document.**

See “Merging Components” on page 10.

3 **Use the Query Panel to create query limits.**

4 **Set the Query Panel as the default startup section.**

5 **Import the Excel spreadsheet that was created when building a network of dashboards.**

The spreadsheet defines the sources and targets in the dashboard. For simplicity, the documents should share the same spreadsheet.

6 **From Sections, select Drill Across Properties and identify the table that contains the source and target mappings.**

See "Using the Drill Across Properties Frame" on page 54.

Using the `OnCellDoubleClick` event, the component:

- Navigates to each embedded pivot on the dashboard that acts as a launch point for a drill across operation and enters Design mode.
- Copies and pastes the common line of script from any button on the toolbar into the `OnCellDoubleClick` event:

```
ActiveDocument.Sections.Item(txlMe.Text).Qiq_onControlClick
(this.Parent,this)
```

Creating an Excel Spreadsheet

Excel spreadsheets should contain column headers similar to those found; for example, in the `Sales Dashboard_esm.bqy` which is installed with the Drill Across component.

Source Document	Source Section	Target Path	Target Document	Target Section	Target Query	Target Label	Target Service Key
Sales Dashboard	Summary Sales	c:\Targets	Costs Dashboard	Costs Detail	Costs Detail Query	Costs	Hysl_drillAcross

Column header definitions include:

- **Source Document**—Interactive Reporting document from which to drill across (The document contains a source pivot that enables you to drill to a target section. The *_esm* suffix is not required for the file name as the Drill Across component works with ESMs and runtime releases)
- **Source Section**—Interactive Reporting document section that contains an embedded pivot object that is the launch point of the drill across operation
- **Target Path**—Absolute path to the folder of the target document (The column can be empty if the target document is in the same folder as the source document)
- **Target Document**—Target Interactive Reporting document which is drilled into (The document can be the same as or different to the source document)
- **Target Section**—Target Interactive Reporting document section that is displayed when the drill across is complete
- **Target Query**—Target Interactive Reporting document query section (When a drill across operation is performed, query filters, local filters, and the intersection of the pivot dimensions from the source document are applied as filter values to the Interactive Reporting document query section)

- **Target Label—Optional:** User-friendly name for the target section, which is displayed in preference to the section name
- **Target Service Key**—For the Drill Across component this is Hysl_drillAcross

➤ To create an Excel spreadsheet:

1 **Create an Excel spreadsheet that maps the sources and targets.**

2 **Save the spreadsheet, import it into your dashboard, and rename it to be IDC Table.**

Note:

IDC Table can also be implemented as a database table. The names and positions of the columns are not important as these are selected in the Drill Across Properties frame.

Using the Drill Across Properties Frame

Use Drill Across Properties to identify the table section that contains the source and target mappings, and to identify which columns contain the required information.

If the dashboards are located together in one folder, then the Target Path column can be set to null. However, the null column must be identified in Drill Across Properties.

➤ To use the Drill Across properties frame:

1 **In Interactive Reporting Studio, open a dashboard that contains the Drill Across component.**

For example, open `Sales Dashboard_esm.bqy` or `Costs Dashboard_esm.bqy` located in the components folder with this installation.

2 **Navigate to Drill Across Properties.**

To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

3 **From Drill Sources and Target Definitions Table, select a table.**

For example, select IDC Table.

4 **In Source Mappings, perform these actions:**

- From Documents List Column, select a source document
- From Pivot Sections List Column, select a source section

5 **In Target Mappings, perform these actions:**

- From Path List Column, select a target path
- From Documents List Columns, select a target document
- From Target Query Names Column, select a target query
- From Sections List Column, select a target section
- From Target Labels Column, select a target label
- From Target Service Names Column, select a target service key

6 **Perform an action:**

- To discard drill across source and target mappings and reload the original settings, click Restore
- To remove selected mappings, click Clear
- To load selected mappings, click Apply

7 **From Sections, select the dashboard frame, and use the "Drilling Operations" on page 51 instructions to drill across.**

Drilling to Separate Tables within the Same Query Structure

If it is not practical to run separate queries against a data source in response to a drill across request, you can configure the source and the target so they are in the same document and therefore, depend on the same query. Typically the target is a table with the details and local filters that only apply to that table. Therefore, the pivot acts as a summary and the table acts as the detail without having to return to the data source and retrieve further data.

To configure the Drill Across component for this operation, the Target Query column must be empty, so no process takes place and only local filters are applied for the target structure. The dashboard developer must set up the filters in the source and target structures. Typically in such a configuration the filters that apply to the target structure are not present in the source structure, so that the source pivot does not change as filters are applied to focus the target on the selected details.

Using Pivot Trees Component as a Drill Across Source

The Drill Across component can be initiated from a pivot used by the Pivot Trees component. In the Pivot Trees component, a tree structure contained in one pivot column is used to expand or collapse a hierarchy. When a row that is a leaf node of the tree is double-clicked, then a drill across operation is performed from that point if the current pivot is defined as a drill across source. See Chapter 17, "Dashboard Studio Pivot Trees Component."

8 Dashboard Studio Drill and Slice Component

In This Chapter

Drill and Slice Component

The Drill and Slice component enables the dashboard developer to create a hierarchy of local filters that are used as the basis for navigating through a data set in an Interactive Reporting document. Only one hierarchy can exist in an Interactive Reporting document. The hierarchy members must be local filters.

As you descend through the hierarchy, the current hierarchy column replaces a pivot row label and chart axis or both. At each level, you can select values to reduce the data that is available to the next level.

Using a Runtime Release of the Drill and Slice Component

Use the Drill and Slice component to create a hierarchy of filters that enable easy navigation through a data set in an Interactive Reporting document.

➤ To use the Drill and Slice component:

1 **In Interactive Reporting Studio, open a dashboard that is configured with the Drill and Slice component.**

2 **From Quick Drill, select an item.**

If the dashboard developer did not apply the setting to select the first item by default, no values are available in Quick Drill. A hierarchy item must be clicked to display the values to drill into.

3 **Click ↘ to drill down.**

The items are displayed in Quick Drill.

4 **Optional: To drill up one level, click ↖, and, to move to the top level, from the lowest level of the hierarchy, click ↘.**

5 **Double-click an item in Quick Drill to apply the item as a filter before moving to the next level in the hierarchy.**

A chart located behind a pivot that is being drilled, is simultaneously being sliced.

Items selected in Quick Drill are applied as filters before the next column in the hierarchy is added to the pivot.

To enable long entry names to be seen in full, select the item in Quick Drill. The full name is displayed as a text label above Quick Drill. For more information on expanding list descriptions, see "Using the List Expansion Properties Frame" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

The Drill and Slice component works with the Checkpoint control to store or restore the drill path on a dashboard. See "Using Checkpoint Control" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Configuring the Drill and Slice Component

To configure the Drill and Slice component:

1. Merge the component. See "Merging Components" on page 10.
2. **Optional:** If a frame prototype including ↘ and ↖ was not created, configure buttons to perform the drill and slice.
3. Create charts and pivots, and add the marker column where columns from the drill path will display.
4. Display charts and pivots on Drill and Slice frame prototypes, and associate these sections by using Dashboard Studio.
5. **Optional:** If issues arise because the marker column is called ... (an ellipsis), rename the column.
6. In the Drill and Slice Properties frame, select and order local filters to create the drill path.

Configuring Drill and Slice Buttons

After merging the component, add and configure ↘ and ↖. When the component is configured, the buttons enable you to drill into the data.

➤ To add and configure the Drill and Slice buttons:

1 **In Interactive Reporting Studio, open a dashboard that contains the Drill and Slice component.**

2 **Select the frame on which to add the buttons, and press Ctrl+D to enter Design mode.**

3 **From the catalog pane, expand Graphics, and drag a picture object onto the frame.**

4 **Navigate to** `drill_down_Button.bmp` **in the Drill and Slice component directory, and position the button on the dashboard toolbar.**

5 **Double-click the button.**

Properties is displayed.

6 **Enter** `pic^hysl_drillAndSlice^down` **as the object name, and click OK**

7 **Select the button, right-click, and select Scripts.**

Scripts Editor is displayed.

8 **In Scripts Editor, perform an action:**

- Enter this line of code

```
ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
(this.Parent,this)
```

- Copy and paste the line of code from another button on the toolbar to avoid data entry errors

9 **Click OK.**

10 **Repeat steps 3–9 to select** `drill_up_Button.bmp`**, and enter** `pic^hysl_drillAndSlice^up` **as the object name.**

11 **Optional: Add, configure, and name the corresponding gray buttons for the not selectable state.**

12 **Press Ctrl+D to exit Design mode.**

Proceed with configuring the Drill and Slice component by creating and displaying charts and pivots.

Creating and Displaying Charts and Pivots on Drill and Slice Frames

Charts and pivots to be displayed in the Drill and Slice component must be associated with Drill and Slice frames, so that the data is drilled and sliced correctly.

Drill and Slice frame prototypes are available with the installation and are selected in Dashboard Studio, Step 2: Add and Rename Frames.

➤ To create, add, and associate charts and pivots with Drill and Slice frames:

1 **In Interactive Reporting Studio, create the Interactive Reporting documents to be used, including the template.**

2 **Create the charts and pivots to be drilled and sliced.**

- Do not add the columns from your hierarchy
- Add and position the marker column that the Drill and Slice component uses to substitute columns from the hierarchy (see "Renaming the Marker Column" on page 60)

3 **In Step 2: Add and Rename Frames of Dashboard Studio, add the frames upon which charts and pivots are to be displayed.**

The frames must be the frame prototypes available in `Drillslice_component.bqy`. These Drill and Slice frame prototypes are also available in the `Frame_Library.bqy` in the templates folder.

4 Create Drill and Slice frames from a frame prototype:

- Top Controls Drop Down
- Top Controls Tabs
- Side Controls Tabs

5 In **Step 3: Layout** of Dashboard Studio, use Interactive Reporting Studio to drag the charts and pivots onto the frames.

6 In **Step 4: Associate Frames with Charts, Pivots, or Tables** of Dashboard Studio, configure the features available for the charts and pivots.

7 Click to associate the charts and pivots with the frame prototypes.

Renaming the Marker Column

The Drill and Slice component creates a marker column called … (an ellipsis) in every results or table section. The column is empty and hidden from view. It acts as a placeholder for the column values selected in the drill operation. A marker column must be added to each chart or pivot section to be drilled. If charts and pivots are to be drilled and sliced, they must be displayed using the frame prototypes available with this component. These prototypes contain placeholders for the drill path, and the buttons (and).

If a dashboard does not contain a marker column, no marker column is available. A marker column is created when the Drill and Slice Properties configuration frame is activated.

Optional: Use the Drill and Slice Properties configuration frame to rename the marker column.

➤ To rename the marker column:

1 Use the Interactive Reporting document from the Configuring Drill and Slice Buttons procedure, and navigate to **Drill and Slice Properties**.

To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

2 In **Rename Marker Column**, enter a name.

3 Click **Rename**.

Marker Column Name is refreshed to display the replacement name.

If, for example, the display name is entered by pressing the spacebar. The marker column name is >| |<, bounded by >| and |<. In cases of escapable characters, the escaped form of the name is also displayed; for example, >|%20|<.

Using the Drill and Slice Properties Frame

The Drill and Slice Properties frame is used to configure local filters into a hierarchy. Local filters that are excluded from the hierarchy are, however, made available in Step 6: Configure Filters of Dashboard Studio.

➤ To configure Drill and Slice hierarchy path properties:

1. **In Interactive Reporting Studio, navigate to QIQ Filter Properties and create local filters.**
2. **Add a marker column to row labels and the x-axis of pivots and charts that are included in the Drill and Slice operation.**

   The marker column is replaced by columns of the hierarchy during drill and slice.
3. **After pivots and charts are configured with marker columns, move to Drill and Slice Properties.**
4. **From Hierarchy Source, select the section that contains the local filters that were created in QIQ Filter Properties.**
5. **Optional: Configure the hierarchy source by selecting one or both proposed options:**
   - First item is selected by default
   - Filters are retained when drilling up
6. **Move selected filters between Available Columns and Hierarchy Columns by clicking › and ‹.**
7. **Optional: Reorder selected Hierarchy Columns by selecting a column and clicking ˄ or ˅.**
8. **Click Apply.**

   The hierarchy and all frames that use it are configured.

9 Dashboard Studio Workspace Alert Component

In This Chapter

About the Workspace Alert Component

The Workspace Alert component contains a Workspace Alert Properties frame to configure Workspace Alert Interactive Reporting documents using tables. You can create a summary table (see "Creating Summary Tables" on page 100) or use an available table. Tables are configured to display the data monitored. A system filter in the table bypasses other filters on the column being evaluated. The component tests for any outlying rows from the threshold filter, and any remaining rows are reported as an alert or exception. A list of tables is displayed under Table Sections. Tables that contain exception items include the hidden column `_sysException`.

If rows are visible after processing a query and applying a filter, an alert or exception has occurred, and an `output.properties` file is created. Notification of no exceptions also occur. Click Apply in Workspace Alert Properties to create an `orcl_Exception.txt` file containing the exception data. For more information on exceptions and alerts, see "Using Exceptions" in the *Hyperion Workspace User's Guide.*

Alerts are available to users when they subscribe to job output, and are displayed in EPM Workspace Personal Pages, e-mails, or dashboards. See "Displaying Exceptions or Alerts" on page 64.

Note:

Interactive Reporting documents that use the Workspace Alert component to report alerts or exceptions must be configured as a jobs in EPM Workspace.

Note:

In EPM Workspace, only one alert per Interactive Reporting document is displayed at a time, otherwise an error occurs.

Using the Workspace Alert Component with the Conditional Sub-Queries Component

The Workspace Alert component can be used with the Conditional Sub-Queries component, and is linked to the Conditional Sub-Queries primary table (see Chapter 5, “Dashboard Studio Conditional Sub-Queries Component”).

The Conditional Sub-Queries component is configured to handle the threshold and monitor for exception conditions. Using the Conditional Sub-Queries component, threshold filters can be configured with more flexibility; for example, where business rules are more complex and multiple thresholds require handling at one time.

➤ To use the Workspace Alert component with the Conditional Sub-Queries component, select **Used Conditional Sub-Queries** (**CSQ**) in EPM Workspace Alert Properties.

When Used Conditional Sub-Queries is selected, you do not have to enter values for Column, Operator, and Threshold Limit; however, threshold values must be configured for the Conditional Sub-Queries, and the primary query must be selected from Alert Details Query.

When using conditional sub-queries, you provide table, query, and exception string data. The `_sysException` column and filter are not added to the table, however, since the Workspace Alert component relies on the Conditional Sub-Queries limits to look for exception data. The specified Conditional Sub-Queries table is monitored after the process is run, and any exceptions or alerts are reported.

Note:

For the Workspace Alert component to work with the Conditional Sub-Queries component, EPM Workspace Alert Properties must have a higher priority than Conditional Sub-Query Properties. During the `onPostProcess()` event, the Workspace Alert component `onPostProcess()` method must be called before the Conditional Sub-Queries component `onPostProcess()` event. If the Conditional Sub-Queries component `onPostProcess()` method is called first, it causes complications and incorrect behavior when handling alert messages.

Displaying Exceptions or Alerts

You can display exceptions or alerts in:

- Personal Pages
- E-mail messages
- Dashboards

Tip:

Ensure that Interactive Reporting documents are imported into EPM Workspace as job files.

➤ To display exceptions or alerts in Personal Pages:

1. In EPM Workspace, select an Interactive Reporting job, right-click, and select **Subscribe.**
2. Select **Personal Pages.**
3. Select **Add to Exceptions Dashboard**, and click **OK.**
4. On the menu bar, select **Favorites**, then **My Personal Page.**
5. Scroll to the bottom of My Personal Page to view the Exceptions Dashboard information.

   If no exception or alert information is displayed, click ⟳.

➤ To display exceptions or alerts in e-mail messages:

1. In EPM Workspace, select an. Interactive Reporting job, right-click, and select **Subscribe.**
2. Select **Notifications.**
3. Select **Subscribe and send e-mail notifications to.**
4. Enter an e-mail address.

   When an exception or alert occurs in the job, an e-mail is sent to the recipient.
5. Select **exception items**, and click **OK.**
6. **Optional:** Select **Attach output from <*Interactive Reporting document*> to email message (if possible).**

➤ To display exceptions or alerts in dashboards:

1. In EPM Workspace, select an Interactive Reporting job, right-click, and select **Properties.**
2. Under **General, General Properties**, select and copy the SmartCut URL.
3. Click **OK** to close **Properties.**
4. In Interactive Reporting Studio, open the Interactive Reporting document, and select a dashboard frame.
5. Press **Ctrl+D** to enter Design mode.
6. Expand **Controls**, and drag an **Embedded Browser** into the frame.
7. Select the Embedded Browser, right-click, and select **Properties.**
8. In **URL**, paste the SmartCut URL.
9. Edit the SmartCut URL by changing *`get`* to read *`getexception`*.

   For example, change: `http://oracle.com:19000/workspace/browse/`*`get`*`/MyFolder/Workspace_Alert_Sample_esm?jobOutput=true`

   to read: `http://oracle.com:19000/workspace/browse/`*`getexception`*`/MyFolder/Workspace_Alert_Sample_esm?jobOutput=true`
10. Click **OK** to close Properties.
11. Press **Ctrl+D** to exit Design mode.
12. Enter your user name and password to log on to EPM Workspace.

An alert traffic light icon is displayed. The icon image is determined by EPM Workspace.

13. **Hover your mouse over the alert icon to display the document name and alert message.**

14. **Click the alert icon to launch EPM Workspace.**

15. **Optional: If you have configured a Personal Page in EPM Workspace to display exceptions or alerts, select Favorites, then My Personal Page, and scroll to the bottom of the page to view the Exceptions Dashboard information.**

16. **Refresh the alerts in EPM Workspace by clicking .**

    The listed alerts messages are updated.

    Note:

    For information on SmartCuts, see the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 1: Dashboard Design*

Configuring the Workspace Alert Component

➤ To configure the Workspace Alert component:

1. **Merge the component. (See “Merging Components” on page 10.)**

2. **Optional: Create a summary table (see “Creating Summary Tables” on page 100), or use an existing table as a summary table.**

3. **Optional: Use the Workspace Alert component with the Conditional Sub-Queries component. (See “Using the Workspace Alert Component with the Conditional Sub-Queries Component” on page 64.)**

➤ To use the EPM Workspace Alert Properties configuration frame:

1. **In Interactive Reporting Studio or EPM Workspace, open a dashboard that contains anWorkspace Alert component.**

   To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

2. **From Tables Sections, select an option:**

   - **All Tables**—All tables are available.
   - **Configured Tables**—Only tables with applied exception or alert configurations are available.
   - **Unconfigured Tables**—Only tables without applied exception or alert configurations are available.

3. **From the drop-down list, directly under the options, select a table to be monitored.**

   Available tables vary depending on the selected option.

4. **Optional: To view the selected table, click .**

5 **Optional:** Select **Used Conditional Sub-Queries (CSQ)** to employ the Conditional Sub-Queries component to configure an alert.

If selected, you are not required to provide alert details for column, operator, or threshold values. The option is only available when the Conditional Sub-Queries component is used.

6 From **Alert Details**, select the **Query** that the exception table is dependent upon.

The `onPostProcess()` method is activated for the selected query. See "Using the OnPostProcess() Method Call" on page 69.

7 Select the **Column** of the selected table, the data of which is compared to the use- specified **Threshold Limit**.

8 **Optional:** If the selected **Column** contains date values, **Threshold Limit** is unavailable and a calendar control is displayed. Perform these actions:

- Select a date
- Click Set

The date value is added to Threshold Limit.

9 From **Operator**, select the comparison operator for the evaluation of the threshold value.

If the BETWEEN operator is selected, Threshold Max is available, which defines the maximum value that you want to add.

10 Enter a **Threshold Limit** that is used in the evaluation.

The limit value causes the exception, and is used to create a filter. If rows remain after the limit is applied, an output.properties text file is created and exported.

- If you are using Interactive Reporting Studio, the `output.properties` file is exported to same directory as the Interactive Reporting document.
- If you are using EPM Workspace, the `output.properties` file is collected by the event service that generates alerts when a job is executed.

11 From **Exception String Format**, select an option:

- **Alert=True**—String displayed when an exception occurs
- **Alert=False**—String displayed when no exception occurs

These options determine the editable exception text in Alert String Format.

12 From **Keywords**, select the values that dynamically create an exception string.

- **Row Count**—Number of rows after the filter is applied
- **Threshold Value**—Use the specified value
- **Column Name**—Column selected for an alert
- **Table Name**—Table selected for an alert
- **Time Stamp**—Time and date of the exception

13 In **Alert String Format**, the exception string is created and displayed.

If an alert is reported, the exception string reads; for example: As there are _:_1_:_ rows that are within a range, in table _:_4_:_, this raises an alert as of _:_5_:_. If no alert is reported, the exception string reads; for example: No alert has occurred.

14 **Optional: Edit the exception string text.**

15 **Optional: Enter the string format without selecting Keywords.**

16 **Perform an action:**

- To discard in-memory settings and revert to original settings, click **Restore**.
- To remove all in-memory table configuration settings, click **Clear All**.
- To remove the selected table configuration, click **Clear**.
- To commit current settings and call configuration methods to prepare tables for the `onPostProcess()` method, click **Apply**.

  When Apply is clicked, the `orcl_Exception.txt` table is created, and a limit is added to the specified table that is used to look for the exception.

Note:

Clicking Apply, confirms that the `orcl_Exception.txt` table exists, and if it does not, the table is created. The Exception Info column in `orcl_Exception.txt` is hidden. If a false exception alert is returned, you must select the appropriate table and populate EPM Workspace Alert Properties. Users are alerted and process is stopped. Clicking Apply, also verifies that the computed column called *Exception Text* exists in `orcl_Exception.txt`. If does not, the computed column is added, and Exception Info is populated with default syntax.

Orcl_Exception.txt Table and Output.properties

The `orcl_Exception.txt` file contains two columns:

- **Exceptions Info**—Contains row *a* where the exception is displayed as true or false, and row *b* where the exception string is placed
- **Exception Text**—A computed column modified in the `onPostProcess()` method call that displays a message about the exception (Exception information is hidden when the exception text is displayed.)

Rows are counted in the table selected in EPM Workspace Alert Properties after the filter is processed to determine which syntax statement is displayed in the computed column of the `orcl_Exception.txt` table. When the filter is processed, the exception text displayed to the user is; for example:

```
exception.default=off
exception.default.text=There were no Product Lines with excessive discount
rates.
```

Note:

These lines of syntax are exported to the `output.properties` text file without headers.

From the orcl_Exception.txt table, the output.properties file is generated.

Following is an example of the text for exception items in the output.properties file:

```
exception.default=on
exception.default.text=There were 1 Product Lines with an average discount
rate over 25% as of Wednesday, September 13, 2006 15:12:05
```

Following is an example of the text for non-exception items in the output.properties file:

```
exception.default=off
exception.default.text=No exception has occurred
```

Using the OnPostProcess() Method Call

The onPostProcess() method call performs these tasks in the Workspace Alert component:

- Creates a table
- Checks which query is processed, and if a table is configured for the query
- Counts the number of rows in the table
- Adds and modifies the computed column syntax in orcl_Exception.txt to display the correct exception alert information
- Exports orcl_Exception.txt as the generated output.properties text file into a temporary working directory

10 Dashboard Studio Format Header Component

In This Chapter

Format Header Component

The Format Header component generates a header for dashboard frames and reports based on currently applied filters. When a filter is applied, the header is recomputed based on selected values.

The header varies depending on the prefix and suffix rule defined by the dashboard developer.

Using a Runtime Release of the Format Header Component

The Format Header component generates a header for dashboard frames and reports based on currently applied filters.

A static title can be specified for a header. Filter columns are displayed as a prefix or suffix of the static title. Prefixes and suffixes are comprised of one or more filter columns that are configured to be displayed unconditionally or as part of a hierarchy. In a hierarchy, only one filter is displayed on the header at a given time. You can also specify formatting for every header column.

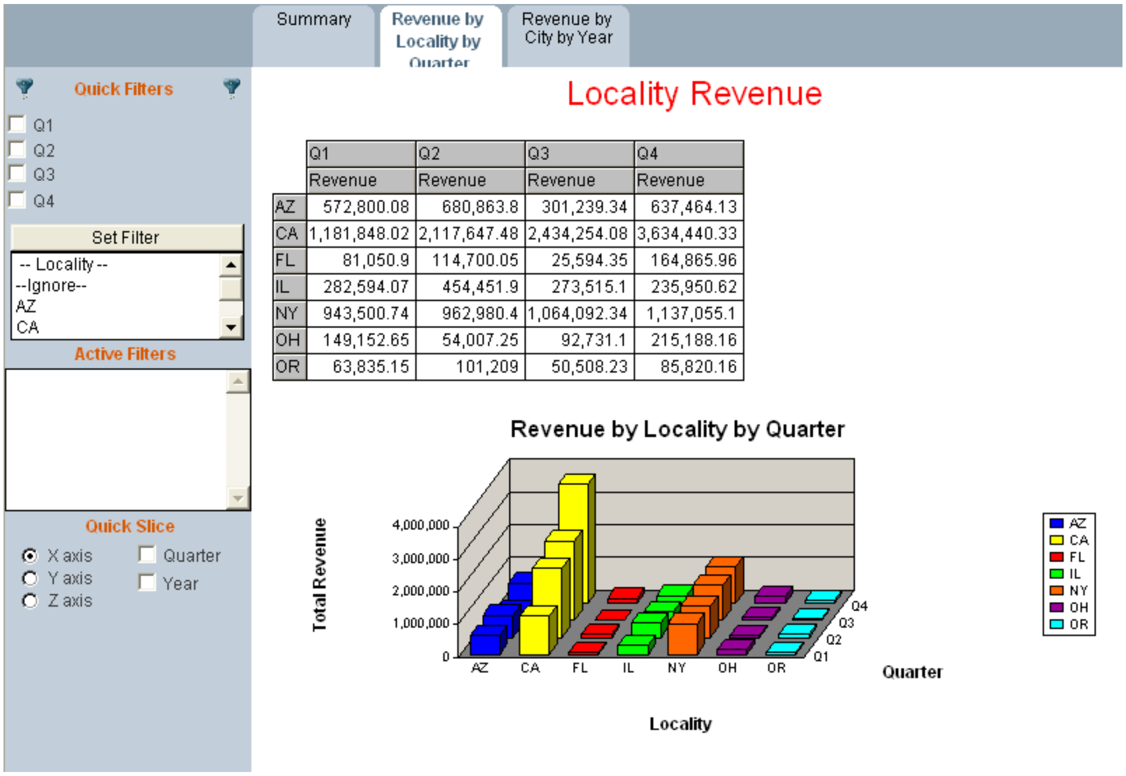
Filter values are displayed if only one value from each filter is set. If multiple values are selected nothing is displayed for that heading part.

