HP OpenView Performance Insight

Guide to Building and Viewing Reports

Software Version: 5.1

for the HP-UX, Linux, Solaris, and Windows operating systems

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Revisions

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This web site provides contact information and details about the products, services, and support that HP offers.

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Getting Started

This chapter describes three of the HP OpenView Performance Insight (OVPI) client applications (Report Builder, Report Viewer, and the Web Access Server), the prerequisites you must meet to use them, and how to start them.

➤ For information about the Management Console client application, refer to the *Performance Insight Administration Guide*.

Overview

To help you with the report preparation process, OVPI supplies client applications. The client applications provide the interface for designing, displaying, scheduling, generating, and printing management reports; and distributing reports using the Web Access Server. You can install a client application on any networked system.

The client applications discussed in this guide are as follows:

- Report Builder. Report Builder lets you build customized reports based on data from the OVPI database, modify existing reports, and deploy reports to the Web Access Server.

- Report Viewer. Lets you view, modify, and print the reports you purchased with OVPI or the custom reports you create with Report Builder.

- Web Access Server. Lets you deploy, view, schedule, and generate reports using a Web browser.

  It also lets you perform administrative tasks for the OVPI client applications and services. Refer to the *Performance Insight Administration Guide* for details.

Report Types

The client applications use the following files: report definition and dataset.

Report Definition

A *report definition* file (`.rep` file extension) contains multiple tables, graphs, graphics, and text and retrieves its data from the database.

Dataset

A *dataset* file (`.srep` file extension) is similar to a report, except when you view a dataset report, its data is retrieved from the report, *not* the database. A dataset report is a snapshot of the data taken at the time the report is generated. This is performed by a batch generation process, which is typically set up by the Administrator. Like a report definition file, you can change many of the display attributes of a dataset report.

Prerequisites

Before you can use Report Builder, Report Viewer, or the Web Access Server, ensure that you have met the following prerequisites:

- OVPI is installed. For more information about installing OVPI, refer to the *Performance Insight Installation Guide*.

- You have a user account. For more information about user accounts, see your Administrator or refer to the *Performance Insight Administration Guide*.

- You have *one* of the following Web browsers installed on the system where you will use the Web Access Server application or view the online help for Report Viewer or Report Builder:

  — Microsoft Internet Explorer 5.5 or later

  — Netscape Navigator 6.0 or later

- The Web Access Server service (OVPI HTTP Server) is running. For more information about how to check if the Web Access Server is running, refer to the *Performance Insight Administration Guide*.

- To view and generate reports properly, make sure that your display is set to *one* of the following: 8, 16, 24, or 32 bits.

- Before you attempt to build reports, which is an advanced feature of OVPI, consult your HP representative for guidance.

Starting the Client Applications

You can use the client applications on either a Windows or a UNIX operating system. For a list of supported operating systems, refer to the *Performance Insight Installation Guide*.

Starting Report Builder or Report Viewer

The following sections describe how to start Report Builder and Report Viewer on UNIX and Windows systems.

UNIX System

To start Report Builder or Report Viewer on a UNIX system:

1 Open a new shell window on the system where the application is installed.

2 Navigate to the following directory:

   installation_directory/bin

   In this instance, *installation_directory* is the directory into which you installed OVPI.

3 Type either of the following commands, and then press **ENTER**:

— `./builder`

— `./viewer`

Windows System

To start Report Builder and Report Viewer on a Windows system, do *one* of the following:

• From the Windows desktop, click the Start button, point to Programs, point to HP OpenView, point to Performance Insight, and then click **Builder** or **Viewer**.

• From a Windows Command Prompt window, type *one* of the following commands at the MS-DOS command prompt, and then press **ENTER**:

— `builder`

— `viewer`

> The **builder** and **viewer** commands support a set of command-line options. For more information about these command-line options, refer to the *Performance Insight Reference Guide*.

• From Windows Explorer:

   a Navigate to the following directory:

   *installation_directory***\bin**

   In this instance, *installation_directory* is the directory into which you installed OVPI.

   b Double-click *one* of the following:

— `builder.exe`

— `viewer.exe`

Logging On

To log on to Report Builder or Report Viewer:

1 Start the application you want to use. For more information about how to start either application, see Starting the Client Applications on page 17.

2   Perform the action you want. (For example, on the File menu, click **Open**. In the Open dialog box, choose the report you want to open, and click **Open**.)

▶   If you are using Report Builder and open a dataset report (`.srep`), you do not have to log on to the application. In any other instance, the Login dialog box opens.

The Login dialog box opens.
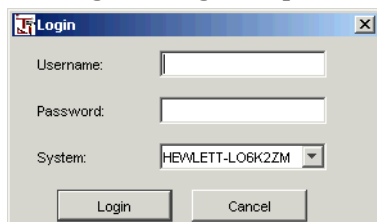
3   Enter your username, your password, and select the system on which you want to use the application.

For more information about your user account or about creating user accounts, see your Administrator or refer to the *Performance Insight Administration Guide*.

4   Click **Login**.

Displaying the Web Access Server

To display the Web Access Server:

1   Enter the address of Web Access Server in your Web browser. For more information about this address, see your Administrator or refer to the *Performance Insight Administration Guide*.

The Log on page appears.