➤ To format a header on a frame:

1 **In Interactive Reporting Studio, open the sample Format Header component document.**

2 **Select a frame.**

For example, select Revenue by Locality by Quarter.



Locality Revenue

	Q1	Q2	Q3	Q4
	Revenue	Revenue	Revenue	Revenue
AZ	572,800.08	680,863.8	301,239.34	637,464.13
CA	1,181,848.02	2,117,647.48	2,434,254.08	3,634,440.33
FL	81,050.9	114,700.05	25,594.35	164,865.96
IL	282,594.07	454,451.9	273,515.1	235,950.62
NY	943,500.74	962,980.4	1,064,092.34	1,137,055.1
OH	149,152.65	54,007.25	92,731.1	215,188.16
OR	63,835.15	101,209	50,508.23	85,820.16

Revenue by Locality by Quarter

In the example, Revenue is the static title and Locality is the default prefix. Locality and City can be set as prefix filter columns. Year and Quarter can be set as suffix filter columns.

3 **From Quick Filters, select a Locality filter, and click Set Filter.**

For example, select CA. The default heading is replaced by the selected filter value.

4 **From the top panel, select the Filters drop-down list, select a filter, and click OK.**

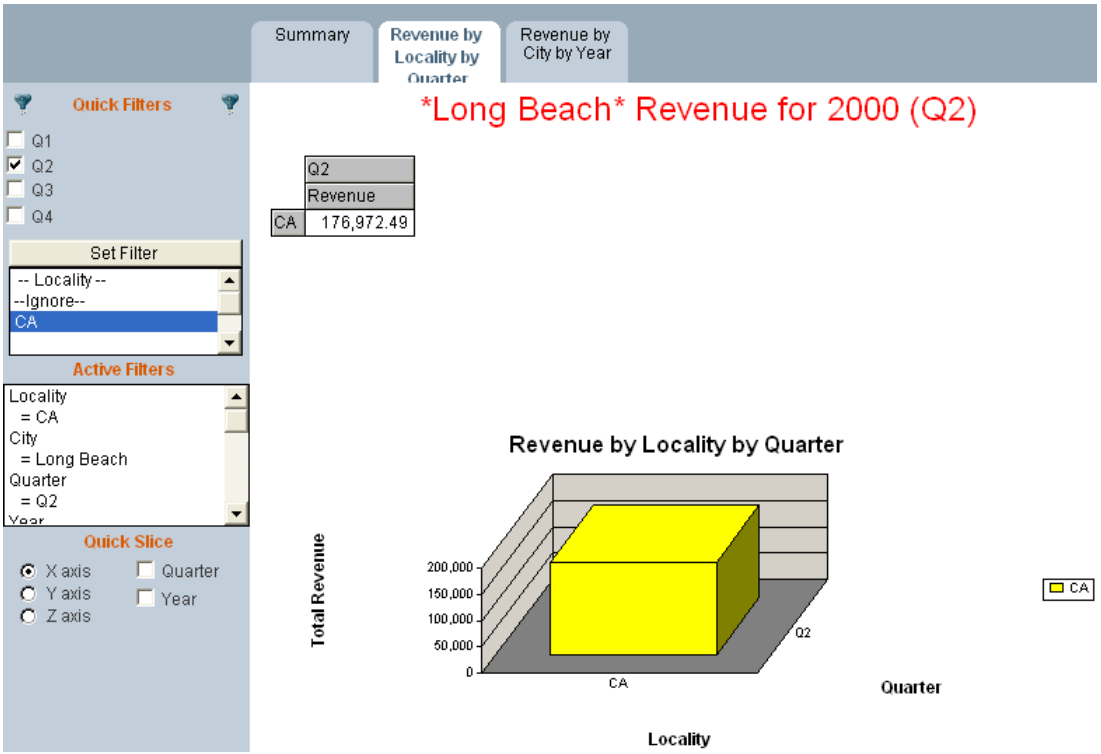
For example, select City. The Filter dialog box is displayed. Select a City value; for example, Long Beach, to replace the Locality value in the header. The replacement is an example of header columns grouped in a hierarchy.

5 **Use Quick Filters to select another filter.**

For example, select Q2. The selected value is displayed as part of the heading.

6 **Select the Filters drop-down list, select another filter, and click OK.**

For example, select Year. The Filter dialog box is displayed. Select a Year; for example, 2000. The Year value is displayed before the Quarter value because the columns do not belong to a hierarchy.



Long Beach Revenue for 2000 (Q2)

☐ Q1
☑ Q2
☐ Q3
☐ Q4

-- Locality --
--Ignore--
CA

Locality
= CA
City
= Long Beach
Quarter
= Q2
Year

● X axis ☐ Quarter
○ Y axis ☐ Year
○ Z axis

	Q2
	Revenue
CA	176,972.49

The Format Header component works with the Checkpoint control to store or restore the formatted header based on the selected filters in a dashboard. See “Using Checkpoint Control” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Configuring the Format Header Component

To configure the Format Header component:

1. Merge the component. See “Merging Components” on page 10.
2. Add a text label `txlFrameTitle` to frames.
3. Decide which frames to apply header specifications to and which filter columns to apply as prefix or suffix headers.
4. Use Format Header Properties to configure the Format Header rule for each frame.

Adding Format Header Text Labels

A text label must be added to the frame to display the configured format header.

➤ To add a Format Header text label:

1. **In Interactive Reporting Studio, open a dashboard that contains the Format Header component.**
2. **Move to the frame that is to contain an inserted text label.**
3. **Press Ctrl+D to enter Design mode.**

4 **From the catalog pane, expand Graphics folder, and drag a text label onto the frame.**

5 **Position and format the text label, and ensure that the length is adequate to accommodate multiple filters.**

6 **Right-click the text label and select Properties.**

Properties is displayed.

7 **Enter** `txlFrameTitle` **as the object name, and click OK.**

8 **Press Ctrl+D to exit Design mode.**

9 **Save the dashboard.**

The Format Header text label is added to the frame.

Configuring the Header Rule

Use the Format Header Properties frame to specify the rule for the header that is displayed for each dashboard frame.

The rule consists of three parts.

1. Static title—A title is displayed in the Format Header text label regardless of whether filters are set for the dashboard.
2. Prefix header—One or more filter columns can be set as prefix headers for the frame. If a value from a filter is set, the set value is displayed as a prefix for the specified static title. A default prefix value can also be specified.
3. Suffix header—Filters are specified to display as suffixes for the static title.

When header columns are selected, the order in which columns are listed is the order in which values are displayed in the Format Header text label. By default, prefix and suffix filter values are displayed unconditionally. However, an option is available to include a group of columns as part of a hierarchy. In a hierarchy, only one filter is displayed on the header at a time. The value for the lowest set filter is shown in the header. A combination of hierarchical or non-hierarchical columns in a prefix or suffix specification is possible. For example, if locality and city are set as header columns and [H] Part of Hierarchy is selected for the columns:

- Applying locality = CA, results in CA being displayed in the header
- Applying city = Long Beach, without clearing the locality filter, results in Long Beach being displayed in the header

However, if locality and city are set as header columns and [H] Part of Hierarchy is not selected, CA and Long Beach are displayed in the header.

A format can be applied to one or more header columns. Header formats can be applied unconditionally or only if a value from a prior filter is set.

For example, if year and quarter are set as header columns and [F] Show if Prior filter exists is selected for quarter, applying quarter = Q1 as a filter results in:

1. Q1 (with formatting) is added to the header if a year filter is set.
2. Q1 (with no formatting) is added to the header if no year filter is set.

Spaces are inserted between the three header parts. However, to allow for formatting such as comma separators, no space is inserted between the columns inside the prefix or suffix.

➤ To configure the Format Header feature:

1. **In Interactive Reporting Studio, open a dashboard that contains the Format Header component.**
2. **Navigate to Format Header Properties.**

   To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.
3. **From Define Format Header, select the frame to configure.**

   The listed frames vary depending upon which option is selected:

   - All dashboards—All frames are available from the list
   - Configured dashboards—Only frames with applied headers are available
   - Unconfigured dashboards—Only frames without applied headers are available

     If a selected dashboard does not contain a Format Header text label, a message is displayed requesting that the text label must be configured.
4. **Optional: Perform an action:**

   - To view the selected section, click
   - To copy the Format Header specifications from one frame to another, click , select another dashboard, and click to paste
5. **Optional: Enter a Static Heading for the dashboard.**
6. **In Configure Header Columns, select an option to configure the Prefix or Suffix header.**
7. **In Define Format, perform an action:**

   - Select [F] Show if prior filter exists, to apply the format only if a value from a prior filter in the list is set (If this option is not selected, the format is displayed)
   - Enter the left and right format characters to apply to the filter values (For example, enter (in Left format characters and) in Right format characters)

   For example, to define the format:

   a. From **Configure Header Columns**, select **Suffix**.

   b. From **Filters Columns**, select an item and click > to move it to **Suffix Filter Columns**.

      For example, [- : -] Year is displayed, where [- : -] indicates that Year is always displayed.

   c. Select [F] **Show if prior filter exists**, and enter (in the Left format characters and) in the Right format characters.

   d. From **Filters Columns**, select another item and click > to move it to **Suffix Filter Columns**.

For example, [- :F] (Quarter) is displayed, where (Quarter) indicates that it is a suffix to the Year filter; for example, 2000 (Q4).

8. **In Select Header Columns, select the filter columns to set as prefix or suffix headers for the frame.**

9. **Optional: Perform one or all of these actions:**

   - Select [H] Part of Hierarchy to make a filter part of a hierarchy (Selected Filter Columns are displayed in Prefix or Suffix Filter Columns with [H:-])
   - Move selected columns between Filter Columns and Prefix or Suffix Filter Columns, by clicking › and ‹
   - Reorder the Prefix or Suffix Filter Columns by selecting a column and clicking ˄ or ˅ (Moving columns may affect the outcome of the header, if [F] Show if prior filter exists or [H] Part of Hierarchy options are set for the columns)

10. **Optional: Enter a Default Prefix or Suffix for the frame.**

11. **Perform an action:**

    - To reload the original settings, click Restore
    - To clear current entries, click Clear
    - To save the configured header specifications, click Apply

Adding Format Header Specifications to Reports

Format Header specifications can be displayed on report sections.

➤ To add Format Header specifications to reports:

1. **In Interactive Reporting Studio, open a dashboard that contains the Format Header component and report sections.**

2. **Navigate to a report.**

3. **From the catalog pane, expand HYSL Report Headings.**

   A list of frames with Format Header specifications is displayed.

4. **Drag a frame onto the report.**

   The header for the selected frame is displayed in the report.

11

Dashboard Studio Graphic Gauges Component

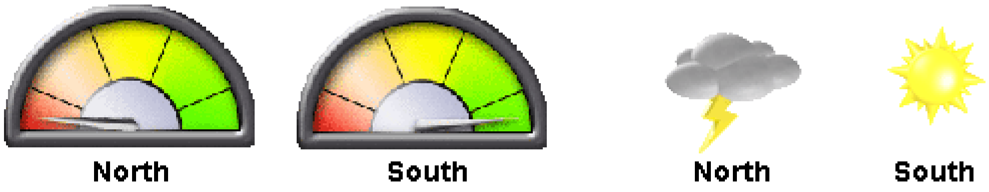
In This Chapter

Graphic Gauges Component

The Graphic Gauges component provides a way of visually summarizing information in a familiar way. A gauge is similar to a bar in a spotlighted chart where another color (or image for gauges) is displayed based on performance. For instructions on how to spotlight a chart, see “Spotlighting Charts” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

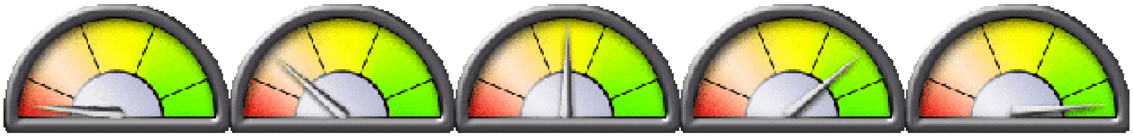
A gauge is a set of images positioned on top of each other. By default, all images are invisible and contain an associated rule to indicate which image is to be made visible. For example, when conditions are excellent the image that conveys excellence is made visible and all other images remain invisible. Conversely, when conditions are very bad the image that conveys the need to take remedial steps is made visible and all other images remain invisible.

In this example, two gauge styles are used. However, both display equivalent information, that is, the business rule defines North is performing at the worst level, while South is performing at the peak.



Five images are used for the four visible gauges, North, South, East, and West. Each image represents five ranges of performance defined by the business rule. Only one image is visible in each gauge at any time, and that image represents the measured performance.

If the dial images are used, the image changes so that the pointer cycles through colors: red, orange, yellow, pale green, and bright green.



If the weather images are used, the image cycles through weather types: thunder storm, rain, mostly cloudy, light cloud, and sunshine.

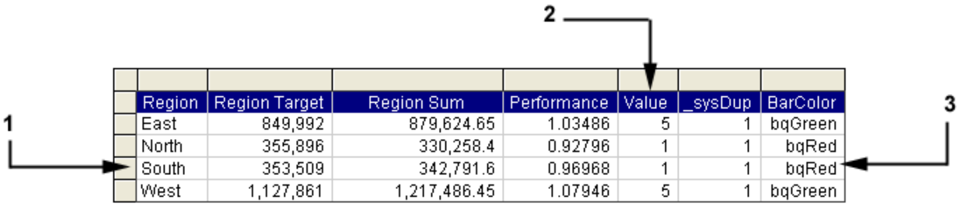
When using the Graphic Gauges component, use the predefined gauge styles or create a gauge style using any image.

Using Gauges as Measures in a Runtime Release

Gauges measure a number for a column in a table or results section. A set of gauges provides comparisons between table rows for a given column. For efficiency and convenience, a section contains one row for each gauge.

For example, Figure 3 is a summary of the performance rows returned by a query. The four row summary is used to drive a set of four gauges—one for each region.

Figure 3 Summary Table of Performance Rows Returned by a Query



Region	Region Target	Region Sum	Performance	Value	_sysDup	BarColor
East	849,992	879,624.65	1.03486	5	1	bqGreen
North	355,896	330,258.4	0.92796	1	1	bqRed
South	353,509	342,791.6	0.96968	1	1	bqRed
West	1,127,861	1,217,486.45	1.07946	5	1	bqGreen

The table describes the features numbered in Figure 3.

Column ID	Column Name	Description
1	Region	Identifies the row that is associated with an image
2	Value	Identifies the image to be visible in the gauge
3	BarColor	Chart Spotlighter column

The Chart Spotlighter feature uses a column (called *BarColor* in this example) to provide visualization based on color and not the visible property of images. For example, based on the data in Figure 3, the Chart Spotlighter sets the FillColor property of a bar or segment according to the values in the BarColor column. And specific gauge images are visible based on the Value column.

The Graphic Gauges component works with the Checkpoint control to store and restore comparisons between table rows for a given column in a table or results section. See "Using Checkpoint Control" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Naming Gauges

The Graphic Gauges component employs a naming scheme to identify and manage gauges. The scheme compiles names in four parts; parts are separated by (^).

Example, sun^Hysl_gg^1^1:

- *sun*—Gauge style or image; includes all characters except space or caret (^)
- *Hysl_gg*—Unique identifier of the Graphic Gauges component
- *1, 2, 3, 4, and so on*—The value range associated with the image; for example, 1 very bad and 5 excellent
- *1, 2, 3, 4, and so on*—The gauge instance (For example, all images with identical values in parts 1, 2, and 4 are sections of one gauge; therefore, gauges can be duplicated and instance numbers can be automatically incremented)

Table 5 Images and Names that Comprise the Sun and Small Traffic Light Gauges

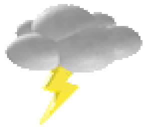
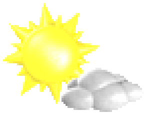
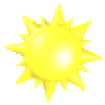
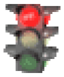
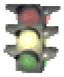
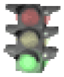
Image	Name
	sun^Hysl_gg^1^1
	sun^Hysl_gg^2^1
	sun^Hysl_gg^3^1
	sun^Hysl_gg^4^1
	sun^Hysl_gg^5^1

Image	Name
	trl_sm^Hysl_gg^1^1
	trl_sm^Hysl_gg^2^1
	trl_sm^Hysl_gg^3^1

Note:

Any image can be used for a gauge; however, it must follow the naming pattern scheme. Import the images into the Interactive Reporting document, name them according to the defined scheme, and use them in the same way as the previously created gauges.

Setting Gauge Visibility or Invisibility

In this example, four gauges are described that display up to five alternative settings. Using the information in Figure 3, each gauge represents the performance of a region. The four gauge images are associated with a value in the Region column. That is, the gauges take the names: East, North, South, and West. The four gauge images are also associated with the performance range in the Value column. The performance ranges are 5 and 1.

If, for example, the sun gauge image is used with instance 1 as East, instance 2 as North, instance 3 as South, and instance 4 as West, a string is generated by the Gauge Properties configuration frame and the values in the table (Figure 3). The string creates the name of the image that is visible. For example,

- sun^Hysl_gg^5^1 (sunshine)
- sun^Hysl_gg^1^2 (thunder storm)
- sun^Hysl_gg^1^3 (thunder storm)
- sun^Hysl_gg^5^4 (sunshine)

Configuring the Graphic Gauges Component

To configure the Graphic Gauges component:

1. Merge the component. See “Merging Components” on page 10.
2. Determine the value range for the gauge and create a computed column to produce the values.
3. Paste or duplicate gauges.
4. Set gauge properties using the Gauge Properties frame.

Determining Range Values and Creating Computed Columns

Determine the range values for the gauges and create a computed column to produce the ranges.

➤ To determine the gauge range values and create a computed column to construct the values:

1 **In Interactive Reporting Studio, open a dashboard that contains the Graphic Gauges component.**

2 **Open the results or table that contains a fact column, and determine the value range for the gauge.**

The Gauge Samples frame contains a list of gauge controls and the range of supported values. For example, *Label for Set of 5* means the gauge supports values from 1 to 5.

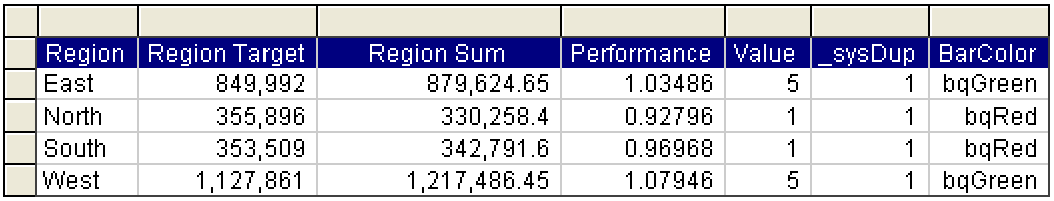
3 **In the results or table, create a computed column to produce the range values by reading the fact column.**

For example, if the gauge contains five gradations, the computed column produces 1 to 5 as the range. The fact column criteria determines the value of each row. A gauge that measures the fact *Performance*, has a computed column with the formula:

```
if (Performance < .990) { 1 }
else if (Performance < .995) { 2 }
else if (Performance < 1) { 3 }
else if (Performance < 1.03) { 4 }
else { 5 }
```

In Figure 4, the computed column, or value range column, is called *Value*. The results or table is called the *Gauge* table. Each row in the table is potentially a gauge. Gauges are labelled to differentiate between them. For example, the Region column is a label column that is used to distinguish each gauge.

Figure 4 Gauge Table Example



Region	Region Target	Region Sum	Performance	Value	_sysDup	BarColor
East	849,992	879,624.65	1.03486	5	1	bqGreen
North	355,896	330,258.4	0.92796	1	1	bqRed
South	353,509	342,791.6	0.96968	1	1	bqRed
West	1,127,861	1,217,486.45	1.07946	5	1	bqGreen

If the Gauge table contains multiple fact columns, create another computed column. Configure the value range column for a second collection of gauges.

Tip:

To use, for example three out of five gauge images, ensure that the computed column returns only those three values.

Caution!

The Graphic Gauges component uses "_._" as a separator. Therefore, the string cannot be used in table or column names. For example, Gauge_._Table or My_._Column are not permitted.

Pasting or Duplicating Gauges

This procedure describes how to paste or duplicate gauge image sets so manipulating the sets is easier.

➤ To paste gauges:

1. **In Interactive Reporting Studio, open a dashboard that contains the Graphic Gauges component.**
2. **From Sections, select Gauge Samples.**
3. **Press Ctrl+D to enter Design mode.**
4. **Drag a rectangle with the mouse around the gauge set, including the label, to select all.**
5. **Press Ctrl+C to copy to the objects.**
6. **Move to another dashboard frame, and select View, then Zoom 50%.**
7. **From the catalog pane, expand Controls, and drag a command button onto the frame, and position it below the level of the lowest frame object.**

   The button is created as a marker object for pasting the gauge objects.

   When a frame is selected in Design mode, or an object is dragged onto a frame, a dotted rectangle displays the furthest boundaries within which objects exist. Ensure the marker is dragged below or to the right of the boundary, so all gauge images are available for selection.
8. **Select the marker and press Ctrl+V to paste the gauge objects.**

   Selecting the marker ensures the pasted objects are positioned below the marker. Paste as many gauge sets as there are unique labels in the results or table column. For example, if the column contains five unique labels, paste up to five gauge sets on the frame.
9. **Delete the marker object, and press Ctrl+D to exit Design mode.**

   Duplicate a gauge set by performing this procedure.

➤ To duplicate gauges:

1. **Use the gauge sets and frames that were created in the paste gauges procedure.**

   The frame remains zoomed to 50%.
2. **Press Ctrl+D to enter Design mode.**
3. **Drag a rectangle with the mouse around the objects: the gauge images and labels.**
4. **Press Ctrl and click a selected object, and without releasing the mouse drag the gauges to create a duplicate.**

   Ensure the gauges and the duplicate do not overlap.
5. **Repeat steps 3 and 4 to create as many duplicates as required.**
6. **Position the selected objects.**
7. **Press Ctrl+D to exit Design mode.**

   Pasted or duplicated gauge sets are available on the frame.

Setting Gauge Properties

Use the Gauge Properties frame to set gauge properties. Each gauge set is mapped to a corresponding label value.

➤ To set gauge properties:

1 **In Interactive Reporting Studio, open a dashboard that contains the Graphic Gauges component.**

2 **Navigate to Gauge Properties.**

To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

3 **From Dashboards with Gauges, select an option and a frame to configure:**

- All dashboards—All frames in the dashboard
- Configured dashboards—Only frames containing gauges
- Unconfigured dashboards—Only frames without gauges

4 **Optional: Click to view the selected frame.**

5 **From Gauge Configuration, select these items:**

a. Select a **Gauge Table.**

The results section or table that contains the value range computed item. See Figure 4.

b. Select a **Value Range Column.**

The computed column that the gauges measure. See the Value column in Figure 4.

c. Select a **Label Column.**

The values that the gauges represent. See the Region column in Figure 4.

d. Select a **Gauge Label.**

The individual label column values assigned to a gauge set. For example, in Figure 4, East, North, South, or West.

The Graphic Gauges component uses "_._" as a separator. Therefore, to avoid operational errors, table or column names containing the string are not permitted, and are not selectable.

6 **Move selected gauges between Available Gauges and Configured Gauges by clicking > and <.**

The selected gauges are mapped to the label value displayed in Gauge Label.

7 **Repeat steps 3–6 to configure and label all gauges.**

8 **Optional: Perform an action:**

- To revert to previously saved settings, click Restore
- To remove all current specifications, click Clear All

9 **Click Apply to load the gauges.**

10 **Navigate to the frame containing the gauges.**

The gauges reflect the values in the Value Range column of the results or table.

12 Dashboard Studio Group Tabs Component

In This Chapter

Group Tabs Component

The Group Tabs component enables navigation tabs to be grouped under a grouping tab. Navigation is displayed in two rows. The first row displays the groups, and selecting an item from the first row displays the first member of that group in the second row, or returns to the section last visited. Selecting a tab in the second row behaves like standard navigation. Using grouped navigation on dashboards mirrors many Web site navigation schemes, and provides a greater number of available tabs in an Interactive Reporting document.

Using a Runtime Release of the Group Tabs Component

The Group Tabs component commits the history of selected tabs on the second and subsequent rows to memory. Therefore, if you select a tab on the first navigation row, and then select a tab on the second navigation row, when you return to the first row tab, the second row tab is remembered and the associated frame is displayed.

➤ To use the Group Tabs component:

1. **In Interactive Reporting Studio, open a dashboard that is configured with the Group Tabs component.**
2. **Navigate to a frame that contains the group tab navigation structure.**
3. **Select a tab on the first navigation row.**

   The dashboard locates and displays the selected frame.
4. **Select a tab on the second navigation row.**

   The selected frame is displayed.
5. **Select another tab on the first navigation row.**

   The selected frame is displayed.
6. **Repeat step 3, by selecting the same first row tab.**

The frame associated with the tab from step 4, on the second row, is displayed. Therefore, you are returned to the frame last visited on that row.

Configuring the Group Tabs Component

To configure the Group Tabs component:

1. Merge the component. See "Merging Components" on page 10.
2. Configure group navigation tabs using the Group Tab Properties.

➤ To use the Group Tab configuration frame:

1 In Interactive Reporting Studio, open a dashboard that contains the Group Tabs component.

2 Navigate to Group Tab Properties.

To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

3 In **Group Tab Name**, enter a name for the group or first row of navigation tabs.

4 To add the group name into **Group Tabs**, click (Add).

The name is appended at the end of the Group Tabs list.

5 **Optional:** To rename the selected group, click .

6 **Optional:** To delete the selected group, click .

7 **Optional:** Reorder **Group Tabs** by selecting a group and clicking ∧ or ∨.

8 Control the types of **Available Sections** by selecting or clearing the section check boxes.

The selected sections are displayed in Available Sections.

9 Move selected sections between **Available Sections** and **Selected Sections** by clicking > and <.

10 **Optional:** Reorder **Selected Sections** by selecting a section and clicking ∧ or ∨.

11 Perform an action:

- To discard group tabs and reload the original settings, click Restore
- To remove all group tabs, click Clear All
- To remove selected group tabs, click Clear
- To load the selected group tabs, click Apply

A group must include at least one dashboard that is configured for group navigation. For example, a group with only queries selected will display an error message. Please specify at least one member for the following: *Group Name*, where *member* is a dashboard configured with at least one tab, and *Group Name* is the name entered in Group Tabs.

12 To test the grouped navigation structure, click 🏠.

13 Dashboard Studio Ignore Percentile Component

In This Chapter

Ignore Percentile Component

The Ignore Percentile component enables you to discard outlying values from one or more results sets.

To configure the component, four computed items must be created in a results section to determine the percentile range for each column value. A table is created from the results set, from which all charts and pivots that use this function are created.

The component includes a button graphic that must be added to dashboard frames and configured. See "Component Buttons" on page 12.

Using a Runtime Release of the Ignore Percentile Component

This procedure applies only to a runtime release of the Ignore Percentile component.

➤ To use the Ignore Percentile component:

1 **In Interactive Reporting Studio, open a dashboard that is configured with the Ignore Percentile component.**

2 **Click %X.**

A drop-down list with percentile ranges is displayed.

3 **From the drop-down list, select a percentile range.**

For example, select 10% – 90%. Values are discarded from the data according to the selected range. The range is displayed in Active Filters.

4 **Click ✕ to clear the selected percentile and revert to the original view.**

Configuring the Ignore Percentile Component

To configure the Ignore Percentile component:

1. Merge the component. See “Merging Components” on page 10.
2. Configure %X (Ignore Percentile).
3. Configure Ignore Percentile computed items. Configuring the Ignore Percentile component involves creating Interactive Reporting Studio dashboard sections and creating the computed items necessary to determine the percentile range of values in the data.

Configuring the Ignore Percentile Button

Before you can configure the Ignore Percentile component, add and configure %X. After the component is configured, the button enables you to manipulate the data percentile ranges.

➤ To add and configure %X (Ignore Percentile):

1. **In Interactive Reporting Studio, open a dashboard that contains the Ignore Percentile component.**
2. **Select the frame on which to add the button, and press Ctrl+D to enter Design mode.**
3. **From the catalog pane, expand Graphics, and drag a picture object onto the frame.**
4. **Navigate to** `outer_n.bmp` **in the Ignore Percentile component directory, and position the button on the dashboard toolbar.**
5. **Double-click the button.**

   Properties is displayed.
6. **Enter** `pic^Qiq_IgnorePercentile` **as the object name, and click OK.**
7. **Select the button, right-click, and select Scripts.**

   Scripts Editor is displayed.
8. **In Scripts Editor, perform an action:**
   - Enter this line of code

     ```
     ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
     (this.Parent,this)
     ```
   - Copy and paste the line of code from another button on the toolbar to avoid data entry errors
9. **Click OK.**
10. **Optional: Add, configure, and name the corresponding gray buttons for the not selectable state.**
11. **Press Ctrl+D to exit Design mode.**

    Proceed with configuring the computed items.

Configuring Ignore Percentile Computed Items

➤ To configure the Ignore Percentile component:

1. Use the Interactive Reporting document from the Configuring the Ignore Percentile Button procedure.
2. Navigate to a results section that contains the data to be manipulated, right-click, and select **Add Computed Item.**

   Computed Item is displayed.
3. In **Name**, enter `QiqION`, click **Reference**, select the column from which to discard values outside the percentiles of interest, and click **OK.**
4. Click **OK.**
5. In the results set, create these computed items, and in **Definition**, enter the specified values.

Table 6 Computed Item Names and Definition Placeholders

Computed Item Name	Definition Placeholders
QiqBot	1
QiqTop	2
Qiq Percentile	"value"

6. Use the same results set, and insert a table.
7. From the catalog pane, drag onto the Data Layout the Qiq Percentile computed item and other columns that are to be reported upon and that use the table, charts, or pivots.
8. Double-click the **Qiq Percentile** column to make it a local filter.
9. In **Filter**, click **Show Values**, **Select All**, and **OK.**

   To apply Ignore Percentile correctly, filters must be set by using the QIQ Filter Properties frame or by clicking ✓ in Step 6: Configure Filters of Dashboard Studio. See "Using the QIQ Filter Properties Frame" or "Step 6: Configure Filters" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*
10. Create the percentile sections from the table, inserted in step 6.
11. Open Dashboard Studio, and move to the **Frames** step, to add frames.
12. **Optional:** Add %X, if it is not available on the frame at this point. See "Configuring the Ignore Percentile Button" on page 90.
13. In Interactive Reporting Studio, from the catalog pane, drag the report sections (table, charts, or pivots) onto the frames.
14. In Dashboard Studio, move to the **Associate** step, and click ! to associate the frames.
15. In Interactive Reporting Studio, test the component by clicking %X.

16 **Save the dashboard.**

It is not necessary to set the Qiq Percentile filter as an active filter for the dashboard.

Note:

Use the Checkpoint control to store or restore the computed item. See "Using Checkpoint Control" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Incompatibility with the Checkpoint Control

Checkpoints that contain an Ignore Percentile filter are not applied correctly to the dashboard, because the Ignore Percentile component uses computed items to apply values. These computed items are not handled correctly by the Checkpoint control.

See “Using Checkpoint Control” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

14

Dashboard Studio Lookup Component

In This Chapter

Lookup Component

The Lookup component enables you to launch an Internet-based mapping provider, such as Yahoo maps, to display the location of an address selected from an embedded table or results section in a dashboard.

The mapping provider is configured in the Qiq_addresslookup dashboard frame that accompanies the component. Use one of the two default mapping providers or configure another provider.

The component displays a map of the selected address by inserting the address data into a URL with a known format. The default address, displayed in text labels within the frame, is shown as:

```
http://maps.yahoo.com/py/maps.py?BFCat=&Pyt=Tmap&newFL=Use+Address
+Below&Get%A0Map=Get+Map&Country=|||Country|||&addr=|||Street_Address|||
&csz=|||City|||,|||Locality|||
```

The text between each set of (|||) separators or delimiters, is the column name. For example, `|||Country|||` is replaced by the contents of the column named *country* in the selected row. Use the same process for `|||Street_Address|||`, `|||Locality|||`, and `|||City|||`. To use the default address shown, the results or table section must include columns named *Country, Locality, City,* and *Street_Address.*

To use other columns for a table, replace the column names within the format. See “Changing Default Column Names” on page 95.

Using a Runtime Release of the Lookup Component

This procedure applies only to a runtime release of the Lookup component.

➤ To use the Lookup component:

1 **In Interactive Reporting Studio, open a dashboard that is configured with the Lookup component.**

2 **Double-click a row in a results or table section that contains addresses.**

A mapping provider is launched in a Web browser that displays the selected address. The mapping provider varies depending on the setting used by the dashboard developer.

Configuring the Lookup Component

To configure the Lookup component:

1. Merge the component. See “Merging Components” on page 10.
2. Select or configure a mapping provider.
3. **Optional:** Escape the address URL.
4. Add and configure the table or results section onto the dashboard.
5. Reassociate the section using Dashboard Studio.

Selecting Mapping Providers

➤ To select Yahoo Map or Maporama as the mapping provider:

1 **In Interactive Reporting Studio, open a dashboard that contains the Lookup component.**

2 **From Sections, select Qiq_addresslookup, or View, then Unhide Section, select Qiq_addresslookup, and click OK.**

Qiq_addresslookup is displayed. On the right side of the frame is a list of mapping provider options.

3 **Select one of these options:**

- Yahoo Map Service—View addresses in the U.S., with a two-letter country identifier (To view an address using Yahoo Map, country column values must be set to US)
- Maporama Map Service—View addresses in Europe, with a three-letter country identifier (For example, to view an address in Austria using Maporama, country column values must be set to AUT)

  For correct country codes, see http://maps.yahoo.com or http://www.maporama.com.

Configuring Mapping Providers

Qiq_addresslookup includes a third option and corresponding text label that can be configured to use a mapping provider other than Yahoo Map or Maporama.

➤ To configure and select the third mapping provider option:

1 **In Interactive Reporting Studio, open a dashboard that contains the Lookup component.**

2 **Press Ctrl+D to enter Design mode.**

3 **From Sections, select Qiq_addresslookup, and double-click Local Map Service.**

Properties is displayed.

4 **Enter a title for the mapping provider, and click OK.**

For example, enter `Map Quest`.

5 **Open a Web browser, and enter a URL; for example, http://www.mapquest.com.**

The requested Website is displayed.

6 **Enter an address; for example,** `17 West Adams, Chicago, IL`**, and click Search.**

A map of the specified address is displayed.

7 **From the Web browser, copy the URL.**

8 **In Interactive Reporting Studio, select Qiq_addresslookup, click the third text label, and paste the URL.**

9 **Replace the address with generic identifiers (**`|||Street_Address|||`**,** `|||City|||`**,** `|||Locality|||`**, and** `|||Country|||`**) so it works with any address in the table.**

For example, if the URL for 17 West Adams, Chicago, IL is:

```
http://www.mapquest.com/maps/map.adp?country=US&addtohistory=&address=17
+West+Adams&city=Chicago&state=IL&zipcode=&homesubmit=Get+Map
```

Change the URL to read:

```
http://www.mapquest.com/maps/map.adp?country=|||Country|||
&addtohistory=&address=|||Street_Address|||&city=|||City|||&state=|||
Locality|||&zipcode=&homesubmit=Get+Map
```

If other column names from the results or tables are used, replace the string between the `|||` separators or delimiters with those values. See "Changing Default Column Names" on page 95.

10 **Press Ctrl+D to exit Design mode.**

11 **Select the third option to use the personalized mapping provider.**

12 **From Sections, select Qiq_addresslookup, and select View, then Hide Section.**

Changing Default Column Names

The default settings for the Lookup component require Country, Locality, City, and Street_Address columns in the results or table section. If multiple column names are used for addresses, change column names within the form as needed.

➤ To change column names:

1 **In Interactive Reporting Studio, open a dashboard that contains the Lookup component.**

2 **Select View, then Unhide Section.**

Unhide Sections is displayed.

3 **Select Qiq_addresslookup,**

Qiq_addresslookup is displayed. The frame includes several text labels. The labels contain URLs for each available mapping provider.

The strings between the ||| separators or delimiters reflect the expected column names in the results or table section.

4 **Change the default column names to reflect the results or tables that are expected.**

5 **From Sections, select Qiq_addresslookup, and select View, then Hide Section.**

Escape the URL

An option to escape the URL is available, because in localized releases of the component, an issue may arise where characters are not recognized. The selected address is displayed incorrectly or not at all, and the Web browser Address box displays extra characters. In this case, you must change the value in text label called *txlEscaped* on Qiq_addresslookup.

The value in `txlEscaped` can be changed from or to one of these options:

1=Escaped

0=Not escaped

Note:

The escape option is *on* by default.

Adding and Configuring Tables or Results

Use the table or results from the Changing Default Column Names procedure.

➤ To add and configure a table or results section:

1 **In Interactive Reporting Studio, press Ctrl+D to enter Design mode.**

2 **From the catalog pane, drag the table or results onto the dashboard.**

3 **Select the table or results, right-click, and select Properties.**

Properties is displayed.

4 **Rename the embedded table or results, by entering** `<`*`Table_Name or Results_Name`*`>^Qiq_addresslookup^1`**.**

For example, enter `Customer_Results^Qiq_addresslookup^1`.

5 **Select Active, and click OK.**

6 **Select the table or results, right-click, and select Scripts.**

Scripts Editor is displayed.

7. **In Scripts Editor, perform an action:**
   - Enter this line of code

     ```
     ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
     (this.Parent,this)
     ```
   - Copy and paste the line of code from another button on the toolbar to avoid data entry errors
8. **Click OK.**
9. **Press Ctrl+D to exit Design mode.**

Proceed to reassociate the table or results using Dashboard Studio.

Reassociating Sections Using Dashboard Studio

Use the Interactive Reporting document from the Adding and Configuring Tables or Results procedure.

➤ To reassociate tables or results with Dashboard Studio:

1. On Dashboard Studio **Start**, connect to the Interactive Reporting document that contains the table or results.
2. Move to the **Associate** step.
3. Select the table or results from the list, and click to reassociate it.
4. In Interactive Reporting Studio, double-click a row in the table or results to test the association and launch the mapping provider.
5. In the Web browser, the configured mapping provider; for example, Yahoo Map, displays the selected address.
6. Save the dashboard.

Incompatibility with EPM Workspace

The Lookup component does not work in EPM Workspace, because EPM Workspace cannot access the server operating system environment, nor can it make use of pop-ups to collect parameters for several of the operations.

15 Dashboard Studio Maps Component

In This Chapter

About the Maps Component

The Maps component contains additional frames incorporating prebuilt maps that can be highlighted to represent trends in data. The component extends the Dashboard Studio Chart Spotlighter functionality.

The Maps component includes `Maps.bqy` with supplementary frames that contain prebuilt maps that can be *spotlighted* to emphasize key trends across certain states.

The component offers a process for spotlighting graphical elements by using a prebuilt map. For instructions on how to spotlight a chart, see the "Spotlighting Charts" section of the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Note:

Map Spotlight and Chart Spotlight operations applied to maps and charts take precedence over the application of Chart Shade configurations. See "Chart Shade Component" on page 27.

Using a Runtime Release of the Maps Component

This procedure applies only to a runtime release of the Maps component. Also see "Spotlighting Charts" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

➤ To use the Maps component:

1 **In Interactive Reporting Studio, open a dashboard that is configured with the Maps component.**

2 **Navigate to a spotlighted map.**

Graphical elements representing relevant states are spotlighted according to measures set by the dashboard developer.

3 **Change the data in the current view by adding filters.**

The colors change to reflect the altered data.

Highlighting Map Features with the Maps Component

This topic explains how to configure a map to show trends for key states or localities by using a technique called *spotlighting*. The topic assumes that the dashboard contains prebuilt maps and all necessary Interactive Reporting Studio sections. To spotlight a map based on conditions or elements that are not presented in these examples, replace the columns and variables with other values.

Procedures to spotlight a map:

1. Merge the component. See "Merging Components" on page 10.
2. Create summary tables.
3. Spotlight the map.

Tip:

Renaming a map frame in a dashboard must be performed before spotlighting the map.

Note:

Frame prototypes that contain map images are available in the Maps component and in the `Frame_Library.bqy` in the templates folder.

Creating Summary Tables

The Create Summary Table frame is designed to automate the process of building summary tables by creating columns to group by, creating computed items, sorting columns, local tables, and filters. Using the Create Summary Table frame saves development time.

Create Summary Table creates a structure that contains the same number of rows as there are bars or segments in a spotlighted chart, or shapes in a spotlighted shape set; for example, a map. See "Configuring the Map Blank Frame" on page 104.

➤ To use the Create Summary Table frame:

1 **In Interactive Reporting Studio, open a dashboard that contains the Maps component.**

2 **Navigate to Create Summary Table.**

To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

3 **In Grouping Column Configuration, select a Table/Results Section that contains your data.**

4. **Optional:** To view the selected section, click 🖥.

5. **Optional:** Enter a **Grouping Column Name** to override the default created by the system.

   If you are grouping multiple columns, enter a Grouping Column Name. For example, grouping country and city, where city is not a unique entity, the user can override the default name which is the concatenation of the column names; for example, Country_City. The computed dimension is a concatenation of the column values.

6. Select an available column to highlight in the map.

   For example, if you merged the component with `Sample_en_esm.bqy`, select State.

7. Sort columns by moving selected columns between **Available Columns** and **Grouping Columns** by clicking > and <.

   If Grouping Columns contains multiple items, create a computed item which is a concatenation of the selected columns, otherwise the selected column is the grouping column. Add the grouping column to the Interactive Reporting Studio Sort line of the section.

8. **Optional:** Reorder **Grouping Columns** by selecting a column and clicking ∧ or ∨.

9. In **Summary Table Configuration**, enter a **Summary Table Name.**

   For example, enter `State_Color`. (This name must match the shape set name used later in the spotlighting process).

10. Select a **Function** to create an aggregated total for each label value.

    For example, select Sum.

    The function is the summary formula used when creating Summary Fact Columns. The function value is combined with selected Available Columns when > is clicked to generate Summary Fact Columns.

11. Move selected columns between **Available Columns** and **Summary Fact Columns** by clicking > and <, to identify the columns for which to create summary computed items.

    For example, select Revenue to create a summary computed item called *Revenue_._Sum_._*.

12. **Optional:** Reorder **Summary Fact Columns** by selecting a column and clicking ∧ or ∨.

13. **Optional:** To add more columns, move selected columns between **Available Columns** and **Summary Table Columns** by clicking > and <, to identify which columns are added to the summary table.

14. **Optional:** Reorder **Summary Table Columns** by selecting a column and clicking ∧ or ∨.

15. Perform an action:

    - To remove all settings, click Clear
    - To build the summary table, click Create

All validation is performed. The summary table is created.

The computed column that determines the color to use for a bar or a shape is typically located in this section. Use the lower section of the Create Summary Table frame to create the computed column, or if the column is complex, create it directly in the table and only reference it through the Create Summary Table frame.

Proceed to Spotlighting the Map.

Spotlighting the Map

To spotlight the map, use the Chart Spotlight Properties frame. The configuration frame includes the optional creation of a computed item using an expression builder. Spotlighting a map is similar to spotlighting a chart.

➤ To use the Chart Spotlight Properties frame:

1 **Use the Interactive Reporting document from the Creating Summary Table procedure.**

2 **From Sections, or the Configuration drop-down list found in Dashboard Studio, select Chart Spotlight Properties.**

3 **From Dashboards with Charts, select an option:**

- All Dashboards—Sections in a dashboard with an associated vertical bar, horizontal bar, or pie chart
- Configured Dashboards—Contains at least one Chart Spotlight specification
- Unconfigured Dashboards—Contains no Chart Spotlight specifications

These options filter the frames that are displayed in the drop-down list.

4 **Select a map section from the drop-down list:**

For example, select Map US.

5 **Optional: To view the selected section, click .**

If no section is selected, is not selectable.

6 **Under Spotlight Configuration, select an item from Chart Section/Shape Set.**

For example, select State_Color (Shape Set). The drop-down list displays names for charts on the selected dashboard and sets of shapes that can be colored by the spotlight feature. Shape examples include circles or rectangles that represent color indicators or points on a map, and so on. You must select the shape set name that matches the summary table name. Shape set names cannot contain spaces.

Table Section is displayed. For example, State_Color is displayed.

7 **From Table Section, to view the table, click (next to the table text label).**

The displayed table is the source for the selected map.

If no section is selected, is not selectable.

8 **From Labels Column, select a column that associates with the x-axis of the selected chart or one of the shapes.**

For example, select State.

The remaining tools on Chart Spotlight Properties assist with defining computed items. Proceed to Defining Color Computed Items.

Defining Color Computed Items

There are two ways to define color computed items; externally outside the Chart Spotlight Properties frame or within the Chart Spotlight Properties frame.

Using an Externally Defined Column

You can create and maintain the column that determines bar or shape colors externally to the Chart Spotlight Properties frame. In this case, use the Chart Spotlight Properties frame drop-down list to select the existing column and click Apply.

Using a Column Defined in the Chart Spotlight Properties Frame

The created or modified computed item is defined using the tools that remain on the Chart Spotlight Properties frame. Computed items cannot be read from the object model, so settings are remembered and loaded as part of the specification. If the user modifies the specification directly, the modification is unable to be read.

➤ To define the computed item:

1 **On Chart Spotlight Properties, perform an action:**

a. Ensure **Create Color Column** is selected, and enter the name of the computed column to create in the text box.

For example, enter `State_Color`.

b. Do not select **Create Color Column**.

The drop-down list displays the computed item to be modified. Computed and non-computed columns are displayed, separated by a blank line. Computed columns are at the top of the list.

2 **From Value Column, select a column that contains the values that determine which colors to apply.**

3 **Specify the color condition by selecting an Operator and Value.**

a. Select an **Operator**.

For example, select > (greater than). Operator lists a set of logical operators to be used in the expression that is being generated.

b. In **Value**, enter characters (numbers or letters) to use in expressions.

For example, enter 55000.

4 From the drop-down list, select a palette to change the color scheme of the displayed option buttons.

For example, select Default 4. If no palettes are displayed use the Color Palette Properties frame to configure a palette. See “Using the Color Palette Properties Frame” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

5 Select an option (color) to combine with **Operator** and **Value** to create an expression.

6 Move selected specifications, by clicking > and <.

The specification is displayed as it is used to construct the computed item.

7 **Optional:** To enable **Selected Condition**, select a specification.

The color associated with the expression is displayed.

8 **Optional:** Reorder selected specifications, by selecting a specification and clicking ˄ or ˅.

9 Perform an action:

- To discard specifications and to reload the original settings, click Restore (This occurs at document startup)
- To remove the specification for a map or shape set, click Clear
- To remove all current specifications, click Clear All
- To load spotlight settings, click Apply (Clicking Apply after clicking Clear All also results in the specification being cleared)

10 From **Dashboards with Charts**, click 🖥, to verify that the map is spotlighted correctly.

Configuring the Map Blank Frame

The Maps.bqy file contains a blank frame that can be configured to represent spotlighted maps.

Bitmaps (BMPs) are required, and each item to be spotlighted must be configured.

Note:

The blank frame prototype is also available in the Frame_Library.bqy in the templates folder.

➤ To configure the Map Blank frame:

1 In Interactive Reporting Studio, open a dashboard that contains a section called *Map Blank.*

2 From **Sections**, select **Map Blank**, and rename it.

3 **Optional:** To configure multiple maps, duplicate the blank map section, and configure each map individually. Repeat steps 5–10 as many times as required.

4 Press **Ctrl+D** to enter Design mode.

5. **From the catalog pane, expand Graphics or Resources, drag a map image onto the frame, and position the image.**

6. **From Graphics, drag an shape object onto the frame, and in Properties set the fill color to white.**

7. **Position the shape on top of the map in an area to be spotlighted, and double-click the object.**

   Properties is displayed again.

8. **Enter the object name as `QiqColor^`*`<summary_table_name>`*`^`*`<column value>`*.**

   For example, enter `QiqColor^State_Color^CA`. Shape set names cannot contain spaces. The object name is divided into three parts:

   - `QiqColor`—Text label name
   - `<summary_table_name>`—Must match the summary table name (The second part of the shape set name is the summary table name.)
   - `<column value>`—Must match the name of a value in the results section to be spotlighted

9. **Click OK.**

10. **Optional: Copy and paste as many instances of the object as required, and repeat these procedures as many times as needed, once for each pasted object.**

    a. Position a pasted object on a map area to be spotlighted.

    b. Double-click the pasted object to open **Properties**.

    c. Change the third part of the object name to match the names of the other column values to be spotlighted.

11. **Press Ctrl+D to exit Design mode, and save the dashboard.**

16 Dashboard Studio Metadata Component

In This Chapter

Metadata Component

The Metadata component enables you to view metadata associated with data from within a dashboard. The component enables you to refer to the content and function of database tables, columns, and so on, in easy-to-understand and relevant terms.

Using Metadata

Metadata is described as data about data. Stored in database tables, metadata describes the history, content and function of the database tables, columns, and joins in intelligible business terms.

Metadata can overcome awkward names or ambiguous abbreviations often used in a database. Complex and confusing names are derived because, while database engineers are good at designing tables, they may not understand the business process as the users of the database; for example, managers or salespeople. Therefore, a database engineer can create a table called *Prod,* when the users prefer to call it *Product Descriptions.* As database tables cannot be easily changed after creation, Interactive Reporting Studio offers metadata as a way of making the tables (and columns in each table) more user-friendly.

When tables are retrieved using an Interactive Reporting database connection (`OCE` extension) with metadata (Metadata `OCE`), the table names are displayed; for example, as *Product Descriptions* and *Sales Figures,* rather than the raw names *Prod* and *Sal.* Queries, charts, and pivots are then created with more familiar names, such as *Product Descriptions,* instead of *Prod.*

Using Various Interactive Reporting Database Connections to Build Dashboards

A business query built using a *raw* Interactive Reporting database connection creates tables and columns that are returned from the database as is. Therefore, column headings may not be user-friendly.

Note:

Interactive Reporting Studio supplies a default raw Interactive Reporting database connection called `Sample.oce`.

From raw tables and columns, pivots and charts are created, and dashboards are built. As *raw* Interactive Reporting database connections do not use metadata, the column names reflect the physical names of the tables; however, they may not be meaningful to end users.

A business query built using an Interactive Reporting database connection with references to metadata, contains a metadata definition that translates physical names in the database into business names using metadata tables. By using the database connection, a more user-friendly view of the database is available.

Note:

Interactive Reporting Studio supplies one such Interactive Reporting database connection, called `Sample with Metadata.oce`.

Pivots and charts are created with user-friendly names, and dashboards are built from them. As metadata database connections use metadata tables to assign practical names, the Metadata component can also use the tables to retrieve descriptions.

The Metadata component can be added to a previously constructed dashboard. Firstly, modify the sample metadata query, point it at the metadata tables and select the columns. The metadata query reads the metadata tables and displays dynamic information about the columns used by the dashboard.

The metadata query uses a *raw* Interactive Reporting database connection, instead of a database connection with metadata, because the query needs direct access to the metadata tables. A database connection with metadata does not enable you to see the metadata tables.

Accessing Metadata by Using the Metadata Button in a Runtime Release

The Metadata component provides descriptions of the columns used by a dashboard.

➤ To access metadata by using (Metadata button):

1 **In Interactive Reporting Studio, open a dashboard that is configured with the Metadata component and that contains metadata structures.**

A metadata sample Interactive Reporting document is available with the component, which can be merged into Dashboard Studio templates and dashboards. See “Merging Components” on page 10.

2 **Click .**

The component examines the Data Layout for the objects that are on the frame, and filters the metadata results to display only those objects. Qiq Metadata is displayed with a table describing the columns used in the current dashboard frame.

When using the sample Interactive Reporting document do not refresh the metadata. The Interactive Reporting document points to a placeholder database deliberately so the component can be customized to point to a database determined by the user. See “Customizing the Metadata Component” on page 112.

3 **Return to the previous frame and change the current view.**

For example, use Quick Slice to add Year to the z-axis (depth).

4 **Click again.**

Qiq Metadata is displayed. The frame includes data on Year.

Configuring Dashboards for the Metadata Component

This taskflow is for dashboard developers who want to add the Metadata component to dashboards.

1. **Optional:** Create an Interactive Reporting database connection with references to metadata (if a connection does not exist). A metadata database connection can be created for each available data source later.
2. Customize the Metadata component to read the correct metadata tables. If multiple data sources are present, multiple Metadata components can be created, each pointing to different data sources.
3. Create metadata templates.
    a. Add the Metadata component to a Dashboard Studio template, so the component is available for building dashboards. However, the component can be added later to other templates.

    b. Add and configure (Metadata) on frames, to access metadata (see “Adding and Configuring Buttons to Dashboards or Templates” on page 16), or extend the Help feature, so frames without can use metadata.

4. Save the template.
5. Design dashboards with the metadata-enhanced template by creating one of these options:
   - A business query that uses the metadata database connection
   - Charts and pivots that use the business query
   - Dashboard frames (using metadata-enhanced frames) that contain charts and pivots
6. Save the dashboard.

Creating Interactive Reporting Database Connections with References to Metadata

Perform this procedure only if *no* Interactive Reporting database connection file provides access to metadata descriptions.

This topic demonstrates how to create a metadata database connection that uses `Sample.oce`, which is supplied with Interactive Reporting Studio. After you complete the procedure, you can create your own metadata database connections.

A metadata database connection enables you to use user-friendly names provided by the metadata database connection to build queries, charts, and pivots and to use the Metadata component with a dashboard.

➤ To create a database connection with references to metadata:

1 **Start Interactive Reporting Studio, and, on the Welcome dialog, click Cancel.**

2 **Select File, then New.**

New File is displayed.

3 **Select `Sample.oce`, and click OK.**

4 **On Log on, click OK.**

A blank Interactive Reporting document is displayed.

5 **Select Tools, then Connection, and then Modify.**

Database Connection Wizard is displayed.

6 **Select On the current connection, and click Next.**

7 **Below Custom, click Edit.**

Metadata Definition is displayed.

a. On **Tables**. select **Custom Definition**.

b. Fill in the text boxes, and use these examples as a guide:

*__Physical Table Name:__ table_name

Table Alias: business_name

From: meta_data_tables

c. Select **Columns**, and select **Custom Definition**.

d. Fill in the text boxes, and use these examples as a guide:

   ***Physical Column Name:** column_name

   Column Alias: business_name

   Column Number: sequence

   ***Column Type:** data_type

   ***Byte Length:** length

   From: meta_data_columns

   Where: table_name=: TABLE

e. Configure the options on **Joins**, and select **Custom**.

f. Fill in the text boxes, and use these examples as a guide:

   ***Primary Table:** pkey_table_name

   ***Primary Column:** pkey_column_name

   ***Foreign Table:** fkey_table_name

   ***Foreign Column:** fkey_column_name

   From: meta_data_joins

g. On **Remarks**, select **Table Remarks**, and configure these entries:

   i. In **Remarks Tabs**, select **Description**.

   ii. Enter **Remarks SQL**, and use these examples as a guide:

      Tab Name: Description

      Select: description

      From: meta_data_tables

      Where: (:TABLE = table_name or :TABALIAS = table_name)

   iii. In **Remarks Tabs**, select **Usage Notes**.

   iv. Enter **Remarks SQL**, and use these examples as a guide:

      Tab Name: Usage Notes

      Select: usage_notes

      From: meta_data_tables

      Where: :TABLE = table_name

8 **Click OK to return to the Database Connection Wizard, and click Finish.**

A dialog box is displayed asking that the Interactive Reporting database connection file be saved.

9 **Click Yes, and name the file.**

10 **Close the document without saving.**

11 **Create an Interactive Reporting document that uses the database connection just created.**

Instead of the raw tables usually seen when using the original Sample.oce, a more user-friendly database view is available. The view excludes the list of metadata tables.

Customizing the Metadata Component

The component uses a metadata query section to read metadata tables and return descriptions of columns that are used in the Interactive Reporting document.

This topic explains how to customize a metadata query so that it points to database metadata tables that are used by Sample.oce. Use this procedure to customize the component to return metadata from your own database.

➤ To customize the Metadata component:

1 **Use the Interactive Reporting document from the Adding and Configuring the Metadata Button procedure.**

2 **From Sections, select QIQ Metadata Query.**

This query contains sample metadata tables, which must be replaced.

➤ To replace the sample tables with metadata tables:

1 **From the catalog pane, expand Tables.**

Tables contains a list of topics, including metadata topics.

Sample.oce log on is displayed.

2 **Click OK.**

3 **Select DataModel, then Data Model Options.**

4 **Clear Auto join tables, and click OK.**

5 **Drag the replacement pair of metadata topics onto the dashboard.**

For example, topics called *Meta Data Tables* and *Meta Data Columns* describe tables and columns in the database.

6 **Create joins between the topics.**

a. From **Meta Data Tables**, select **Owner**, and drag it to the corresponding Owner item in **Meta Data Columns**.

b. For the Table Name item, repeat the step 6a.

The result is two joins between the topics.

The Request line references columns in the sample metadata topics. These references must be updated to point to the columns in the metadata tables.

➤ To ensure that the Metadata component points to the correct metadata tables in the database:

1 **On the Request line, double-click each item, and, in Item Properties, click Reference.**

2 **Replace the reference with the topic and item values, as shown in Table 7.**

Table 7 Replacement Request Line Items

Request Line Item	Topic	Item
Table Business Name	Meta_Data_Tables_2	Business_Name
Column Business Name	Meta_Data_Columns_2	Business_Name
Table Name	Meta_Data_Tables_2	Table_Name
Column Physical Name	Meta_Data_Columns_2	Column_Name
Column Description	Meta_Data_Columns_2	Description
Column Usage Notes	Meta_Data_Columns_2	Usage_Notes
Column Transformation Rules	Meta_Data_Columns_2	Transformation_Rules
Column Source System	Meta_Data_Columns_2	Source_System

3 **Remove the sample request items that do not exist in the metadata topics.**

4 **Drag items from the metadata structures to the Request line to make them visible.**

Items on the Filter line must be updated as they reference old topics.

➤ To update Filter line items:

1 **On the Filter line, delete Table Name and Column Name.**

The deleted items reference the old topics.

2 **Add the equivalent columns from the metadata topics, name the first filter *Table Name* and the second filter *Column Name.***

3 **From Meta Data Tables 2, add Table Name, and from Meta Data Columns 2, add Column Name as filters.**

4 **In Filter, click Show Values, Select All, and OK.**

Values must be assigned to a filter before being added to the filter.

5 **Delete the original sample metadata topics from the content area.**

6 **Double-click Meta Data Tables 2.**

Topic Properties is displayed.

7 **Rename Topic Name as *Meta Data Table,* and click OK.**

8 **For Meta Data Columns 2, repeat steps 7–8, and rename Meta Data Columns 2 as *Meta Data Column.***

The item references are updated.

9 **On the Interactive Reporting Studio toolbar, click Process, to process the query section.**

QIQ Metadata results is populated with metadata from the `Sample.oce` database. The results section represents the component local cache of metadata from the `Sample.oce` database. From this point forward, the component uses the cache to show the database metadata. The local cache enables a dashboard with the Metadata component to display metadata, even if the dashboard and component are disconnected from their databases. However, the cache of metadata can be updated when it is connected to the database, by reprocessing the QIQ Metadata query or by clicking ⟳ on QIQ Metadata.

10 **Select File, then Save As.**

Name the component by describing the database to which the component is linked. For example, name the component `Metadata_component_for_Sample_OCE.bqy`.

11 **Close the document.**

Creating Metadata Templates

The Metadata component must be added to a template to create a metadata template. Access is provided by clicking ▣ or using the Help feature.

Adding the Metadata Component

Merge the Metadata component into a template to create a metadata template. See "Merging Components" on page 10.

Frames created from the template contain ▣, which enables you to access the metadata table. Use Dashboard Studio to extend the button functionality to perform specialized functions.

Providing Access to the Metadata Component

The Metadata component provides two frame prototypes for which ▣ is configured. Use the prototypes as the basis for creating a template. These Metadata frame prototypes are also available in the `Frame_Library.bqy` in the templates folder.

Metadata can also be accessed by using one of these methods:

- Add ▣ to frames
- Extend the Help feature

In this procedure, add and configure ▣ to access to metadata.

➤ To add and configure ▣ (Metadata):

1 **In Interactive Reporting Studio, open a dashboard that contains the Metadata component.**

2 **Select the frame on which to add the button, and press Ctrl+D to enter Design mode.**

3 **From the catalog pane, expand Graphics, and drag a picture object onto the frame.**

4 **Navigate to `Metadata.bmp` in the Metadata component directory, and position the button on the dashboard toolbar.**

5. **Double-click the button.**

   Properties is displayed.

6. **Enter** `pic^Qiq_metadata` **as the object name, and click OK.**

7. **Select the button, right-click, and select Scripts.**

   Scripts Editor is displayed.

8. **In Scripts Editor, perform an action:**

   - Enter this line of code

     ```
     ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
     (this.Parent,this)
     ```

   - Copy and paste the line of code from another button on the toolbar to avoid data entry errors

9. **Click OK.**

10. **Optional: Add, configure, and name the corresponding gray button for the not selectable state.**

11. **Press Ctrl+D to exit Design mode.**

    In this procedure, the Help feature is extended to enable access to metadata.

➤ To extend the Help feature:

1. **In Interactive Reporting Studio, open a template that contains the Metadata component.**

2. **Select View, then Unhide Section.**

3. **Select 1100 Custom Metadata and 1100 Custom, and click OK.**

4. **From Sections, select 1100 Custom Metadata.**

5. **Press Ctrl+D to enter Design mode.**

6. **Right-click (?), and select Scripts.**

   Scripts Editor is displayed that contains code that must be added to the 1100 Custom frame.

7. **In Scripts Editor, select the code, and press Ctrl+C to copy.**

8. **Click OK.**

9. **Move to 1100 Custom, right-click (?), and select Scripts.**

10. **In Scripts Editor, select the code, and press Ctrl+V to paste the code copied from the previous frame.**

11. **Click OK, and press Ctrl+D to exit Design mode.**

12. **On 1100 Custom, click (?), to initialize the code.**

    Clicking (?) on every frame of type 1100 (that is, every frame that does not contain ◈) provides access to the metadata table.

13. **From Sections, select 1100 Custom, and select View, then Hide Section.**

14 From **Sections**, select **1100 Custom Metadata**, and select **View**, then **Hide Section**.

15 Save the template.

Designing Dashboards with the Metadata-Enhanced Template

➤ To design a dashboard with the metadata-enhanced template:

1 From Dashboard Studio **Start**, select a template or editable source master (ESM) that contains the Metadata component, and click >.

Dashboard Studio moves to Step 1: Create Queries, Tables, Charts, Pivots, and Reports.

2 Insert a query using an Interactive Reporting database connection with metadata definitions.

In this step, use the database connection that was created in "Creating Interactive Reporting Database Connections with References to Metadata" on page 110. This action enables charts and pivots to be created that use user-friendly names.

3 Create the Interactive Reporting Studio sections, such as charts, pivots, and tables, to be displayed on the dashboard, and use Dashboard Studio to name them.

4 In Dashboard Studio, click > to move to the **Frames** step.

5 Select the frame prototype to use for the dashboard.

6 Click > to move to the **Layout** step.

7 In Interactive Reporting Studio, drag sections onto the frames.

8 In Dashboard Studio, click > to move to the **Associate** step.

9 Click to associate the sections.

10 Complete the remaining Dashboard Studio steps, and save the dashboard.

The Metadata feature is accessible by clicking or ?, depending on how the template is customized.

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Dashboard Studio Pivot Trees Component

In This Chapter

Pivot Trees Component

The Pivot Trees component uses the `OnCellDoubleClick` event that an embedded pivot exposes to expand or drill into hierarchies of information. The operation is similar to using Tree Views in the Tree component (see Chapter 21, “Dashboard Studio Tree Component”).

The component initially displays top level nodes in pivots. However, when a row containing Pivot Trees properties is double-clicked, the descendants are displayed or hidden.

Note:

The Pivot Trees component uses *appended queries* to view data in a hierarchical structure. An appended query is a group of different queries appended together. Each query in an appended query has the same column names and column data types. For detailed information on appended queries, see the section titled “Appending Queries” in the *Hyperion Interactive Reporting Users' Guide*.

Creating a Query Definition

Creating a query definition is a requirement for the component to function correctly, and you must provide a hierarchical structure for the results set.

As an example, open the `PivotTree_Sample_esm.bqy`, and from Sections, select Sales PT Results. The Item Type column represents the first level of the hierarchy, Store Type is the second level, OS is the third level, and State is the fourth level. The columns called *Units* and *Amount* are summary data. Therefore, to define the query, you must decide on the hierarchy and facts that are required before building the query.

Building Queries

Using the sample, `PivotTree_Sample_esm.bqy`, from Sections, select Sales PT Query. This query is a union of four separate query requests where each query has the same column names. In Sales PT Query 1, Item Type is added, and then the remaining hierarchical columns are added as NULL columns. The Units column, for example, becomes the Sum of Units for Item Type. See Table 8 for the column names and values.

Table 8 Sales PT Query 1 Column Names and Values

Column Name	Column Values
Item Type	Item Type
Store Type	NULL
OS	NULL
State	NULL
Sum(Units)	Sum(Units)
Sum(Amount)	Sum(Amount)

In Sales PT Query 2, Store Type is added as the next hierarchical level, it contains data rather than being a NULL column. The remaining columns are again added as NULL columns. The Sum of Units column, for example, becomes the Sum of Units for Item Type and Store Type. See Table 9 for the column names and values.

Table 9 Sales PT Query 2 Column Names and Values

Column Name	Column Values
Item Type	Item Type
Store Type	Store Type
OS	NULL
State	NULL
Sum(Units)	Sum(Units)
Sum(Amount)	Sum(Amount)

➤ To create a union of queries:

1 **In Interactive Reporting Studio, open a dashboard that contains the Pivot Trees component, and select Insert, then New Query.**

2 **If prompted, select the database connection file.**

For example, select `Sample.oce`, and click OK at the user name and password login without entering any information.

3 **From catalog, expand Tables, and drag tables onto the content area.**

4 **Optional: Create links between the tables, if not automatically linked.**

5 **Select topics or columns and drag them onto the Request line.**

6 **Select Query, then Append Query to create the union.**

A set of query tabs is displayed beneath the Request line.

7 **Optional: Select a query tab, right-click, and select Rename.**

8 **Select topics or columns and drag them onto the Request line for the appended queries.**

9 **From the Interactive Reporting Studio toolbar, select Process.**

The results are displayed.

10 **Select Insert, then New Table and drag all columns to the Content pane.**

Configuring the Pivot Trees Component

➤ To configure the Pivot Trees component:

1 **Merge the component. See "Merging Components" on page 10.**

2 **Create a query definition. See "Creating a Query Definition" on page 117.**

3 **Build a query. See "Building Queries" on page 118.**

4 **Configure the Pivot Trees tables using the Pivot Trees Properties.**

➤ To use the Pivot Trees configuration frame:

1 **In Interactive Reporting Studio, open a dashboard that contains the Pivot Trees component.**

To access the configuration frame, use Sections or the Configuration drop-down list found in Dashboard Studio.

2 **From Base Table Section, select a results or table section that contains the full row set representing every tree node, and that will be used as the base for the pivot tree.**

The selected table or results populates Available Columns.

3 **From Tree Table Section, select an option:**

- Select a Tree Table Section—A list of recognized Pivot Trees tables created from the existing results set is displayed (The first Pivot Trees table is displayed by default)
- Create a Tree Table Section—The table is based on the Base Table Section name; for example, if the base section is called *Revenue Results*, then the Pivot Trees table is called *Orcl_pivotTree_Revenue Results* (Where no Pivot Trees tables exist, Create a new table is displayed by default)

Base tables can have one or more associated Pivot Trees tables.

4 Move selected **Available Columns** between **Column Hierarchy** and **Other Columns** by clicking › and ‹.

5 **Optional:** Reorder **Column Hierarchy** and **Other Columns** by selecting a column and clicking ˄ or ˅.

The Column Hierarchy list should match the column order in the Request line.

6 From **Descendants Indicator**, select a character to indicate that one or more descendants exist.

The indicators are displayed as a hexadecimal representation: character representation. The default value is 25BC:▼.

7 **Optional:** Replace the default Hierarchy Separator value if the default value will cause a conflict with your data.

The Hierarchy Separator creates the hierarchical path for each node with the separator between each value. Although the separator is never displayed, it is used by the component to create the columns called *__break_Gen1*, *__break_Gen2*, and so on.

8 **Optional:** Clear **Automatically configure Embedded Pivot Objects on dashboards**, which is selected by default, to configure the pivots that belong to the Pivot Trees component.

When this option is selected, the Associate step in Dashboard Studio adds the `OnCellDoubleClick` code to pivots created from the Pivot Trees table, and txlClass is updated to reference Orcl_pivotTree so the correct code handles double-clicking a cell. The option is not set if another component uses txlClass, in which case the developer must add code lines to the `OnCellDoubleClick` event.

9 Perform an action:

- To discard in-memory settings and revert to original settings, click Restore
- To remove all in-memory settings, click Clear All (A dialog box is displayed that prompts to remove all computed sections. To retain the existing configuration of the base, tree, and pivot tables, click Yes. The tables are removed from the Interactive Reporting document. Click No for the component to remove the configurations. Clicking Apply saves the changes, and clicking Restore reloads the saved configurations)
- To remove in-memory settings from table sections, click Clear (The user selects to delete all tables and pivots, or only the in-memory representations of the configurations. This is similar to clicking Clear All. Clicking Apply saves the changes, and clicking Restore reloads the saved configurations)
- To create computed columns, the table and pivot, and save the settings, click Apply (Clicking Apply creates the base, tree, and default pivot)

10 Drag the pivot that is created onto a Dashboard frame. Right click the pivot, go to Properties and select the Active option button. Click **OK**.

11 Connect the dashboard to the Wizard, move to Step 4, and click ❗.

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Dashboard Studio Point of View (POV) Component

In This Chapter

Point of View (POV) Component

The POV component enables you to manipulate Oracle's Hyperion® Web Analysis Studio and Oracle Hyperion Financial Reporting Studio, Fusion Edition views embedded within Interactive Reporting Studio dashboards.

The views are displayed using URLs that are associated with filters in the dashboard. In a runtime document, users set filters in dashboards which results in the Point of View attribute being refreshed. For example, Interactive Reporting Studio may display expense information for an organization, while Web Analysis Studio may display budgets, and Reporting Studio may display actual revenue. The three reporting environments must share common dimensions such as, geography or sales organization with common members. Operations then applied to the dashboards are extended to other views so that a coherent synchronized set of operations is performed.

When connecting to a dashboard with an embedded view, you may be prompted to:

- Enter your login and password every time
- Remove your login and passwords from the document

Using a Runtime Release of the Point of View Component

This procedure applies only to a runtime release of the POV component.

➤ To use the POV component:

1 **In Interactive Reporting Studio, open a dashboard that is configured with the POV component.**

2 **Optional: Perform an action if prompted:**

- If a Point of View login screen is displayed:

    - ○ Enter your login and password for each POV URL, and click OK.

      Your credentials are stored for that session. You can select multiple URLs before you enter your login information.

    - ○ Click 🏠 on the toolbar to begin using your document.

- To remove the Point of View login and password information from your Interactive Reporting document, click **Yes**, and save your document.

3. **Navigate to a frame that contains a POV embedded browser.**
4. **Set filters by selecting one or a combination of these actions:**
    - From the Filters drop-down list, select items
    - Use Quick Filters or Quick Slice on the side-label navigation panel, if these options are configured

   If the dashboard developer enabled Automatically refresh when Filters are set, the refreshed frames reflect the filters. If the option is not enabled, click 🔄.

   A POV embedded browser is refreshed only if the applied filter is associated with the POV URL attributes. See "Using Map URL Attributes" on page 128.
5. **Optional: If configured, share an embedded browser among multiple POVs to reduce the size of the space used, by selecting an option button. See "Accessing Multiple Point of View Embedded Browsers with Option Buttons" on page 129.**

Configuring the Point of View Component

The POV component works only with dashboards built with Release 9.0 templates.

To configure the POV component:

1. Merge the component. See "Merging Components" on page 10.
2. Collect URLs.
3. Name and configure URLs.
4. Create a POV embedded browser.
5. Add option buttons to access multiple POV embedded browsers.
6. **Optional:** Configure 🔄 (Refresh).
7. **Optional:** Import the Interactive Reporting document into EPM Workspace.

Collecting POV URLs

The POV component displays Reporting Studio and Web Analysis Studio views in dashboard embedded browsers. URLs that display the content must first be gathered, saved to text files, and tested. The text files are used to import the URLs, see "Using Manage URL Library" on page 124.

➤ To collect, save, and test URLs for Reporting Studio:

1 **Log on to EPM Workspace on a server.**

2 **Navigate to the folder that contains the Reporting Studio document to be displayed.**

Note the folder path and file name.

3 **Open a Web browser, and enter the URL:**

`http://server:port/workspace/browse/listXML?path=<folder path>`

4 **If prompted, log on to EPM Workspace again.**

An XML file listing URLs for all documents in the folder is displayed.

5 **Search for the elected file name, and copy the HTML URL.**

6 **Paste the URL into a text file.**

7 **In EPM Workspace, provide a user name and password by replacing** `sso_token=$SSO_TOKEN$&$CONTEXT$` **with** `sso_username=username&sso_password=password`**.**

The replacement enables EPM Workspace to display content without prompting for a user name and password.

8 **If the document contains modifiable dimensions, append the dimensions to the URL in the form:**

`&attribute=Dimension.id.SampleValue`

For example, if the document contains two modifiable dimensions, year and market, append this text to the URL:

`&attribute=Year.id.Qtr1&attribute=Market.id.New+York`

9 **Save the text file.**

10 **Test the URL in a Web browser, by using the text file created in step 6.**

By default, the view pane and masthead are enabled in EPM Workspace. Therefore, to provide a larger content area to display a URL in a frame, turn these elements off by appending `&layout=embedded` to the URL.

➤ To collect, save, and test URLs for Web Analysis Studio:

1 **Log on to EPM Workspace, and navigate to the Web Analysis Studio document to be displayed.**

2 **In a Web browser, note the server and port, and the file path.**

3 **Open another Web browser, and enter a URL as** `http://server:port`**.**

For example, enter `http://folsom:19000`.

4 **Append this string to instruct Web Analysis Studio to load the document:**

`/WebAnalysis/servlet/HTMLViewer?action=login&postlogin=loadReport`

5 **Append the location of the Web Analysis Studio document** `&report=file path`**.**

For example, append `&report=/DavidW/Chart`.

6. **To test the URL on the desktop, in EPM Workspace, provide a user name and password by appending `&userid=user_name&password=password`.**

   Appending the string enables EPM Workspace to display content without prompting for a user name and password.

7. **If the document contains modifiable dimensions, append the dimensions to the URL in the form:**

   ```
   &attribute=Dimension.id.SampleValue
   ```

   For example, if the document contains two modifiable dimensions, year and market, append this text to the URL:

   ```
   &attribute=Year.id.Qtr1&attribute=Market.id.New+York
   ```

8. **Provide screen dimensions for the Web Analysis Studio document by appending this string:**

   ```
   &reportWidth=NumberOfPixels&reportHeight=NumberOfPixels
   ```

   For example, append `&reportWidth=400&reportHeight=300`.

   By default, the view pane and menu bar are enabled in a POV embedded browser. Therefore, to provide a larger content area to display a URL in a frame, turn off these elements by appending `&templatePath=hitemplates&hideSubToolbar=true` to the URL.

9. **Press Enter in the Web browser to launch the URL.**

   The URL is displayed; for example, as:

   ```
   http://folsom:19000/WebAnalysis/servlet/HTMLViewer?
   action=login&postlogin=loadReport&report=/DavidW/
   Chart&userid=ld_admin&password=quality&attribute=Year.id.Jul&attribute=Mark
   et.id.New
   +York&reportWidth=400&reportHeight=300&templatePath=hitemplates&hideSubTool
   bar=true
   ```

10. **Copy and paste the URL into a text file, and save the file.**

Naming and Configuring URLs for Dashboards

The three configuration frames that are associated with the POV component, are discussed in these topics.

1. Use Manage URL Library to import or enter the URLs gathered in the Collecting POV URLs procedure.
2. Use Set URL Properties to configure the properties of each URL; for example, the size of the view.
3. Use Map URL Attributes to associate filters within a dashboard with the hierarchy members of each URL.

Using Manage URL Library

The Manage URL Library frame enables you to load a set of URLs and specify the URLs to be displayed in POV embedded browsers.

The fastest way to load URLs is to import a text file that contains URLs, although you can manually enter URLs into the list. These URLs must be assigned names so they are associated with embedded browsers in the dashboards. The URLs must be fully-featured before being imported. That is, the URLs must contain the properties in Table 10.

Table 10 Essential URL Properties and Explanations

URL Parameter	Explanation
Web Analysis Studio URLs	

userid=username
password=password
	Log on details

attribute=Dimension.id.Value	Append to the URL for every modifiable dimension in the Web Analysis Studio document

reportWidth=number
reportHeight=number
	Size of the Web Analysis Studio document

templatePath=hitemplates
hideSubToolbar=true
	Maximize the content area (optional)

Reporting Studio URLs	

sso_username=username
sso_password=password
	Log on details

attribute=Dimension.id.Value	Append to the URL for every modifiable dimension in the Reporting Studio document
layout=embedded	Maximize the content area (use full to display the masthead and the view pane)

Note:

Omitted essential properties are not editable in the POV configuration frames.

URLs must be valid. URL property values must not contain these special characters:

```
<space> ? & =
```

Replace special characters with escaped characters, as presented in Table 11.

Table 11 Special Characters and Replacement Values

Special Character	Replacement
<space>	+
?	%3F
&	%26
=	%3D

For example, the URL:

```
attribute=Industry.key.[Industry].[1. Mining & Construction].[10. Metal
mining]
```

is replaced with:

```
attribute=Industry.key.[Industry].[1.+Mining+%26+Construction].[10.+Metal
+mining]
```

Each attribute must contain a valid separator. You must use the separator "`id`" for Reporting Studio and Web Analysis Studio; for example:

```
Dimension.id.Value
```

➤ To import a text file with URL values:

1. In Interactive Reporting Studio, navigate to **Manage URL Library**.
2. Perform an action:
   - In File with URL values, enter the file path
   - Click Browse and navigate to the file (Browse is available only if the common file dialog box is accessible and can be called from within Interactive Reporting Studio)
3. Click **Import URLs**,

   The operation clears all other entries from the list.

➤ To manually add a URL:

1. Enter the URL.
2. Click **Add URL**.

   The action appends entries to the list.

   Imported or entered URLs are displayed in Select a URL.

➤ To name and store a URL:

1. Select a URL, and enter the **URL Name**.

   The URL name is used to identify the URL displayed in the embedded browser, and as the name forms part of the embedded browser name, spaces must be replaced with underscores (_). The name must be unique.

2. Click to store the URL.

   The name is displayed in Available URLs, and an application type is assigned to the URL.

3. If the wrong application is assigned, from the drop-down list, select the correct type.
4. Name the other URLs to be displayed in the embedded browsers.
5. Click **Apply**.

   Use Set URL Properties and Map URL Attributes to configure the POV URLs.

➤ To delete a POV URL:

1. **From Available URLs, select the URL to be deleted.**
2. **Optional: Select a URL Type.**
3. **Click .**
4. **Click Apply.**

   To export configured URLs with assigned names, click Export URLs to export the list to a text file. These URLs are available to be imported into other dashboards.

Using Set URL Properties

URLs imported into the POV component are usually long and complex. The Set URL Properties frame divides URLs into manageable chunks, and enables you to edit the URL properties. Only URLs with names assigned in Manage URL Library are available in this procedure.

➤ To configure the URL properties:

1. **In Interactive Reporting Studio, navigate to Set URL Properties.**
2. **From Available URLs, select a URL name.**

   URL properties are displayed.

   - EPM Workspace Server Path—Application module (for example, Reporting Studio or Web Analysis Studio) to which the EPM Workspace server redirects the URL (If the URL does not require redirection, the default is `<Automatic>`)
   - Application Path—Application module
   - URL User Id—User name
   - URL Password—Password

     The user name and password are used to log on to the application module when the Interactive Reporting document is run; for example, in Interactive Reporting Studio. However, when the Interactive Reporting document is imported into EPM Workspace, the POV component uses EPM Workspace credentials to log on.

   - Other URL Properties—Other modifiable properties (Depending on the application type, properties for modification are; for example, the width and height of displayed content, the color scheme, and whether to hide or show toolbars. The number of editable properties is dependent on the total properties present in the imported URL. See Table 10 for essential properties)
   - Instance—Individual values to use if the selected URL property contains multiple values
   - URL Instance Property Value—The value of the selected URL property

3. **Optional: Edit the properties.**
4. **Click Apply.**

Using Map URL Attributes

The Map URL Attributes frame enables you to associate a local filter with each attribute member in a POV URL. The association determines whether a POV URL should be updated when a filter is set in the dashboard.

Before using Map URL Attributes, ensure that data values are shared by dashboard filters, and dimensions in Reporting Studio and Web Analysis Studio.

To automatically refresh a POV embedded browser when a filter is set, select Automatically refresh when Filters are set. Or provide a means to manually refresh items; for example, configure ⟳ on the frame. See "Configuring the Refresh Button" on page 131.

➤ To associate filters with a URL attribute:

1 **In Interactive Reporting Studio, navigate to Map URL Attributes.**

2 **From Available URLs, select a URL.**

URL Attributes are displayed. Local filters are displayed in Available Filters.

3 **Select an item in URL Attributes.**

URL Attribute Members are displayed. The number of attributes is dependent on the attributes present in the imported URL. See Table 10 for essential properties.

4 **Move selected filters between Available Filters and Associated Filters by clicking › and ‹.**

5 **Optional: Reorder multiple members to specify a hierarchy of filter values, by selecting a filter and clicking ⌃ or ⌄.**

The hierarchy order must correspond to the order of the attribute members in the list. If the selected filter is set, each member value is replaced by the corresponding selected filter value (if the value exists in the application database).

6 **Configure other attribute members to be associated with filters.**

7 **Click Apply.**

Creating Embedded Browsers

Point of View objects are displayed on the frames through embedded browsers.

➤ To create a POV embedded browser:

1 **In Interactive Reporting Studio, navigate to a frame that is to contain the POV objects.**

2 **Press Ctrl+D to enter Design mode.**

3 **From the catalog pane, expand Controls, and drag an embedded browser object onto the frame.**

4 **Double-click the browser object.**

Properties is displayed.

5 **Enter the object name as** `<url_name>^Hysl_pov`**.**

For example, for a URL named *Metrics_Clip*, enter `Metrics_Clip^Hysl_pov`.

6 **Click OK.**

7 **Press Ctrl+D to exit Design mode.**

8 **Navigate to another frame and return to refresh the embedded browser.**

9 **Optional: To apply filters and observe embedded browsers updating on the frame, add Quick Filters. See "Configuring Quick Filters" in the** ***Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.***

For example, use the Tree component to select hierarchical values that are used in Reporting Studio and Web Analysis Studio. Consider using the Tree component to navigate and apply the filters. See"Using Tree Views in the Tree Limits Component Runtime Sample" on page 159 and "Configuring the Tree Component" on page 160.

Obtain the tree hierarchy source by creating an OLAP query to Oracle Essbase for Oracle Hyperion Financial Reporting Studio, Fusion Edition and Oracle's Hyperion® Web Analysis Studio.

Accessing Multiple Point of View Embedded Browsers with Option Buttons

Dashboard developers who want to place related documents on one dashboard frame, to enable users to view related information within one context, and without moving from frame to frame, can use option buttons.

A single Point of View embedded browser can occupy more than half the screen, so placing multiple POV objects on one frame can be difficult. The Point of View component enables you to share one embedded browser between multiple POV objects. Users select an option button to switch between POV views.

Adding Option Buttons

The POV component enables you to use option buttons to switch between embedded browsers, and reduce the amount of space used.

Before adding option buttons, create a shared embedded browser.

➤ To create a shared POV embedded browser:

1 **In Interactive Reporting Studio, navigate to a frame that is to contain multiple POV objects.**

2 **Press Ctrl+D to enter Design mode.**

3 **From the catalog pane, expand Controls, and drag an embedded browser object onto the frame.**

4 **Double-click the browser object.**

Properties is displayed.

5 **Enter `all^Hysl_pov` as the object name.**

6 **Click OK.**

7 **Press Ctrl+D to exit Design mode.**

8 **Navigate to another frame and return to refresh the embedded browser.**

Note:

Information in earlier releases regarding adding option buttons is still applicable; however, it is not as efficient as the latest information provided in this documentation.

➤ To add option buttons:

1 **In Interactive Reporting Studio, open a dashboard frame containing POV embedded browsers.**

2 **Press Ctrl+D to enter Design mode.**

3 **From the catalog pane, expand Controls, and drag an option button onto the frame.**

4 **Double-click the option button.**

Properties is displayed.

5 **Enter `<`*`url_name`*`>^Hysl_pov^rbt` as the object name.**

For example, for a URL named *Metrics_Clip*, enter `Metrics_Clip^Hysl_pov^rbt`.

6 **Click OK.**

7 **Select the option button, right-click, and select Scripts.**

Scripts Editor is displayed.

8 **In Scripts Editor, perform an action:**

- Enter this line of code

```
ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
(this.Parent,this)
```

- Copy and paste the line of code from another button on the toolbar to avoid data entry errors

9 **Click OK.**

10 **Repeat steps 3–9 for every option button to be added.**

11 **Press Ctrl+D to exit Design mode.**

Creating Multiple Shared Embedded Browsers

Users with large screen sizes can place multiple shared POV embedded browsers on a frame. Each shared browser is individually controlled by a set of option buttons.

➤ To create multiple shared embedded browsers:

1 **In Interactive Reporting Studio, navigate to a frame that is to contain the POV objects.**

2. **Press Ctrl+D to enter Design mode.**
3. **From the catalog pane, expand Controls, and drag an embedded browser object onto the frame.**
4. **Double-click the browser object.**

   Properties is displayed.
5. **Enter `all2^Hysl_pov` as the object name.**

   The object name numbers must be sequential. For example, enter `all3^Hysl_pov`, `all4^Hysl_pov`, and so on.
6. **To assign an option button to a shared browser, use the Adding Option Buttons procedural steps, and name it *<url_name>*`^Hysl_pov^rbt^`*<browser_id>*.**

   For example, to assign an option button with a Metrics_Clip URL to the shared browser `all2^Hysl_pov`, name the option button *Metrics_Clip^Hysl_pov^rbt^all2*.

   If a `browser_id` is not specified, the option button points to the default shared browser, `all^Hysl_pov`.
7. **Select the option button, right-click, and select Scripts.**

   Scripts Editor is displayed.
8. **In Scripts Editor, perform an action:**
   - Enter this line of code

     ```
     ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
     (this.Parent,this)
     ```
   - Copy and paste the line of code from another button on the toolbar to avoid data entry errors
9. **Click OK.**
10. **Press Ctrl+D to exit Design mode.**

Configuring the Refresh Button

To manually refresh a POV item when a filter is set, configure ⟳ on the frame.

➤ To add and configure ⟳ (Refresh):

1. **In Interactive Reporting Studio, open a dashboard that contains POV embedded browsers.**
2. **Select the frame on which to add the button, and press Ctrl+D to enter Design mode.**
3. **From the catalog pane, expand Graphics, and drag a picture object onto the frame.**
4. **Navigate to `refresh.bmp` in the POV component directory.**
5. **Position the button on the dashboard toolbar.**
6. **Double-click the button.**

   Properties is displayed.

7. Enter `picRefresh^Hysl_pov` as the object name.
8. Click **OK**.
9. Select ⟳, right-click, and select **Scripts**.

   Scripts Editor is displayed.
10. In **Scripts Editor**, perform an action:
    - Enter this line of code

      ```
      ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
      (this.Parent,this)
      ```
    - Copy and paste the line of code from another button on the toolbar to avoid data entry errors
11. Click **OK**.
12. Press **Ctrl+D** to exit Design mode.
13. Set filters on the frame, and click ⟳.

    The POV embedded browsers refresh to reflect the set filters.

Import Interactive Reporting Documents into EPM Workspace

To import an Interactive Reporting document into EPM Workspace use the standard import procedure. The imported Interactive Reporting document contains the POV component functionality.

When the POV component is run in EPM Workspace, the EPM Workspace log on authentication is required.

See "Import Server Names Must Match" on page 132, for troubleshooting when importing Interactive Reporting documents into EPM Workspace.

Import Server Names Must Match

If a POV embedded browser displays an error message, ensure that the server names of the URL used to log on to EPM Workspace and the URL imported into the POV component match.

For example, if the Web browser displays the log on URL for EPM Workspace as:

`http://`**`folsom`**`:19000/workspace/index.jsp`

And the imported URL is displayed as:

`http://`**`folsom.hyperion.com`**`:19000/metrics/viewer/clip?`

A mismatch in the server names of the URLs is apparent. To rectify the mismatch, change one of the URLs so that the names are identical.

19 Dashboard Studio Query Limits Component

In This Chapter

Query Limits Component

The Query Limits component manages the gathering of limits and the processing of queries. It enables you to process the dashboard without having to deal with variable limits individually in sections.

After the component is merged, it can be used to:

- Configure component properties at design time (See "Configuring the Query Limits Component" on page 135)
- Gather limit values and execute queries in the dashboard at runtime (See "Using a Runtime Release of the Query Limits Component" on page 134)

The Query Limits component conceals the complexity of having to provide identical answers multiple times to different limits. For example, a dashboard can contain separate structures (or databases) for costs and sales information, or it may require multiple appended queries to produce a consolidated revenue report from various types of revenue-oriented transactions.

Typically the time period of interest is identical in all query structures.

Specifying the time frame for a query only *once*, is a practical and time saving feature. Having the dashboard developer configure a mechanism to apply an identical time frame to the remaining limits, saves you having to repeat the answer for each limit.

The related-limits mechanism relies on two requirements:

- similar data type
- common name prefix

Two variable limits share a name prefix, if they fall in one of these categories:

- identical names
- names contain two periods (..) with identical information on the left of the two periods

Table 12 Query Limits Name Prefix Examples

Data Model	Regular Query 1	Regular Query 2	Appended 1	Appended 2	Comment
Quarter	Quarter	Quarter			
Quarter	Quarter	Quarter	Quarter	Quarter	See Note 1
Quarter	Quarter	Quarter	Quarter	Quarter..2	See Note 2
Acct No	Acct No	Acct No	Acct No	Acct No	See Note 1
Acct No	Acct No	Acct No	Acct No	Acct No..2	See Note 2

Note 1. The scheme does not work, as attempts to manage limits with common names in appended queries have no effect.

Note 2. The scheme is the workaround to the problem described in Note 1.

For example, selecting quarter at runtime displays a list of quarters to choose from. Clicking OK applies the selected value to the five locations shown in the table, subject to Note 1 and Note 2.

Using a Runtime Release of the Query Limits Component

This procedure applies only to a runtime release of the Query Limits component. The Query Limits frame that is displayed in a runtime release differs from the ESM release. For information on configuring an ESM release, see "Configuring the Query Limits Component" on page 135.

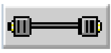
Note:

If the dashboard developer configured the No Login Required option, Available Queries is not visible.

➤ To use the Query Limits component:

1 **In Interactive Reporting Studio, open a dashboard that is configured with the Query Limits component.**

2 **From Sections, select Query Limits.**

3 **From Available Queries, select one or more queries, and click** **.**

Log on is activated to connect to the data source.

4 **Enter the query user name and password, and click OK.**

A successful connection is indicated by []======[].

If the dashboard is viewed in EPM Workspace, some connected queries may be displayed as disconnected. See "Connected Queries Displayed as Disconnected" on page 137.

5 **From Required Limits, select a limit.**

If the dashboard is viewed in EPM Workspace, click Set (next to Required Limits) after selecting a limit and before limit values are set.

The Filter dialog box is displayed.

If the dashboard is viewed in EPM Workspace, Filter Control EIS is displayed instead of Filter.

6. **From Filter, select limit values, and click OK.**

   If the dashboard is viewed in EPM Workspace, click Set Limit.

   The selected values are displayed in Active limit values and are available in the dashboard.

7. **Repeat steps 5–7 to configure all Required Limits.**

8. **Set values for Optional Limits.**

9. **Click to process the available queries.**

   The query is processed and the Home frame is displayed.

   A query cannot be processed by clicking Process on the Interactive Reporting Studio toolbar.

Configuring the Query Limits Component

To configure the Query Limits component:

1. Merge the component. See “Merging Components” on page 10.
2. Configure (Query Limits).
3. Configure Required and Optional Limits.
4. Set Query Limits as the Startup frame.

This topic describes the process of configuring a Query Limits frame using an editable source master (ESM) document. These procedures assume that the dashboard contains variable limits.

These controls are available only in an ESM dashboard.

- Test—Initiates Query Limits to be displayed in a runtime dashboard
- (Find Queries)
- v and ^ between Required Limits and Optional Limits lists

Before you can configure Query Limits, add and configure . After the component is configured, the button enables you to activate the Query Limit frame from other frames.

Adding and Configuring the Query Limits Button

➤ To add and configure (Query Limits):

1. **In Interactive Reporting Studio, open a dashboard that contains the Query Limits component.**

2 **Select the frame on which to add the button, and press Ctrl+D to enter Design mode.**

3 **From the catalog pane, expand Graphics, and drag a picture object onto the frame.**

4 **Navigate to** `QueryLimits.bmp` **in the Query Limits component directory.**

5 **Position the button on the dashboard toolbar.**

6 **Double-click the button.**

Properties is displayed.

7 **Enter** `picQL^Qiq_queryLimits` **as the object name, and click OK.**

8 **Select the button, right-click, and select Scripts.**

Scripts Editor is displayed.

9 **In Scripts Editor, perform an action:**

- Enter this line of code

  ```
  ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
  (this.Parent,this)
  ```

- Copy and paste the line of code from another button on the toolbar to avoid data entry errors

10 **Click OK.**

11 **Optional: Add, configure, and name the corresponding gray button for the not selectable state.**

12 **Press Ctrl+D to exit Design mode.**

Proceed with configuring Query Limits.

Configuring the Query Limits Frame

➤ To configure a Query Limits frame:

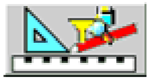
1 **Use the Interactive Reporting document from the Adding and Configuring the Query Limits Button procedure.**

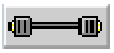
2 **From Sections, select Query Limits.**

If the dashboard developer configured No Login Required, Available Queries is not visible.

3 **If Available Queries, is not displayed, clear No Login Required.**

Available Queries is displayed.

4 **If no variable limits are present in Available Queries, click**  **to locate queries.**

5 **Select the disconnected queries ([]===X===[]), and click**  **to connect.**

Log on is activated to connect to the data source.

6 **Enter the user name and password, and click OK.**

A successful connection is indicated by []======[].

7. **Optional:** Reorder **Available Queries** by selecting a query and clicking ↑ or ↓.
8. Configure the variable limits as required or optional:
   - Required Limits values must be specified before the query is processed (By default, variable limits are displayed in Required Limits)
   - During processing, limit values may or may not be supplied for Optional Limits
9. **Optional:** Move limits between **Required Limits** and **Optional Limits** by clicking V and Λ.
10. **Optional:** Reorder **Required Limits** or **Optional Limits** by selecting a limit and clicking ↑ or ↓.

Setting Query Limits as the Startup Section

To ensure that end users process the variable limits before using the dashboard, Query Limits must be set as the Startup section or Home frame. After the variable limits are processed, the dashboard moves to the specified Home frame, and Query Limits is accessed, by clicking ?.

➤ To set Query Limits as the Startup section:

1. Connect the dashboard that contains **Query Limits** to Dashboard Studio, and move to **Step 7: Configure Properties.**
2. From **Startup Section**, select **Query Limits**, and click ✓ to apply the selection.
3. Click > to move to the final Dashboard Studio step, or click **Finish.**
4. In Interactive Reporting Studio, select **Home.**

   Query Limits is displayed.

Connected Queries Displayed as Disconnected

An Interactive Reporting document that opens to Query Limits in EPM Workspace, attempts to connect all queries to the data source, using the Query Limits component.

The component is able to connect queries where a log on and password were previously specified, or if no log on is required. However, there is no reliable way of knowing if a query is connected in EPM Workspace; therefore, a connected query may be displayed as disconnected when Available Queries is refreshed. To connect a query, select the disconnected queries in Available Queries, click 🔌, and click OK at Log on without specifying your user name or password.

20 Dashboard Studio Quick Query Limits Component

In This Chapter

Quick Query Limits Component

The Quick Query Limits component manages the selection and display of limits and the processing of queries in a similar way to the Query Limits component. Limit selections are set by selecting values from check boxes, drop-down lists, option buttons, list boxes, calendar controls, or tree controls configured by the dashboard developer.

The component also includes a Favorites option which captures and stores the currently selected limits. End users select a favorite to reapply those values. See "Using the Favorites Option" on page 143.

Using Query Panel within a Runtime Release of the Quick Query Limits Component

A query limit is one or more limits that share a name in one or more queries; therefore, selections are applied to all instances of a limit. For example, in an expense and revenue dashboard the user selects the month only once and it is applied to the expense and revenue queries if both contain an equivalent month limit.

Query Panel enables users to select from query limit controls configured by the dashboard developer. Query limit controls are one or more controls that are responsible for helping the user select values to be applied to an individual limit.

Individual query limit values are set by using one or more of these controls:

- check boxes
- option buttons
- list boxes
- drop-down lists

- tree controls
- calendar controls

The controls available in Query Panel vary depending on the dashboard developer configuration, and whether the dashboard is a runtime or an editable source master (ESM). For example, and are not available in runtime dashboards. Query Panel includes other buttons on the top panel. See "Toolbar Buttons" on page 14.

Applying Quick Query Limits

This procedure describes applying quick query limits only in a runtime dashboard.

➤ To apply and save quick query limits:

1 **In Interactive Reporting Studio, open a dashboard that is configured with the Quick Query Limits component.**

HYSL Query Login is displayed if connection to a database is required. If a connection is not required, the dashboard opens to Query Panel, if this is configured as the Startup section. See "Setting Query Panel as the Startup Section" on page 154.

2 **In HYSL Query Login, enter log on details, and click OK.**

If `Quickquerylimits_sample_esm.bqy` is used, click OK, without entering log on details.

Query Panel is displayed.

3 **Select the query limit values by using the dashboard developer configured controls.**

Several buttons can be associated with a control to make it easier to select, add, or clear values. See "Control Buttons and Guidelines" on page 141.

4 **Click to apply the selected values.**

Selected values are displayed in Currently Selected Query Limits.

5 **Optional: Save a set of query limit values by clicking .**

See "Using the Favorites Option" on page 143.

6 **Click to process the queries.**

If Allow Custom Process is enabled, a drop-down list is displayed. Process all queries or one query. If only one query is available or if custom processing is not set, all available queries are processed when is clicked.

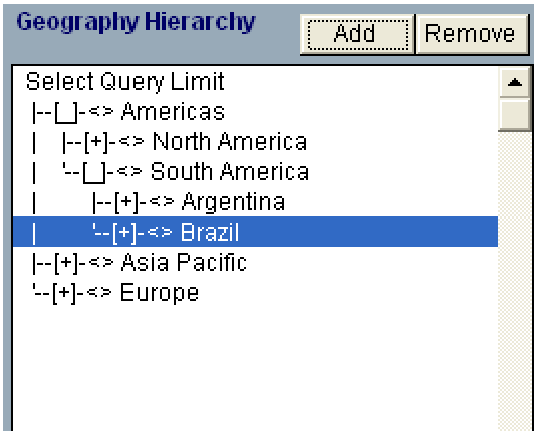
If the dashboard designer allowed multi-selection for query processing, a list box is displayed. Select one or more queries to process and click .

To get rid of the list box without processing, click any area in the list box below the query values to deselect all values and click .

Control Buttons and Guidelines

The dashboard developer can configure command buttons to be associated with certain query limit controls.

a. Add and Remove buttons for tree controls



```
Select Query Limit
|--[_]-<> Americas
|   |--[+]-<> North America
|   '--[_]-<> South America
|       |--[+]-<> Argentina
|       '--[+]-<> Brazil
|--[+]-<> Asia Pacific
'--[+]-<> Europe
```

Add—Applies the current selection as query limit values. The entire hierarchy is applied. For example, clicking Add includes Region = Americas, Territory = South Americas, and Country = Brazil to the list of currently selected query limits. Selecting another value from the tree and clicking Add appends the selection to the list instead of replacing previous values.

Remove—Clears the highlighted value in the tree. For example, clicking Remove, removes only Country = Brazil from the list of selected query limits.

b. List box buttons

List boxes come with a variety of buttons.

Add—Adds custom values to the list box. Custom values are entered in a text box that is configured to point to the query limit.

All—Selects all available values in the list box.

Clear—Removes all selected values in the list box and clears previously applied values. This button sets the limit Ignore property to *true*.

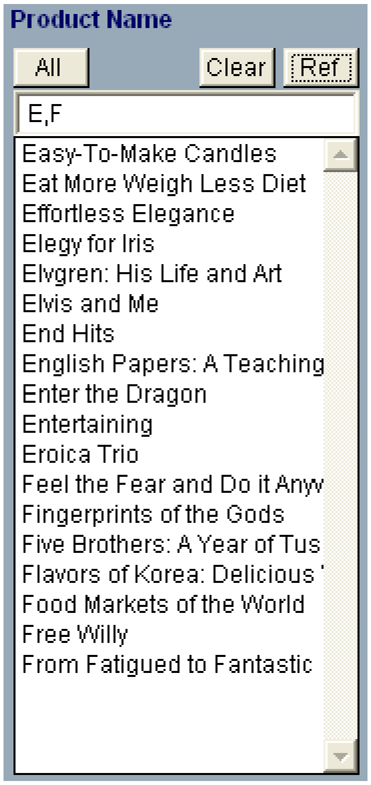
Ref —Updates the values in a list box based on selections. For example, if Country = U.S.A. is selected, clicking Ref in the City list displays only cities in the U.S.A.

A group of limits that use the data model properties of available queries can be configured by the dashboard developer. Typically, limits that share a database table are in a matching group.

For example, if Product Line = Videos is selected, clicking Ref associated with Product Family displays values that are categorized under the Videos line. Clicking Ref associated with Product Category updates the list based on selections made in Product Line and Product Family.

Ref can also be used to scroll through values in the list box, in which case a text box must be configured to point to a query limit. For example, if the Product Name list box is configured to show only 20 values at a time. Clicking Ref, with (+) entered in the associated text box, displays the next 20 values in the list. The dashboard developer configures the number of values to display in a list at a given time.

Ref is used to update values based on a search criteria. For example, entering `E,F` in the text box and clicking Ref, returns products starting with E and F. This list is case-sensitive, and spaces should not be added after commas.

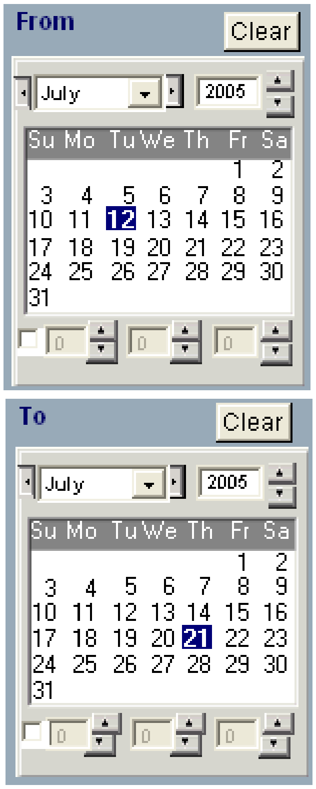


E,F

Easy-To-Make Candles
Eat More Weigh Less Diet
Effortless Elegance
Elegy for Iris
Elvgren: His Life and Art
Elvis and Me
End Hits
English Papers: A Teaching
Enter the Dragon
Entertaining
Eroica Trio
Feel the Fear and Do it Anyv
Fingerprints of the Gods
Five Brothers: A Year of Tus
Flavors of Korea: Delicious '
Food Markets of the World
Free Willy
From Fatigued to Fantastic

Rem —Removes values from the list box.

c. Calendar control and button



If, for example, two calendars are configured on Query Panel, selecting a value in the *From* and *To* calendars returns all values between the selected dates. The dates are displayed in Currently Selected Query Limits.

The calendar contains a Clear button, which removes selected dates from the Currently Selected Query Limits list.

For more detailed information on calendars, see "Adding and Configuring Calendars" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Using the Favorites Option

Query Panel includes a Favorites option, which saves limit values sets and stores them in the Interactive Reporting document. To reapply values, select a favorite.

➤ To save limit values sets as favorites:

1 **Click .**

A drop-down list of controls is displayed.

2 **Select Add Favorites.**

The limit values selected are saved as *Favorites 1*, *Favorites 2*, *Favorites 3*, and so on.

Editing Favorites

The Quick Query Limits component includes an Edit Favorites frame, which enables you to rename, remove, or change the order of favorites.

➤ To edit favorites:

1 **Click .**

A drop-down list of controls is displayed.

2 **Select Edit Favorites.**

Edit Favorites is displayed.

Several options are available within the Edit Favorites frame:

a. Rename a favorite.

i. From **Available Favorites**, select an item, and enter a **Favorite Name**.

ii. Click to rename the favorite.

If another favorite is selected from the list, Favorite Name is not updated. To display the name of the selected favorite in Favorite Name, click . The entry in Favorite Name takes precedence over the selected Available Favorites.

b. Reorder the favorites list.

From Available Favorites, select an item, and click ⌃ or ⌄.

c. Delete a favorite from the list.

From Available Favorites, select an item, and click .

Configuring the Quick Query Limits Component

To configure the Quick Query Limits component:

1. Merge the component. See "Merging Components" on page 10.
2. Configure (Query Panel).
3. Add the query sections and the limits required in those sections.
4. Identify queries to process using HYSL Queries and Datamodels.
5. Configure Quick Query Limit controls with the Query Panel prototype frame.
6. Configure other controls.
7. Configure query limit properties using Quick Query Limit Properties.
8. **Optional:** Configure the required query limits using Required Query Limits Properties.

9. Set Query Panel as the Startup frame.

This topic describes the process of configuring a dashboard using the Quick Query Limits component.

Before you can configure the Quick Query Limits component, add and configure . After the component is configured, the button enables you to activate the Query Panel from another frame.

Note:

Dashboards developed with the Quick Query Limits component Release 11.1.1 or later, contain `lbxQueryLog` and `lbxQueries` by default on the Query Panel. Dashboards developed with an earlier release of the Quick Query Limits component require an update using the Dashboard Development Services Update Utility to provide these two list boxes on the Query Panel prototype frame. For these lists to function on existing Query Panel frames, users must add one or both to the frames. Otherwise the lists can be deleted.

Adding and Configuring the Query Panel Button

Add and configure the button to enable activation of the Query Panel from another frame.

➤ To add and configure (Query Panel):

1. **In Interactive Reporting Studio, open a dashboard that contains the Quick Query Limits component.**
2. **Select the frame on which to add the button, and press Ctrl+D to enter Design mode.**
3. **From the catalog pane, expand Graphics, and drag a picture object onto the frame.**
4. **Navigate to `QueryPanel.bmp` in the Quick Query Limits component directory.**
5. **Position the button on the dashboard toolbar.**
6. **Double-click the button.**

   Properties is displayed.
7. **Enter `picGo^Hysl_qql` as the object name, and click OK.**
8. **Select the button, right-click, and select Scripts.**

   Scripts Editor is displayed.
9. **In Scripts Editor, perform an action:**
   - Enter this line of code

     ```
     ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
     (this.Parent,this)
     ```
   - Copy and paste the line of code from another button on the toolbar to avoid data entry errors
10. **Click OK.**

11. **Optional:** Add, configure, and name the corresponding gray buttons for the not selectable state.
12. Press **Ctrl+D** to exit Design mode.

    Proceed with configuring Quick Query Limits, by determining the queries to be processed.

Identifying Queries to Process

Before configuring the Quick Query Limit controls, query sections that contain the query limits to be displayed in Query Panel, must be available for processing.

➤ To identify queries for processing:

1. In Interactive Reporting Studio, open a dashboard that contains the Quick Query Limits component.
2. Navigate to **HYSL Queries and Datamodels.**
3. **Optional:** To prevent locking a user out of a database, clear **Stop logging in on first connection error** on the HYSL Queries and Datamodels frame to force the dashboard to connect to the remaining queries even if it encounters an error.

   Locking occurs when a user logs into multiple queries using the HYSL Query Login frame, and an error is encountered on one query. If the queries use the same database, and the database has a connection attempt limit, the user can be locked out.
4. Move query sections between **Available Sections** and **Sections to Process** by clicking > and <.
5. Repeat step 3 for each query section to be processed.
6. **Optional:** You can leave queries in **Available Sections** that are not processed.

   Queries remaining in Available Sections are used to cache values that are displayed in tree limits, lists or, drop-down lists that obtain values from a cached result section. These sections are refreshed by running the dashboard regularly in the scheduler. When running in the scheduler only the queries in Available Sections are refreshed.
7. **Optional:** Reorder **Sections to Process** by selecting a section and clicking ⬆ or ⬇.
8. Click **Apply.**
9. Move to **Query Panel.**

   If one or more selected queries require a database connection, HYSL Query Login is displayed.
10. If **HYSL Query Login** is displayed, enter log on details, and click **OK.**

    Query Panel is displayed.

Note:

If HYSL Query Login fails to connect to a query on the Oracle's Hyperion® Interactive Reporting Web Client or in EPM Workspace, an explanatory dialog box is displayed that contains the database connection error.

Configuring Quick Query Limit Controls

Query Panel contains sample Quick Query Limit controls that can be configured to represent query limit values. The frame is created from the Query Panel frame prototype when the template is converted into an editable source master (ESM).

Configuring Quick Query Limit controls is similar to configuring Quick Filters. See "Configuring Quick Filters" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio*.

Copy and paste as many instances of a control as required. A control must point to an existing query limit or one that is created before the completion of the configuration task. All sample control names begin with `User_Limit`, which is replaced with the name of the query limit to be associated with the current control. Similarly, the names of buttons and text boxes that may supplement a control are replaced.

Spaces in query limit names must be replaced with underscores (_). As appended queries and queries that share a data model cannot use a limit twice, limits with numeric suffixes are treated as one limit.

A query limit is configured only once in Query Panel. For example, if a list box is configured to show quarter values, a check box cannot be configured to also represent quarter values. The second query limit occurrence is ignored.

➤ To configure Quick Query Limit controls:

1. **In Interactive Reporting Studio, open a dashboard that contains the Quick Query Limits component.**
2. **Press Ctrl+D to enter Design mode.**
3. **Configure the controls.**

   See "Configuring Other Controls" on page 147.
4. **Click the control group background, and change the label to display the configured query limit name.**
5. **Press Ctrl+D to exit Design mode.**
6. **Click ⟳ to update the values.**

   Values that were specified when creating the query limit are displayed in Currently Selected Query Limits.

Configuring Other Controls

Other controls are check boxes, list boxes, option buttons, drop-down lists, calendar controls (apply limits that contain a date or timestamp data type), and tree controls. These procedures examine configuring the controls individually. To configure the controls, ensure that Design mode (Ctrl+D) is activated.

➤ To configure check box controls:

1. **Select a sample query limit check box, right-click, and select Properties.**

Properties is displayed.

2 In **Name**, replace *`User_Limit`* with the name of the query limit to be set.

For example, to associate the limit called *Quarter*, replace *`User_Limit`*`^Hysl_qql^cbx^1` with `Quarter^Hysl_qql^cbx^1`.

3 In **Title**, enter the associated query limit value.

For example, enter `Q1`.

4 Click **OK**.

5 Copy and paste as many instances as required, and configure each instance.

➤ To configure option button controls:

1 A choice of two option buttons can be configured. Perform an action:

- Select **All**

a. Right-click **All**, and select **Properties**.

Properties is displayed.

b. In **Name**, replace *`User_Limit`* with the name of the query limit to be set.

For example, to associate the limit called *Order Date*, replace *`User_Limit`*`^Hysl_qql^rbt^all` with `Order_Date^Hysl_qql^rbt^all`.

c. Enter a **Title**.

d. Click **OK**.

- Select a sample option

a. Right-click the sample, and select **Properties**.

Properties is displayed.

b. In **Name**, replace *`User_Limit`* with the name of the query limit to be set.

c. Replace *`csql_1`* with text that identifies the option on the configuration frame.

For example, `Order_Date^Hysl_qql^rbt^even_months`.

d. Enter a **Title**.

e. Click **OK**.

2 Copy and paste as many instances as required, and configure each instance.

Option buttons operate in groups. Only one option in a group is selected at a time. If multiple groups of option buttons exist, assign a unique name for each group.

3 Click ⟲, and move to **Quick Query Limit Properties**.

4 From **Unconfigured Option Buttons**, select an option.

5 In **Custom SQL**, perform an action.

An example of custom SQL statement is "periods_days.month_number >=1 AND periods_days.month_number <=4".

a. Enter the **Custom SQL** to be associated with the selected option.

b. Retrieve the table.column definition:

   i. Navigate to the query.

   ii. Double-click the limit column in the table.

   Filters is displayed.

   iii. Click **Custom SQL**.

   iv. Copy the table.column definition.

   v. Return to the Quick Query Limit Properties frame, and paste the SQL into **Custom SQL**.

6. Move selected options between **Unconfigured Options Buttons** and **Option Buttons with Custom SQL** by clicking > and <.

7. If All was not selected, configure the Custom SQL for the other option buttons.

   It is not necessary to specify the Custom SQL for All.

8. Click **Apply**.

9. Move to **Query Panel**, and click ⟳.

➤ To configure list box controls:

1. Select a sample query limit list box, right-click, and select **Properties**.

2. In **Name**, replace *`User_Limit`* with the name of the query limit to be set.

   For example, to associate the limit called *Quarter*, replace *`User_Limit`*`^Hysl_qql^lbx^1` with `Quarter^Hysl_qql^lbx^1`.

3. **Optional.** Change the order in which Dashboard Studio loads query limits. (The default is to load query limits in ascending order.)

   To configure a list to load values in descending order, add `^d` as the fourth part of the object name (for example,. `Region^Hysl_qql^lbx^d^2`).

   To configure a list to load values without sorting, add `^n` as the fourth part of the object name (for example, `Region^Hysl_qql^lbx^n^2`).

   Note that `^n` is only recommended when the source for limit values is set to be a cached results or table section. This option is not recommended where lists are populated from more than one value source.

4. Click **OK**.

   Each list box can have associated buttons and a text box.

   The available buttons determine the level of control exercised by the end user. These are guidelines:

   - If users select values from the list and nothing else, all sample buttons and text boxes can be deleted

- If users select or clear all values, All and Clear must be configured, and the remaining buttons must be deleted
- If users add custom values to the list, the text box and Add and Remove, must be configured
- If users refresh the list of available values, Ref must be configured
- If a list box contains a large number of values, it can cause the Query Panel to be slow (Therefore, restrict the number of values to be displayed in the list box, and configure a text box and Ref to enable users to scroll through the values)
- If limit values are not cascading, exclude Ref

5 **Configure buttons or text boxes to be associated with the list box, by replacing** *`User_Limit`* **in the button or text box name with the query limit to which the list box points.**

6 **Copy and paste as many list boxes, and associated buttons and text boxes as required, and configure each instance.**

➤ To configure drop-down list controls:

1 **Select the sample query limit drop-down list, right-click, and select Properties.**

Properties is displayed.

2 **In Name, replace** *`User_Limit`* **with the name of the query limit to be set.**

3 **Optional. Change the order in which Dashboard Studio loads query limits. (The default is to load query limits in ascending order.)**

To configure a list to load values in descending order, add `^d` as the fourth part of the object name (for example,. `Region^Hysl_qql^lbx^d^2`).

To configure a list to load values without sorting, add `^n` as the fourth part of the object name (for example, `Region^Hysl_qql^lbx^n^2`).

Note that `^n` is only recommended when the source for limit values is set to be a cached results or table section. This option is not recommended where lists are populated from more than one value source.

4 **Click OK.**

Ref is available with drop-down lists. Configure Ref by replacing *`User_Limit`* with the query limit that was configured for the drop-down list.

5 **Copy and paste as many drop-down lists and instances of Ref as required, and configure each instance.**

➤ To configure calendar controls:

1 **Select Clear, right-click, and select Properties.**

Properties is displayed.

2 **In Name, replace** *`User_Limit`* **with the name of the query limit to be set.**

A query limit can be a date or timestamp data type.

Only one calendar button (Clear) can be renamed.

3 **Click OK.**

4 **Copy and paste as many calendar controls as required, and configure each instance.**

5 **Optional: To duplicate a calendar control, drag the mouse over the calendar to select all shapes, hold the Ctrl key, and drag the shapes to another part of the frame.**

See "Adding and Configuring Calendars," in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Creating a Date Range

➤ To create a date range:

1 **Perform these actions to create a *from* and *to* date limit in a query:**

a. In the query, drag a date column onto the Filters line.

b. In **Filter**, enter a **Name**.

For example, enter `From`.

c. Set the operator to >=.

d. Click **Show Values**, select a date, and click **OK**.

e. From the query, drag the date column onto the Filters line again.

f. In **Filter,** enter `To` as the **Name**.

g. Set the operator to <=.

h. Click **Show Values**, select a date, and click **OK**.

2 **On the dashboard, create two calendar controls.**

See "Adding and Configuring Calendars," in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

3 **Name the calendars, *From* and *To*.**

These calendars set values in the query limits defined in step 1.

Tree controls are part of another component and include a separate configuration frame. See "Configuring the Tree Component" on page 160.

➤ To configure query limit tree controls:

1 **Copy and paste as many tree controls as required.**

2 **Move to QIQ Tree Limit Properties.**

3 **From Tree Limit Objects, select a tree control to configure.**

4 **Select Query Limits.**

5 **From Hierarchy Source, select an item.**

6 **Select the query limits to be displayed in the tree limit control.**

7 **Configure the other query limit tree controls.**

8 **Click Apply, and return to Query Panel.**

Available values are displayed in Currently Selected Query Limits.

Configuring Multi-Selection for Query Processing

The Query Panel Prototype section includes a list box called `lbxQuery`. If `lbxQuery` is available on the frame, queries are displayed when you click .

To allow multi-selection for queries, position the list box in the desired location, taking care not to obstruct any other controls on the frame. If the list box is deleted, queries are displayed in the default manner using a dropdown list.

Configuring the Quick Query Limit Properties Frame

Quick Query Limit Properties enables you to manipulate query limits properties, and to enter custom SQL statements, and associate the statements with available options.

Maximum limit values to show—Enables a restriction to be set on the number of values that are displayed in a Quick Query Limits list box (List box controls that contain a large number of available values may affect the performance of Query Panel).

➤ To set the maximum value:

1 **Enter the number of values to be displayed.**

2 **Click Apply.**

3 **Click to activate Query Panel.**

Lists in Query Panel are displayed using the specified number of values. The text box and Ref can be configured to scroll through the list of values. A plus sign (+) displayed in the text box enables the next set of values to be viewed.

Allow Custom Process—Enables users to process individual query sections (If enabled, a drop-down list is displayed when is clicked. Users select the query sections to process, or choose to process all. The drop-down list is displayed only if multiple query sections require processing. See "Processing All, One, or More Queries" on page 154).

Prompt Login—Prompts users to connect to the data source every time the dashboard is opened.

Section to Display after Process—Enables developers to select a section to be displayed after the user clicks Process (The dashboard home section is the default).

Sources for Limit Values—Enables users to specify the source of the query limits configured in the Query Panel.

➤ To configure the sources for the limit values:

1 **From the list, select a query limit.**

Only query limits associated with lists and drop-down lists are displayed, because they must detect from where the available values are loaded.

2 **Use the options to select a source.**

If Values Cached in Results is selected, a drop-down list is displayed, that provides available results and tables for selection.

3 **Click Change Value Type.**

The selected source is appended to the query limit in Sources for Limit Values. See Value Types.

4 **Click Apply.**

Value Types

Value types nominate how lists obtain the values that are displayed to users.

- No Values—If a query limit exists in multiple queries, it is not necessary for the values to be read from all sections, so *No Values* is used for those queries in which no values need to be obtained (However, one section for each limit requires an option other than *No Values*. Values need only be obtained from multiple queries for a limit if a section does not provide the full set of values from which the user can choose)
- Available Values—The full set of values for the limit are retrieved from the database, in a similar manner to Show Values in a query (Use this option cautiously as it takes time to refresh the list of values)
- Custom Values—Functioning in a similar manner to Custom Values in a query, the values that are added to the custom values list of the limit are used, and not the values in the database
- Values Cached in Results—Read values in a column with an identical name to the limit in a nominated table or results (A more powerful option than Custom Values, but functioning in a similar way, the values are not obtained from the database, hence the speed is comparable with Custom Values. The query associated with the nominated results can be scheduled regularly, so the list of cached values in the Interactive Reporting document is available to be refreshed as required)

Custom SQL for Option Buttons—Enables users to configure the custom SQL to associate with options in Query Panel (see the procedure to configure option button controls in "Configuring Other Controls" on page 147).

Configuring the Required Query Limits

Required Query Limits extends the Quick Query Limits component by enabling the dashboard developer to nominate one or more required query limits. If values from a required query limit are not selected, then the query will not run. When the required values are entered, then the query can be processed.

➤ To use the Required Query Limits Properties frame:

1 **From Sections, select Required Query Limits Properties.**

Required Query Limits Properties is displayed.

2 Move selected limits between **Optional Query Limits** and **Required Query Limits** by clicking > and <.

Moving values to Required Query Limits creates mandatory limits that are required for processing the query. Therefore, when configured, Required Query Limits cannot be ignored.

3 Perform an action:

- To reload the original settings, click Restore
- To remove selected limits, click Clear
- To load selected limits, click Apply

4 Return to the Query Panel and click to process the query with the required query limits.

Note:

When processing a query on the Query Panel by clicking, an error message is displayed if no values are selected for a required query limit. You must select one or more values for that required query limit and then reprocess the query.

Setting Query Panel as the Startup Section

It is recommended that Query Panel be set as the Startup section or Home frame, because users must set query limit values before using the dashboard.

➤ To set Query Panel as the Startup section:

1 Connect the dashboard that contains **Query Panel** to Dashboard Studio, and move to **Step 7: Configure Properties.**

2 From **Startup Section**, select **Query Panel**, and click ✓ to apply the setting.

3 Click > to move to the final Dashboard Studio step, or click **Finish**.

4 In Interactive Reporting Studio, select **Home.**

Query Panel is displayed.

Processing All, One, or More Queries

The Quick Query Limits component provides the ability to process all, one, or more processable queries. From the Query Panel, the dashboard developer selects an option:

- **Process All queries—**Enabled when is clicked on the Query Panel and where Allow Custom Process is cleared in the Quick Query Limit Properties frame (All configured queries are processed and the results are displayed on the Home section. If a list box called *lbxQueryLog* is present on the Query Panel, it logs the beginning and end of each query request)
- **Process One and Process All queries—**Enabled when Allow Custom Process is selected in the Quick Query Limit Properties frame and is clicked on the Query Panel, which displays a drop-down list from which the user selects a query to process (The user remains on the Query Panel so further queries can be selected and processed. If the user selects the Process All option in the drop-down list, all configured queries are processed and the results are displayed on the Home section. If a list box called *lbxQueryLog* is present on the Query Panel, it logs the beginning and end of each query request)
- **Process One or More queries—**Enabled when Allow Custom Process is selected in the Quick Query Limit Properties frame, a list box called *lbxQueries* is present on the Query Panel, and when is clicked on the Query Panel, lbxQueries displays all queries selected (The user clears or selects queries in the list, clicks , and only the selected queries are processed. If all queries are selected, the results are displayed on the Home section. If a list box called *lbxQueryLog* is present on the Query Panel, it logs the beginning and end of each query request)

21

Dashboard Studio Tree Component

In This Chapter

Tree Component

The Tree component consists of two parts:

- Tree Limits enables you to apply filters to queries, data models, or results, by manipulating tree views (It is similar to the Interactive Reporting Studio Pivot Drill Down feature. Tree Limits enables you to filter data in a hierarchical fashion)
- Tree View enables you to display hierarchical objects as a tree inside a list (It is very similar to the way folders are viewed in the left pane of Windows Explorer. Tree View is a building block and is used by other components to display their hierarchies; consequently, it is of interest to programmers who need to use it to display their hierarchical data)

The Tree component contains these notable features.

Drilling Down

The Tree component enables you to filter data in a hierarchical fashion.

Traditionally, applying filters in an Interactive Reporting document was performed one at a time. For example, previously to filter data to the following location, one filter was added at a time.

```
Asia Pacific > Pacific Rim > Australia > New South Wales > Sydney
```

That is, each filter was located and a value was selected from the list.

- First filter: Region = Asia Pacific
- Second filter: Territory = Pacific Rim
- Third filter: Country = Australia
- Fourth filter: State = New South Wales
- Fifth filter: City = Sydney

As several cities are called *Sydney* around the world, applying one filter may result in data from cities other than Sydney, Australia being included.

The component presents all geographical information in a tree view and enables you to drill a path down to a city. After selecting a city, click Add, and all values in the path; for example, Asia Pacific, Pacific Rim, Australia, New South Wales, and Sydney, are applied as filters at the one time.

Filters on Queries to Improve Performance

As dashboards enable you to quickly add and remove filters to perform data analysis, they require all data to be present in memory (specifically, a results section) for the filters to work. If the dataset is small, it is not a problem, but a big dataset can overwhelm the memory capacity of a desktop computer. You may not want to wait for a big dataset to be loaded and processed, if you are concerned only with a section of the data.

To solve this problem, you can apply filters to the data query, or underlying data model. See "Drill Down on Limits and Filters" on page 158. The query is processed, and the relevant data is retrieved from the database, reducing the time and memory needed to perform the analysis. The Tree component enables you to quickly apply a hierarchy of filters to a query.

Multiple Paths

You can select alternative paths on a tree and apply them to a query simultaneously.

All path selections must be peers—there cannot be two different path levels. For example, Americas > North America and Asia Pacific > Pacific Rim > Australia results in no data being displayed. Whereas, an example of paths as peers is, Americas > North America > U.S.A. and Asia Pacific > Pacific Rim > Australia.

Multiple Trees

Multiple tree views can exist on a dashboard frame. For example, you can select filters from a geographical hierarchy and a product line hierarchy.

Drill Down on Limits and Filters

A tree view can apply hierarchical limits and filters.

- Limits applied to queries and data models—Click Process to re-execute selected queries so that related results, charts, and pivots are updated
- Filters applied to the document—A filter applies to all results or table sections in theInteractive Reporting document

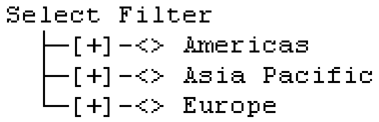
  Filters offer three interfaces:

  - Pop-ups in Interactive Reporting Studio

- ❍ Quick Filters (check boxes, drop-down lists, and so on)
- ❍ Tree views

Unicode Characters

In Unicode releases of Interactive Reporting Studio, tree controls use characters that more closely resemble a tree structure.



```
Select Filter
   ├─[+]-<> Americas
   ├─[+]-<> Asia Pacific
   └─[+]-<> Europe
```

Modify existing tree list boxes by changing the font to a monospace font; such as, Courier New, Lucida Console, Andale Mono, or OCR A Extended.

Using Tree Views in the Tree Limits Component Runtime Sample

To use Tree Views in the Tree Limits Sample Interactive Reporting document, you must add one or more filters or query limits.

➤ To add a filter:

1. **In Interactive Reporting Studio, open the Tree Limits Sample Interactive Reporting document.**
2. **Select Home.**
3. **Select one or an assortment of paths from one or more tree views.**

   For example, from Geographical Hierarchy, select the regions Americas and Europe. From Product Hierarchy, select the product line Music, and product family Dance and DJ.
4. **Click Add.**

   Filters displays the selections.

   Dashboard charts and pivots immediately reflect the changes.

➤ To add query limits:

1. **In Interactive Reporting Studio, open the Tree Limits Sample Interactive Reporting document.**
2. **Select TreeLimits.**
3. **Select one or an assortment of paths from one or more tree views.**

   For example, from the first Query Limits list, select the regions Americas and Asia Pacific, the territories North America and Pacific Rim, and the countries USA and Australia. From the second Query Limits list, select the product line for books and videos.
4. **Click Add.**

   Selected Limits displays the selections.

5 **Click Process to process the selected query sections in the document.**

The related tables and charts of the query are updated.

For consistency, Tree Views share a state across frames. For example, if the Product Hierarchy tree is expanded on the Home frame, Product Hierarchy is also expanded on the Tree Limits frame.

Note:

Double-clicking a node is not supported in EPM Workspace; therefore, +/- is supplied with each Tree Limits list. The button is hidden from view in a desktop application of Interactive Reporting Studio. See "Tree Component Compatibility with EPM Workspace" on page 164.

The Tree component works with the Checkpoint control to cache and reinstate (if required) filters only, not query limits. See "Using Checkpoint Control" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Configuring the Tree Component

To configure the Tree component:

1. Merge the TreeLimits component. See "Merging Components" on page 10. The TreeView component is a subset of TreeLimits, and is used to develop your own components.
2. Add tree limit controls.
3. Configure tree limit controls.
4. Select query and data model sections.
5. Optimize tree limits for use on EPM Workspace.

This topic discusses tree limit controls, and how to add and configure the controls in dashboards that contain the Tree component.

About Tree Limit Controls

Tree limit controls located in the QIQ Tree Limits Samples, include list boxes and buttons that can be copied and pasted onto frames.

Tree Limits List Boxes—Display a hierarchy; for example, geography or product line (Use Hierarchy Source on QIQ Tree Limit Properties to configure the list contents. To view multiple hierarchies, paste another tree limits list onto the frame. The number at the end of the list name is incremented).

Tip:

In Unicode releases of Interactive Reporting Studio, existing tree list boxes are better represented by changing to a Unicode font. See "Unicode Characters" on page 159.

Expand and Collapse Button—Clicking +/- expands and collapses nodes selected in the tree limits lists (It is provided for compatibility with EPM Workspace, because double-clicks are not supported on the EPM Workspace platform. See "Tree Component Compatibility with EPM Workspace" on page 164. The Visible property is not selected by default).

Add and Remove Buttons—Add and remove selected values in the tree limits lists (Only one set is required on a frame, as both work with query limits and filters. Removing a value from a tree control in the Tree component causes the selected value and values beneath to be removed in a cascading manner).

Display List Boxes—Two list boxes exist: Filters and Selected Limits (Filters displays all applied filters. Add this list when the frame requires tree limits lists that apply filters. Selected Limits displays all applied query limits).

Process Button—Process selected query sections in the dashboard (Add this button when the frame requires tree limits lists that apply query limits).

Clear Button—Remove applied query limits (To clear filters, click , on the Dashboard Studio toolbar).

Adding Tree Limits Controls

A set of blank tree limits controls are provided within QIQ Tree Limit Samples.

➤ To add tree limit controls to a dashboard:

1. **In Interactive Reporting Studio, open a dashboard that contains the Tree component.**
2. **From Sections, select QIQ Tree Limits Samples.**
3. **Press Ctrl+D to enter Design mode.**
4. **Copy the controls, press Ctrl, and select multiple items.**
5. **Paste the controls onto a frame.**

   Only one set of Add and Remove buttons is required on a frame, as both work with every tree control on a frame. Ensure the Add and Remove buttons are named *cbtSelect^Qiq_treeLimits* and *cbtRemove^Qiq_treeLimits* respectively.
6. **Repeat steps 4 and 5 as required.**
7. **Press Ctrl+D to exit design mode.**
8. **Save the dashboard.**

Configuring Tree Limits Controls

Tree limits controls that are added onto frames are blank because they are not yet configured. A control is populated from a table or results section that contains hierarchical values.

Table 13 Hierarchical Values Format

1	1.1	1.1.1
1	1.1	1.1.2
1	1.2	1.2.1
1	1.2	1.2.2
2	2.1	2.1.1

To create a hierarchy source, perform an action:

1. Create a query, and select the tables and columns to form a hierarchy; for example, country, state, and city (similar to Table 13).
2. Import a table that contains hierarchical values, similar to Table 13, into the Interactive Reporting document using a tab-delimited text file, CSV file, or an Excel spreadsheet.

The hierarchy source must be independent. That is, it must be separate from the business queries used to produce charts and pivots, because a tree limits control is constantly reading the hierarchy source to update contents. No filter column should be defined in the hierarchy source. This prevents dashboard filters users from accidentally reducing the number of available values in the tree limits control. For example, you want to use state and city in a tree. However, these columns are filters in a results section called *Results A*. Since filtered results should not be a hierarchy source, you should create a new query, drag state and city onto the Request line, and save the results as Results B. In QIQ Tree Limits Properties, select Results B (rather than Results A) as your hierarchy source.

➤ To configure tree limits controls:

1 **In Interactive Reporting Studio, open a dashboard that contains the Tree component.**

2 **From Sections, select QIQ Tree Limits Properties.**

3 **Select an option:**

- All Dashboards—All frames with tree objects in Tree Limits Objects
- Configured Dashboards—Only configured frames are available
- Unconfigured Dashboards—Only unconfigured frames are available

4 **From Tree Limits Objects, select the items to be configured.**

5 **Optional:**

- To view the tree limits dashboard, click
- To delete the columns specified for a tree limit, click

6 **In Tree Limit Configuration, select Filters or Query Limits.**

a. If Filters is selected, a filter applied to the tree limits is applied to results, that is, the local data that was retrieved from the database. For this reason, filters are also known as *local filters.* The advantage of using filters is that tables, pivots, and charts are updated instantly without reconnecting to a database. A filter is also applied to the results sections that contain the filter column, so tables, pivots, and charts are consistent throughout the Interactive Reporting document.

b. If Query Limits is selected, the tree limits object is applied to the selected query and data model sections of the document. The advantage of using query limits is that only requested queries are updated, so fewer results, charts, and pivots require recalculating. See "Selecting Query and Data Model Sections" on page 163. However, a connection to a database, to process the queries, is required for tables, pivots and charts to be updated.

7 **From Hierarchy Source, select the results or table that the Tree component uses to obtain a hierarchy.**

Data in this section determines the selections in the tree limits list. Therefore, the section contains hierarchical data with columns called; for example, Region, Territory, and Country or Product Name, Product Line, and Product Family.

8 **Move selected columns in the hierarchy that are displayed in the tree limits list, by clicking > and <.**

9 **Optional: Reorder selected columns, by selecting a column and clicking ∧ or ∨.**

10 **Click Apply.**

The tree limits list contains a tree view.

Note:

Use the Checkpoint control to cache and reinstate (if required) filters only, not query limits. See "Using Checkpoint Control" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Selecting Query and Data Model Sections

If tree limits lists apply query limits, you must select the queries and data model sections to which the query limits apply.

➤ To select queries and data model sections:

1 **In Interactive Reporting Studio, open a dashboard that contains the Tree component.**

2 **From Sections, select HYSL Queries and Datamodels.**

3 **Move sections between Available Sections and Sections to Process by clicking > and <.**

4 **Click Apply.**

From this point, when Process is clicked on a tree limits list to apply query limits, the limits are applied to the selected query and data model sections.

Tree Component Compatibility with EPM Workspace

Click a node to expand or collapse it in the hierarchy. Double-clicking a node, however, is not supported in EPM Workspace; therefore, +/- is supplied with each tree limits list. In Interactive Reporting Studio, +/- is hidden from view.

Optimizing Tree Limits for EPM Workspace

When an item is selected in the tree limits list in EPM Workspace, an unnecessary call is sent to EPM Workspace notifying it that the item is selected. These procedures explain how to prevent the call from occurring.

➤ To optimize tree limits lists for use in EPM Workspace:

1. **In Interactive Reporting Studio, open a dashboard that contains the Tree component.**
2. **Press Ctrl+D to enter Design mode.**
3. **Right-click a list box, and select Scripts.**

   Scripts Editor is displayed.
4. **Select code in Scripts Editor, and delete it.**
5. **Click OK.**
6. **Press Ctrl+D to exit Design mode.**
7. **Navigate to another frame and return to refresh the screen.**

   The tree limit list no longer makes redundant calls to EPM Workspace when an item is selected. The result of removing the code from Scripts Editor is that nothing happens if a node is double-clicked in EPM Workspace or in Interactive Reporting Studio. The user can expand and collapse nodes by clicking +/-.
8. **Save the Interactive Reporting document, and import it back into EPM Workspace.**

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Dashboard Studio Webdash Builder Component

In This Chapter

Webdash Builder Component

Use the Webdash Builder component to build dashboardsRF in environments (such as pure HTML, Web plug-ins, or desktop applications) that process Interactive Reporting documents.

The build tool is a Dashboard Studio configuration frame, called *Build Dashboard,* that uses the placement features of the object model. These features enable you to create, place, and size dashboard objects without going into Design mode.

The component eliminates the need for the Dashboard Studio wizard in most cases. The eight steps have become one configuration frame. However, the wizard is required to combine documents and templates (using the Dashboard Studio Merge Utility), create and customize templates, configure styles, and build more sophisticated, user-configured dashboards.

You use the dashboard sections and prototypes provided by the component to support runtime mode for dashboard building and to position and size embedded objects.

➤ To incorporate Webdash Builder component into customized dashboard templates:

1. **Update the template, using the Dashboard Development Services Update Utility.**
2. **Add shapes such as *Panel_Background_1*, *Panel_Background_2*, and *Panel_Background_3* to frame prototypes that the facility will use.**
3. **Import data models into the template, and then import the template into EPM Workspace.**

Webdash is available in multiple formats and can be used in multiple ways. See “Using the Webdash Template to Build Dashboards ” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

Using the Webdashbuilder Sample

The `Webdashbuilder_sample_esm.bqy` provides features for creating local filters and building a dashboard. To build a dashboard, see "Configuring the Webdash Builder Component" on page 166.

➤ To use the Webdashbuilder sample, do one of the following:

- Import the sample ESM with one or more data models into EPM Workspace to create queries, charts, or pivots; then, convert the sections into a dashboard.
- Import an ESM that contains charts or pivots into EPM Workspace.

➤ To use the Webdashbuilder sample in Interactive Reporting Studio to create local filters:

1. In Interactive Reporting Studio, open `Webdashbuilder_sample_esm.bqy`.
2. Select **Sections**, then **Build Dashboard.**
3. In **Create Local Filters**, select a results section.

   For example, select Sales Results. The results columns are displayed.
4. Select **Columns** to add to the local filters.

   For example, select Revenue.
5. Move selected columns between **Columns** and **Local Filters** by clicking > and <.
6. Click **Apply** at this point in development, or build your dashboards before clicking **Apply**.
7. Navigate to another dashboard frame, and verify that the local filters function correctly.
8. From **Filters** on the top panel or **Quick Filters**, select and set a filter.

   The local filter selected in Build Dashboard is displayed in the Filters or Quick Filters, and the dashboard data changes to reflect the selected filter.
9. Save the dashboard.

Tip:

To reorder local filters, use the Filter Aliases Properties Frame. See "Filter Aliases Properties Frame" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio*.

Configuring the Webdash Builder Component

Tasks that you perform to use the Webdash Builder component to create dashboards:

1. Merge the component. See "Merging Components" on page 10.

   Merging the component names the frame panels as *Panel_Background_1, Panel_Background_2, Panel_Background_3,* and so on. You can verify the Properties of the panel names. Then, you can configure the component, by adding shapes and controls, creating local filters, and building dashboards.

2. Add shapes to frame prototypes.
3. **Optional:** Using Dashboard Studio Options, include the template.
4. **Optional:** Import or create sections.
5. Create local filters. See "Creating Local Filters" on page 169 and "Using the Webdashbuilder Sample" on page 166.
6. Use Build Dashboard in Interactive Reporting Studio to create a dashboard.
7. **Optional:** Customize the dashboard using Dashboard Studio.

You can view and configure the merged template or document in Interactive Reporting Studio.

Adding Shapes to Frame Prototypes

You use the Build Dashboard UI frame to add one or more Webdash shapes (a drop-down list, command button, list box, and rectangle) to frame prototypes so that runtime Build Dashboard features can be used with existing templates.

The drop-down list, button, and list controls are used to make filters generically accessible. You should add the drop-down list, button, and list box controls to all frame prototypes to be used with the Build Dashboard section. The button is required only for frame prototypes that do not contain a button for a Quick Filters list box.

The rectangle identifies the location and size of pivots, charts, and tables to be embedded. You copy the rectangle one or more times to each frame prototype to be used with the Build Dashboard section, and position and resize as required.

Frame prototypes are available in the `Webdash_Template.bqy` and `Frame_Library.bqy`. These files are located in the templates folder.

Tip:

If the component is merged with a document, display frame prototypes in Interactive Reporting Studio, by selecting **View**, then **Unhide Section**.

Note:

If you want to use Quick Slice on your dashboards, configure options before importing into EPM Workspace.

➤ To add shapes and controls to frames:

1 **In Interactive Reporting Studio, open the merged document or template.**

2 **From Sections, select Build Dashboard UI.**

3 **Press Ctrl+D to enter Design mode.**

4. Select the rectangle, and press **Ctrl+C**.
5. From **Sections**, select a frame prototype on which to place the rectangle.

   For example, if the component was merged with the Round Tab Panel Template, select 4 Panels Round Tab.
6. Paste the rectangle by pressing **Ctrl+V**, and resize if necessary.

   Shapes are named according to the order in which they are pasted. For example, the panel headings are displayed as Heading 1, Heading 2, Heading 3, and Heading 4, left to right. Therefore, you should paste shapes in the order in which you want them numbered.
7. **Optional:** To view a shape name, right-click the shape, and select **Properties**.

   The name is displayed as *Panel_Background_1, Panel_Background_2, Panel_Background_3,* and so on, with an incremental end number.
8. On the frame prototype, select and delete all Quick Filters controls.
9. In **Build Dashboard UI**, copy the drop-down list, button, and list controls to replace the deleted frame prototype controls.
10. Paste and position the controls on the frame prototype.

    The section called *Hysl_rtdb* is required to enable the functionality of the shapes in Webdash-configured documents. `Hysl_rtdb` is not required to be visible to function correctly. To locate the section, select **View**, then **Unhide Section**, and then click **Cancel**.
11. Repeat steps 2–10 to add shapes to other frame prototypes.
12. Press **Ctrl+D** to exit Design mode.
13. Select **File**, then **Save**.
14. Close the template or document.

Including Templates

Optional: This step is required only if a template was customized.

➤ To include a template:

1. Start Dashboard Studio.
2. From **Select a Framework Template**, click ☑.

   Options is displayed. See “Options Window” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*
3. Click **Include**.
4. Navigate to the customized template.
5. Click **OK**.

   The template is displayed in Create a Document From Template.
6. **Optional:** Use the Dashboard Studio wizard to import sections or create sections.

Creating Local Filters

Using Build Dashboard to create local filters is equivalent to setting filters in the QIQ Filters Properties frame, (see “Using the QIQ Filter Properties Frame” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio*).

Note:

The Local Filters section is only available on QIQ Filter Properties if Webdash is *not* available in the Interactive Reporting document. Where Webdash is available, create the local filters using the Build Dashboard frame.

To create local filters, see “Using the Webdashbuilder Sample” on page 166.

Building Dashboards

This topic expects that charts and queries have been built, either created from scratch or imported using Dashboard Studio Merge Utility.

Note:

You can use the Build Dashboard frame in Interactive Reporting Studio or EPM Workspace to build dashboards.

➤ To use the Build Dashboard frame to create dashboards:

1 **In Interactive Reporting Studio or EPM Workspace, open the dashboard from the Creating Local Filters procedure.**

2 **From Sections, select Build Dashboard.**

3 **In Create and Configure Dashboards, enter a dashboard name.**

For example, enter `Summary`.

4 **From Prototype, select a layout, and click (Add).**

For example, select 4 (2 x 2) Round |–|–|. The code reads the geometry of the panels (for example, 4 round panels with 2 panels at top and 2 panels at the bottom) and creates a miniature facsimile of the layout.

The dashboard name is displayed in Navigation Targets and above the preview frame.

5 **Optional: To change the name or panel layout, enter another Dashboard Name or select another prototype, and click (Modify).**

Caution!

If you rename a dashboard frame to *Item*, an error is displayed in the Interactive Reporting Studio Console window.

6 **From Available Objects, select charts, pivots, or tables, and click the preview frame to display the icons.**

Chart and pivot icons are displayed on the preview frame, in a left-to-right, top-to-bottom order. Charts and pivots that share a name prefix are displayed on the same panel. For example, Revenue by Item Type Chart and Revenue by Item Type Pivot are displayed on the same panel.

7 **Optional: Select multiple available objects, and click › for the best-guess option.**

› is selectable only if the preview frame is empty. When an object is added to a panel, › is not selectable.

8 **Repeat steps 3–7 to build another frame.**

9 **Optional: Reorder Navigation Targets by selecting a target and clicking ˄ or ˅.**

After Apply is clicked, this reorders the navigation of frames in the dashboard.

10 **Click Apply to create the dashboard.**

Design Notes

- Chart, pivot, and table icons that are added to the preview frame are displayed in the corners of the panel. However, in the dashboard that is created, the charts, pivots, and tables fill the panel.
- Selecting an available object and clicking a panel results in the object being displayed on the panel. If an icon is clicked in a panel, it is removed from view. Clicking an icon in one panel, and then clicking in another panel adds the removed icon to the second panel.
- Only one chart icon and one pivot or table icon can be displayed in a panel. If a chart icon, and a pivot or table icon are added to a 1 Round or 1 Square panel layout, they occupy the same panel, and the switch between a chart and pivot view feature is automatically applied. See "Switching Between Chart and Pivot Views" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*
- The names of navigation targets and prototypes can be modified before Apply is clicked, by clicking ↻.
- Changing the layout prototype may affect the displayed data. For example, moving from 4 panels to 2 panels results in a loss of displayed data, and moving from 1 panel to 2 panels results in additional data requiring configuration.

Embedding Sections

The Webdash Builder component recognizes only embedded section shapes with names in the form Chart1, Chart2, or Pivot1, Pivot2, and so on. The name *Chart* applies to any graphical view, and the name *Pivot* applies to any tabular view. The number indicates the panel on which the object is placed.

If a dashboard is built by using drag-and-drop in Interactive Reporting Studio, then the names generated by Interactive Reporting are incorrect for results, tables, and reports, and the component cannot recognize them. To edit these dashboards in the Webdash Builder component, the generated names must be modified to conform to names that the component expects.

Embedding Browsers

Embedding browsers relies upon script-based object creation and placement features. See "Object Model Placement and Sizing" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 1: Dashboard Design.*

➤ To use the Build Dashboard frame to create dashboards that contain embedded browsers:

1. In Interactive Reporting Studio or EPM Workspace, open a dashboard that contains the Webdash_builder sample.
2. From **Sections**, select **Build Dashboard.**
3. **Optional:** Use the **Create Local Filters** section to set local filters.
4. In **Create and Configure Dashboards**, enter a dashboard name.

   For example, enter `Web Browser`.

5. From **Prototype**, select a layout, and click (Add).

   For example, select 1 Round.

   The dashboard name is displayed in Navigation Targets and above the preview frame.

6. **Optional:** To change the name or panel layout, enter another **Dashboard Name** or select another prototype, and click (Modify).

   Caution!

   If you rename a dashboard frame to *Item*, an error is displayed in the Interactive Reporting Studio Console window.

7. From **Available Objects**, select **Set Embedded Browser**, and enter a URL.

   For example, enter www.oracle.com for the Oracle Web site.

8. Click the preview frame to display the browser icon.
9. Repeat steps 3–8 to build another frame that contains an embedded browser.

10 **Optional:** Reorder **Navigation Targets** by selecting a target and clicking ▲ or ▼.

After Apply is clicked, this reorders the navigation of frames in the dashboard.

11 Click **Apply** to create the dashboard.

Embedding Reports

Embedding reports relies upon script-based report object creation and placement features. See "Embedding Reports" in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio.*

➤ To use the Build Dashboard frame to create dashboards that contain embedded reports:

1 In Interactive Reporting Studio or Oracle Enterprise Performance Management Workspace, Fusion Edition, open a dashboard that contains the Webdash_builder sample.

2 From **Sections**, select **Build Dashboard.**

3 **Optional:** Use the **Create Local Filters** section to set local filters.

4 In **Create and Configure Dashboards**, enter a dashboard name.

For example, enter `Summary Report`.

5 From **Prototype**, select a layout, and click (Add).

For example, select 1 Square.

The dashboard name is displayed in Navigation Targets and above the preview frame.

6 **Optional:** To change the name or panel layout, enter another **Dashboard Name** or select another prototype, and click (Modify).

Caution!

If you rename a dashboard frame to *Item*, an error is displayed in the Interactive Reporting Studio Console window.

7 From **Available Objects**, select a report, and click the preview frame to display the icon.

8 **Optional:** Select multiple available objects, and click › for the best-guess option.

› is selectable only if the preview frame is empty. When an object is added to a panel, › is not selectable.

9 Repeat steps 3–8 to build another frame that contains an embedded report.

10 **Optional:** Reorder **Navigation Targets** by selecting a target and clicking ▲ or ▼.

After Apply is clicked, this reorders the navigation of frames in the dashboard.

11 Click **Apply** to create the dashboard.

Note:

When embedding a report into a Webdash document using the Build Dashboard frame, the name of the report must begin with Pivot to be recognized as a tabular structure.

Creating Runtime Documents

Note:

Creating a runtime document removes the code necessary to create and configure dashboard sections. It is not possible to reconfigure a runtime document. As a result, you should always save an updated copy of your working ESM BQY before creating a runtime document.

➤ To create a runtime document when there is no existing runtime folder or document:

1 **In the Build Dashboards section, click Make Runtime.**

A Create a Runtime document dialog box is displayed.

2 **Read the information in the Create a Runtime Document dialog box and click Yes to continue.**

A Runtime folder is created and an Alert dialog box is displayed.

3 **In the Alert dialog box, click Yes to continue.**

A runtime document is created and saved in the newly-created Runtime folder, and the ESM document is closed.

➤ To create a runtime document when a runtime document exists with the same path and name:

1 **In the Build Dashboards section, click Make Runtime.**

A message is displayed letting you know that there is already a file with the same name in the Runtime folder.

2 **Do one of the following and click Yes to continue.**

- Select **Overwrite file**.
- Change the file name.

An Alert dialog box is displayed.

3 **In the Alert dialog box, click Yes to continue.**

A runtime document is created and saved, and the ESM document is closed.

➤ To create a runtime document in Workspace:

1 **Save your original ESM document as** `<`*`some_name`*`>_esm.bqy`**.**

2 **Save this same document as** `<`*`some_name`*`>.bqy`**.**

This is the document that will be turned into a runtime document.

3 **In the Build Dashboards section, click Make Runtime.**

A Create a Runtime Document dialog box is displayed.

4 **In the Create a Runtime Document dialog box, click Yes to continue.**

An Alert dialog box is displayed.

5 **In the Alert dialog box, click Yes to continue.**

The Alert dialog box lets you know when the process is complete and the runtime document is created.

6 **Click OK.**

7 **Save and close the document.**

8 **Open the runtime version of the document in Workspace.**

➤ To create a packed runtime document:

1 **In the Build Dashboards section, click Make Runtime.**

A Create a Runtime Document dialog box is displayed.

2 **In the Create a Runtime Document dialog box, select Packed Runtime.**

An Alert dialog box is displayed.

3 **In the Alert dialog box, click Yes to continue.**

A packed runtime document is created.

Verifying Dashboard Functionality

➤ To test dashboard functionality:

1 **In Interactive Reporting Studio, navigate to the dashboard sections created in the Building Dashboards procedure.**

2 **Use the frame navigation to move between the sections.**

For example, if a tab prototype was created, use tabs.

3 **Optional: If a chart and a pivot or table are configured on a 1 Round or 1 Square panel frame, click 📊 or ▦, to switch between the views.**

4 **Use other dashboard functions, by selecting controls on the top panel.**

For example, click ↑ or ↓, to sort data.

5 **Optional: Set filters using Quick Filters.**

6 **Save the dashboard.**

Customizing Dashboards Using Dashboard Studio

A dashboard that is created using Build Dashboard can be customized (but does not have to be) in Dashboard Studio. The dashboard properties and styles can be configured by using Step 7 of Dashboard Studio and Step 8 of Dashboard Studio (see chapters “Step 7: Configure Properties” and “Step 8: Configure Style” in the *Hyperion Interactive Reporting – Object Model and Dashboard Development Services Developer's Guide, Volume 5: Dashboard Studio*). The dashboard can be merged or imported into another document by using the Dashboard Studio Merge Utility (see “Merging Components” on page 10).

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Dashboard Studio Blank Component

In This Chapter

Blank Component

The blank component enables developers to create and customize components. The component has restricted standard functional capabilities that are associated with naming, generating, and creating component definition properties.

`Blank_component.bqy` contains the sections described in Table 14.

Table 14 Blank Component Sections, Core Properties, and Descriptions

Section Name	Core Properties	Description
Orcl_blank	FrameType = 1020	Each component contains this core section that contains the code to make the component function, the static properties (such as multilingual string constants), and the configuration properties to enable the component to perform correctly in different situations

Orcl_blank Properties	Implements = STYLES1
	FrameType = 1051
	txlClass = Orcl_blank
		A component can contain one, multiple, or no properties frames (These frames are only present in ESMs and assist the dashboard developer to set the required options for the dashboard to function in the current context)

Orcl_blank UI	FrameType = 1022	A component can contain one, multiple, or no user interface sections (These sections contain user interface samples that can be cut and pasted into other sections; for example, the Graphic Gauges component includes a set of images, or the calendar control object has a sample calendar)

Customizing the Component Core

Use the Orcl_blank frame to customize the component. Table 15 describes the Orcl_blank object titles, names, and functions required to construct a component.

Table 15 Orcl_blank Object Titles, Names, and Functionality

Object Title	Object Name (where applicable)	Functionality
ParentOrcl_blank	txlParent	Reserved for future use (also see MeOrcl_blank)
MeOrcl_blank	txlMe	Provides the component name which is identical to the section name (Can be used internally by the component code)
Run Time Event Handlers and Functions	cbt_events_runTime	Activated at document startup, the button contains functions that are used by the runtime document (The blank component is preconfigured with a set of empty functions that have tracing to enable developers to test that the component properties are correctly configured, and that the component is functioning before adding custom code)
Configuration Time Event Handlers and Functions	cbt_events_config	Activated at document startup, the button contains functions that are used during dashboard development to handle the configuration or properties frames (The first line of code establishes if the document is a runtime release, and if so, it exits. The blank component is preconfigured with a set of empty functions that have tracing to enable developers to test that the component properties are correctly configured, and that the component is functioning before adding custom code)
Aspect Event Handlers	cbt_events_aspec	Commented out pre- and post-event handlers called before or after the event handlers for an event. These are commented out because they add overhead to every event and should only be used where some specific behavior that cannot be achieved through standard events is required. Note: These override the behavior of other components; however, the developer can un-comment these handlers where required. Most components do not use them.
VersionInfo		Release information about the component
txlReqBrio		Minimum required release number of Interactive Reporting Studio (The framework checks for the release and only initializes the component if the

Object Title	Object Name (where applicable)	Functionality
		release of Oracle's Hyperion® Interactive Reporting Studio is equal to or later than the listed value)
txlReqTemplate		Minimum required release number of the Dashboard Studio core template (The framework checks for the release and only initializes the component if the release of the template is equal to or later than the listed value)
txlFrameName		Name of the first configuration frame for the component
txlPriority		Order in which the component is initialized; that is, the order the component receives broadcast events, such as `OnStartup`, `OnShutDown`, `OnActivate`, `OnPreProcess`, and so on, including aspect events (The lower the priority, the earlier the component is acted upon. Priorities range from 1–10, with an empty value being treated as a priority of 10)
ComponentDefinition		Core component sections, sequence of properties frames, and sections to remove when an ESM is saved as a runtime (The text label is affected by Synch Component Definition, Rename Component, and Rename Property Editor)
gtxlProperties		Unique settings and options for dashboards (Clicking Apply on a configuration or properties frame updates the gtxlProperties text label)
gtxlToolTip (click to generate for configurator)		Parses the configuration frame and generates, in the Console Window, a default floating comment for each clickable shape (The developer copies, pastes, and edits these into the gtxlToolTip text label)
gtxlToolTip		Language strings for floating commentsdisplayed when hovering over clickable objects
gtxlLanguageStrings (click to generate for configurator)		Parses the configuration frame and generates, in the Console Window, a default text string for each shape with a text property (Developers copy, paste, and edit these strings into the gtxlLanguageStrings text label)

Object Title	Object Name (where applicable)	Functionality
gtxlLanguageStrings		Language strings for text labels, alert boxes, and so on, displayed in the component user interface
gtxlLanguageMappings		Association between strings and objects so code is not required for changes in the user interface text values; for example, in response to a user switching the dashboard language
Synch Component Definition	txlSynchCompoentDefinition	Only visible if the Interactive Reporting document is a component; that is, not a template, an ESM, nor a runtime (Updates the contents of ComponentDefinition using sections located in the component, and assumes all sections are part of the component and must be retained. It identifies configuration or properties frames based on the FrameType, and clicking Default when creating a runtime release selects all sections, except the core, to be discarded)
Rename Component	txlRenameComponent	Code to apply consistent renaming to sections in the component (When renaming is complete, it calls Synch Component Definition if the Interactive Reporting document is a component)
Revert to Component	txlMakeComponent	Discards sections that are not part of the component, so the component can be extracted from the template (Only operates if the Interactive Reporting document is a template)
Rename Property Editor	txlRenamePropertyEditor	Renames the selected Property Editor (configuration or properties frame), and updates ComponentDefinition and txlFrameName
Set Dependency Version To Current	txlSetDep	Updates txlReqBrio to the current release, and if the Interactive Reporting document is a template, an ESM, or a runtime release, sets txlReqTemplate to the version of the current template
txlName		User-friendly component name (Used by Dashboard Architect to generate the JavaDoc for the component)
Descriptive text	txlDescription	Component synopsis (Used by Dashboard Architect to generate the JavaDoc for the component)

Blank Component Properties Frame and User Interface

Orcl_blank Properties is a blank configuration or properties frame that contains the minimal objects and controls required to customize a configuration or properties frame.

Orcl_blank UI is an empty section that user interface objects can be pasted into from other parts of an Oracle's Hyperion® Interactive Reporting document.

Glossary

access permissions A set of operations that a user can perform on a resource.

accountability map A visual, hierarchical representation of the responsibility, reporting, and dependency structure of the accountability teams (also known as critical business areas) in an organization.

active service A service whose Run Type is set to Start rather than Hold.

active user A user who is entitled to access the system.

active user/user group The user or user group identified as the current user by user preferences. Determines default user preferences, dynamic options, access, and file permissions. You can set the active user to your user name or any user group to which you belong.

adaptive states Interactive Reporting Web Client level of permission.

aggregate cell A cell comprising several cells. For example, a data cell that uses Children(Year) expands to four cells containing Quarter 1, Quarter 2, Quarter 3, and Quarter 4 data.

aggregate limit A limit placed on an aggregated request line item or aggregated metatopic item.

alias An alternative name. For example, for a more easily identifiable column descriptor you can display the alias instead of the member name.

appender A Log4j term for destination.

application (1) A software program designed to run a specific task or group of tasks such as a spreadsheet program or database management system. (2) A related set of dimensions and dimension members that are used to meet a specific set of analytical and/or reporting requirements.

artifact An individual application or repository item; for example, scripts, forms, rules files, Interactive Reporting documents, and financial reports. Also known as an object.

attribute Characteristics of a dimension member. For example, Employee dimension members may have attributes of Name, Age, or Address. Product dimension members can have several attributes, such as a size and flavor.

attribute dimension A type of dimension that enables analysis based on the attributes or qualities of dimension members.

authentication service A core service that manages one authentication system.

axis (1) A straight line that passes through a graphic used for measurement and categorization. (2) A report aspect used to arrange and relate multidimensional data, such as filters, pages, rows, and columns. For example, for a data query in Simple Basic, an axis can define columns for values for Qtr1, Qtr2, Qtr3, and Qtr4. Row data would be retrieved with totals in the following hierarchy: Market, Product.

bar chart A chart that can consist of one to 50 data sets, with any number of values assigned to each data set. Data sets are displayed as groups of corresponding bars, stacked bars, or individual bars in separate rows.

batch POV A collection of all dimensions on the user POV of every report and book in the batch. While scheduling the batch, you can set the members selected on the batch POV.

book A container that holds a group of similar Financial Reporting documents. Books may specify dimension sections or dimension changes.

book POV The dimension members for which a book is run.

bookmark A link to a reporting document or a Web site, displayed on a personal page of a user. The two types of bookmarks are My Bookmarks and image bookmarks.

bounding rectangle The required perimeter that encapsulates the Interactive Reporting document content when embedding Interactive Reporting document sections in a personal page, specified in pixels for height and width or row per page.

cache A buffer in memory that holds data temporarily.

calculation The process of aggregating data, or of running a calculation script on a database.

Catalog pane Displays a list of elements available to the active section. If Query is the active section, a list of database tables is displayed. If Pivot is the active section, a list of results columns is displayed. If Dashboard is the active section, a list of embeddable sections, graphic tools, and control tools are displayed.

categories Groupings by which data is organized. For example, Month

cause and effect map Depicts how the elements that form your corporate strategy relate and how they work together to meet your organization's strategic goals. A Cause and Effect map tab is automatically created for each Strategy map.

cell (1) The data value at the intersection of dimensions in a multidimensional database; the intersection of a row and a column in a worksheet. (2) A logical group of nodes belonging to one administrative domain.

chart A graphical representation of spreadsheet data. The visual nature expedites analysis, color-coding, and visual cues that aid comparisons.

chart template A template that defines the metrics to display in Workspace charts.

child A member with a parent above it in the database outline.

choice list A list of members that a report designer can specify for each dimension when defining the report's point of view. A user who wants to change the point of view for a dimension that uses a choice list can select only the members specified in that defined member list or those members that meet the criteria defined in the function for the dynamic list.

clustered bar charts Charts in which categories are viewed side-by-side; useful for side-by-side category analysis; used only with vertical bar charts.

column A vertical display of information in a grid or table. A column can contain data from one field, derived data from a calculation, or textual information.

computed item A virtual column (as opposed to a column that is physically stored in the database or cube) that can be calculated by the database during a query, or by Interactive Reporting Studio in the Results section. Computed items are calculations of data based on functions, data items, and operators provided in the dialog box and can be included in reports or reused to calculate other data.

connection file *See Interactive Reporting connection file (.oce).*

content Information stored in the repository for any type of file.

cookie A segment of data placed on your computer by a Web site.

correlated subqueries Subqueries that are evaluated once for every row in the parent query; created by joining a topic item in the subquery with a topic in the parent query.

critical business area (**CBA**) An individual or a group organized into a division, region, plant, cost center, profit center, project team, or process; also called accountability team or business area.

critical success factor (**CSF**) A capability that must be established and sustained to achieve a strategic objective; owned by a strategic objective or a critical process and is a parent to one or more actions.

cube A block of data that contains three or more dimensions. An Essbase database is a cube.

custom calendar Any calendar created by an administrator.

custom report A complex report from the Design Report module, composed of any combination of components.

dashboard A collection of metrics and indicators that provide an interactive summary of your business. Dashboards enable you to build and deploy analytic applications.

data function That computes aggregate values, including averages, maximums, counts, and other statistics, that summarize groupings of data.

data layout The data layout interface is used to edit a query, arrange dimensions, make alternative dimension member selections, or specify query options for the current section or data object.

data model A representation of a subset of database tables.

database connection File that stores definitions and properties used to connect to data sources and enables database references to be portable and widely used.

descendant Any member below a parent in the database outline. In a dimension that includes years, quarters, and months, the members Qtr2 and April are descendants of the member Year.

Design Report An interface in Web Analysis Studio for designing custom reports, from a library of components.

detail chart A chart that provides the detailed information that you see in a Summary chart. Detail charts appear in the Investigate Section in columns below the Summary charts. If the Summary chart shows a Pie chart, then the Detail charts below represent each piece of the pie.

dimension A data category used to organize business data for retrieval and preservation of values. Dimensions usually contain hierarchies of related members grouped within them. For example, a Year dimension often includes members for each time period, such as quarters and months.

dimension tab In the Pivot section, the tab that enables you to pivot data between rows and columns.

dimension table (1) A table that includes numerous attributes about a specific business process. (2) In Essbase Integration Services, a container in the OLAP model for one or more relational tables that define a potential dimension in Essbase.

display type One of three Web Analysis formats saved to the repository: spreadsheet, chart, and pinboard.

dog-ear The flipped page corner in the upper right corner of the chart header area.

drill-down Navigation through the query result set using the dimensional hierarchy. Drilling down moves the user perspective from aggregated data to detail. For example, drilling down can reveal hierarchical relationships between years and quarters or quarters and months.

drill-through The navigation from a value in one data source to corresponding data in another source.

dynamic report A report containing data that is updated when you run the report.

Edit Data An interface for changing values and sending edits to Essbase.

employee A user responsible for, or associated with, specific business objects. Employees need not work for an organization; for example, they can be consultants. Employees must be associated with user accounts for authorization purposes.

ending period A period enabling you to adjust the date range in a chart. For example, an ending period of "month", produces a chart showing information through the end of the current month.

exceptions Values that satisfy predefined conditions. You can define formatting indicators or notify subscribing users when exceptions are generated.

external authentication Logging on to Oracle's Hyperion applications with user information stored outside the applications, typically in a corporate directory such as MSAD or NTLM.

externally triggered events Non-time-based events for scheduling job runs.

Extract, Transform, and Load (ETL) Data source-specific programs for extracting data and migrating it to applications.

fact table The central table in a star join schema, characterized by a foreign key and elements drawn from a dimension table. This table typically contains numeric data that can be related to all other tables in the schema.

filter A constraint on data sets that restricts values to specific criteria; for example, to exclude certain tables, metadata, or values, or to control access.

folder A file containing other files for the purpose of structuring a hierarchy.

footer Text or images at the bottom of report pages, containing dynamic functions or static text such as page numbers, dates, logos, titles or file names, and author names.

format Visual characteristics of documents or report objects.

free-form grid An object for presenting, entering, and integrating data from different sources for dynamic calculations.

generic jobs Non-SQR Production Reporting or non-Interactive Reporting jobs.

grid POV A means for specifying dimension members on a grid without placing dimensions in rows, columns, or page intersections. A report designer can set POV values at the grid level, preventing user POVs from affecting the grid. If a dimension has one grid value, you put the dimension into the grid POV instead of the row, column, or page.

group A container for assigning similar access permissions to multiple users.

highlighting Depending on your configuration, chart cells or ZoomChart details may be highlighted, indicating value status: red (bad), yellow (warning), or green (good).

host A server on which applications and services are installed.

host properties Properties pertaining to a host, or if the host has multiple Install_Homes, to an Install_Home. The host properties are configured from the LSC.

hyperlink A link to a file, Web page, or an intranet HTML page.

Hypertext Markup Language (HTML) A programming language specifying how Web browsers display data.

image bookmarks Graphic links to Web pages or repository items.

implied share A member with one or more children, but only one is consolidated, so the parent and child share a value.

inactive group A group for which an administrator has deactivated system access.

inactive service A service suspended from operating.

inactive user A user whose account has been deactivated by an administrator.

Install_Home A variable for the directory where Oracle's Hyperion applications are installed. Refers to one instance of Oracle's Hyperion application when multiple applications are installed on the same computer.

Interactive Reporting connection file (.oce) Files encapsulating database connection information, including: the database API (ODBC, SQL*Net, etc.), database software, the database server network address, and database user name. Administrators create and publish Interactive Reporting connection files (.oce).

intersection A unit of data representing the intersection of dimensions in a multidimensional database; also, a worksheet cell.

Investigation *See drill-through.*

Java Database Connectivity (JDBC) A client-server communication protocol used by Java based clients and relational databases. The JDBC interface provides a call-level API for SQL-based database access.

job output Files or reports produced from running a job.

job parameters Reusable, named job parameters that are accessible only to the user who created them.

jobs Documents with special properties that can be launched to generate output. A job can contain Interactive Reporting, SQR Production Reporting, or generic documents.

join A link between two relational database tables or topics based on common content in a column or row. A join typically occurs between identical or similar items within different tables or topics. For example, a record in the Customer table is joined to a record in the Orders table because the Customer ID value is the same in each table.

JSP Java Server Pages.

layer (1) The horizontal location of members in a hierarchical structure, specified by generation (top down) or level (bottom up). (2) Position of objects relative to other objects. For example, in the Sample Basic database, Qtr1 and Qtr4 are in the same layer, so they are also in the same generation, but in a database with a ragged hierarchy, Qtr1 and Qtr4 might not be in same layer, though they are in the same generation.

legend box A box containing labels that identify the data categories of a dimension.

level A layer in a hierarchical tree structure that defines database member relationships. Levels are ordered from the bottom dimension member (level 0) up to the parent members.

line chart A chart that displays one to 50 data sets, each represented by a line. A line chart can display each line stacked on the preceding ones, as represented by an absolute value or a percent.

link (1) A reference to a repository object. Links can reference folders, files, shortcuts, and other links. (2) In a task flow, the point where the activity in one stage ends and another begins.

linked data model Documents that are linked to a master copy in a repository

linked reporting object (LRO) A cell-based link to an external file such as cell notes, URLs, or files with text, audio, video, or pictures. (Only cell notes are supported for Essbase LROs in Financial Reporting.)

local report object A report object that is not linked to a Financial Reporting report object in Explorer. *Contrast with linked reporting object (LRO).*

local results A data model's query results. Results can be used in local joins by dragging them into the data model. Local results are displayed in the catalog when requested.

locked data model Data models that cannot be modified by a user.

LSC services Services configured with the Local Service Configurator. They include Global Services Manager (GSM), Local Services Manager (LSM), Session Manager, Authentication Service, Authorization Service, Publisher Service, and sometimes, Data Access Service (DAS) and Interactive Reporting Service.

Map Navigator A feature that displays your current position on a Strategy, Accountability, or Cause and Effect map, indicated by a red outline.

master data model An independent data model that is referenced as a source by multiple queries. When used, "Locked Data Model" is displayed in the Query section's Content pane; the data model is linked to the master data model displayed in the Data Model section, which an administrator may hide.

MDX (multidimensional expression) The language that give instructions to OLE DB for OLAP- compliant databases, as SQL is used for relational databases. When you build the OLAPQuery section's Outliner, Interactive Reporting Clients translate requests into MDX instructions. When you process the query, MDX is sent to the database server, which returns records that answer your query. *See also SQL spreadsheet.*

measures Numeric values in an OLAP database cube that are available for analysis. Measures are margin, cost of goods sold, unit sales, budget amount, and so on. *See also fact table.*

member A discrete component within a dimension. A member identifies and differentiates the organization of similar units. For example, a time dimension might include such members as Jan, Feb, and Qtr1.

member list A named group, system- or user-defined, that references members, functions, or member lists within a dimension.

metadata A set of data that defines and describes the properties and attributes of the data stored in a database or used by an application. Examples of metadata are dimension names, member names, properties, time periods, and security.

metric A numeric measurement computed from business data to help assess business performance and analyze company trends.

MIME Type (Multipurpose Internet Mail Extension) An attribute that describes the data format of an item, so that the system knows which application should open the object. A file's mime type is determined by the file extension or HTTP header. Plug-ins tell browsers what mime types they support and what file extensions correspond to each mime type.

minireport A report component that includes layout, content, hyperlinks, and the query or queries to load the report. Each report can include one or more minireports.

missing data (#MISSING) A marker indicating that data in the labeled location does not exist, contains no value, or was never entered or loaded. For example, missing data exists when an account contains data for a previous or future period but not for the current period.

model (1) In data mining, a collection of an algorithm's findings about examined data. A model can be applied against a wider data set to generate useful information about that data. (2) A file or content string containing an application-specific representation of data. Models are the basic data managed by Shared Services, of two major types: dimensional and non-dimensional application objects. (3) In Business Modeling, a network of boxes connected to represent and calculate the operational and financial flow through the area being examined.

multidimensional database A method of organizing, storing, and referencing data through three or more dimensions. An individual value is the intersection point for a set of dimensions.

native authentication The process of authenticating a user name and password from within the server or application.

note Additional information associated with a box, measure, scorecard or map element.

null value A value that is absent of data. Null values are not equal to zero.

online analytical processing (OLAP) A multidimensional, multiuser, client-server computing environment for users who analyze consolidated enterprise data in real time. OLAP systems feature drill-down, data pivoting, complex calculations, trend analysis, and modeling.

origin The intersection of two axes.

page member A member that determines the page axis.

palette A JASC compliant file with a .PAL extension. Each palette contains 16 colors that complement each other and can be used to set the dashboard color elements.

performance indicator An image file used to represent measure and scorecard performance based on a range you specify; also called a status symbol. You can use the default performance indicators or create an unlimited number of your own.

personal pages A personal window to repository information. You select what information to display and its layout and colors.

personal recurring time events Reusable time events that are accessible only to the user who created them.

personal variable A named selection statement of complex member selections.

perspective A category used to group measures on a scorecard or strategic objectives within an application. A perspective can represent a key stakeholder (such as a customer, employee, or shareholder/financial) or a key competency area (such as time, cost, or quality).

pie chart A chart that shows one data set segmented in a pie formation.

pinboard One of the three data object display types. Pinboards are graphics, composed of backgrounds and interactive icons called pins. Pinboards require traffic lighting definitions.

pins Interactive icons placed on graphic reports called pinboards. Pins are dynamic. They can change images and traffic lighting color based on the underlying data values and analysis tools criteria.

plot area The area bounded by X, Y, and Z axes; for pie charts, the rectangular area surrounding the pie.

predefined drill paths Paths used to drill to the next level of detail, as defined in the data model.

presentation A playlist of Web Analysis documents, enabling reports to be grouped, organized, ordered, distributed, and reviewed. Includes pointers referencing reports in the repository.

primary measure A high-priority measure important to your company and business needs. Displayed in the Contents frame.

Production Reporting *See SQR Production Reporting.*

promotion The process of transferring artifacts from one environment or machine to another; for example, from a testing environment to a production environment.

property A characteristic of an artifact, such as size, type, or processing instructions.

proxy server A server acting as an intermediary between workstation users and the Internet to ensure security.

public job parameters Reusable, named job parameters created by administrators and accessible to users with requisite access privileges.

public recurring time events Reusable time events created by administrators and accessible through the access control system.

publish The process that enables a model owner to forward a model or model changes for inclusion in an enterprise model.

range A set of values including upper and lower limits, and values falling between limits. Can contain numbers, amounts, or dates.

reconfigure URL URL used to reload servlet configuration settings dynamically when users are already logged on to the Workspace.

recurring time event An event specifying a starting point and the frequency for running a job.

relational database A type of database that stores data in related two-dimensional tables. *Contrast with multidimensional database*.

report object In report designs, a basic element with properties defining behavior or appearance, such as text boxes, grids, images, and charts.

resources Objects or services managed by the system, such as roles, users, groups, files, and jobs.

result frequency The algorithm used to create a set of dates to collect and display results.

role The means by which access permissions are granted to users and groups for resources.

row heading A report heading that lists members down a report page. The members are listed under their respective row names.

RSC services Services that are configured with Remote Service Configurator, including Repository Service, Service Broker, Name Service, Event Service, and Job Service.

scale The range of values on the Y axis of a chart.

schedule Specify the job that you want to run and the time and job parameter list for running the job.

score The level at which targets are achieved, usually expressed as a percentage of the target.

scorecard Business Object that represents the progress of an employee, strategy element, or accountability element toward goals. Scorecards ascertain this progress based on data collected for each measure and child scorecard added to the scorecard.

scorecard report A report that presents the results and detailed information about scorecards attached to employees, strategy elements, and accountability elements.

secondary measure A low-priority measure, less important than primary measures. Secondary measures do not have Performance reports but can be used on scorecards and to create dimension measure templates.

Section pane Lists all sections that are available in the current Interactive Reporting Client document.

security agent A Web access management provider (for example, Netegrity SiteMinder) that protects corporate Web resources.

security platform A framework enabling Oracle's Hyperion applications to use external authentication and single sign-on.

services Resources that enable business items to be retrieved, changed, added, or deleted. Examples: Authorization and Authentication.

servlet A piece of compiled code executable by a Web server.

Servlet Configurator A utility for configuring all locally installed servlets.

sibling A child member at the same generation as another child member and having the same immediate parent. For example, the members Florida and New York are children of East and each other's siblings.

single sign-on Ability to access multiple Oracle's Hyperion products after a single login using external credentials.

SmartCut A link to a repository item, in URL form.

snapshot Read-only data from a specific time.

SPF files Printer-independent files created by a SQR Production Reporting server, containing a representation of the actual formatted report output, including fonts, spacing, headers, footers, and so on.

Spotlighter A tool that enables color coding based on selected conditions.

SQL spreadsheet A data object that displays the result set of a SQL query.

SQR Production Reporting A specialized programming language for data access, data manipulation, and creating SQR Production Reporting documents.

stacked charts A chart where the categories are viewed on top of one another for visual comparison. This type of chart is useful for subcategorizing within the current category. Stacking can be used from the Y and Z axis in all chart types except pie and line. When stacking charts the Z axis is used as the Fact/Values axis.

Start in Play The quickest method for creating a Web Analysis document. The Start in Play process requires you to specify a database connection, then assumes the use of a spreadsheet data object. Start in Play uses the highest aggregate members of the time and measures dimensions to automatically populate the rows and columns axes of the spreadsheet.

strategic objective (SO) A long-term goal defined by measurable results. Each strategic objective is associated with one perspective in the application, has one parent, the entity, and is a parent to critical success factors or other strategic objectives.

Strategy map Represents how the organization implements high-level mission and vision statements into lower-level, constituent strategic goals and objectives.

structure view Displays a topic as a simple list of component data items.

Structured Query Language A language used to process instructions to relational databases.

subscribe Flags an item or folder to receive automatic notification whenever the item or folder is updated.

Summary chart In the Investigates Section, rolls up detail charts shown below in the same column, plotting metrics at the summary level at the top of each chart column.

super service A special service used by the startCommonServices script to start the RSC services.

target Expected results of a measure for a specified period of time (day, quarter, etc.,)

time events Triggers for execution of jobs.

time scale Displays metrics by a specific period in time, such as monthly or quarterly.

token An encrypted identification of one valid user or group on an external authentication system.

top and side labels Column and row headings on the top and sides of a Pivot report.

top-level member A dimension member at the top of the tree in a dimension outline hierarchy, or the first member of the dimension in sort order if there is no hierarchical relationship among dimension members. The top-level member name is generally the same as the dimension name if a hierarchical relationship exists.

trace level Defines the level of detail captured in the log file.

traffic lighting Color-coding of report cells, or pins based on a comparison of two dimension members, or on fixed limits.

transformation (1) Transforms artifacts so that they function properly in the destination environment after application migration. (2) In data mining, modifies data (bidirectionally) flowing between the cells in the cube and the algorithm.

transparent login Logs in authenticated users without launching the login screen.

trusted password A password that enables users authenticated for one product to access other products without reentering their passwords.

trusted user Authenticated user

user directory A centralized location for user and group information. Also known as a repository or provider.

Web server Software or hardware hosting intranet or Internet Web pages or Web applications.

weight Value assigned to an item on a scorecard that indicates the relative importance of that item in the calculation of the overall scorecard score. The weighting of all items on a scorecard accumulates to 100%. For example, to recognize the importance of developing new features for a product, the measure for New Features Coded on a developer's scorecard would be assigned a higher weighting than a measure for Number of Minor Defect Fixes.

ws.conf A configuration file for Windows platforms.

wsconf_platform A configuration file for UNIX platforms.

Y axis scale Range of values on Y axis of charts displayed in Investigate Section. For example, use a unique Y axis scale for each chart, the same Y axis scale for all Detail charts, or the same Y axis scale for all charts in the column. Often, using a common Y axis improves your ability to compare charts at a glance.

Zero Administration Software tool that identifies version number of the most up-to-date plug-in on the server.

zoom Sets the magnification of a report. For example, magnify a report to fit whole page, page width, or percentage of magnification based on 100%.

ZoomChart Used to view detailed information by enlarging a chart. Enables you to see detailed numeric information on the metric that is displayed in the chart.

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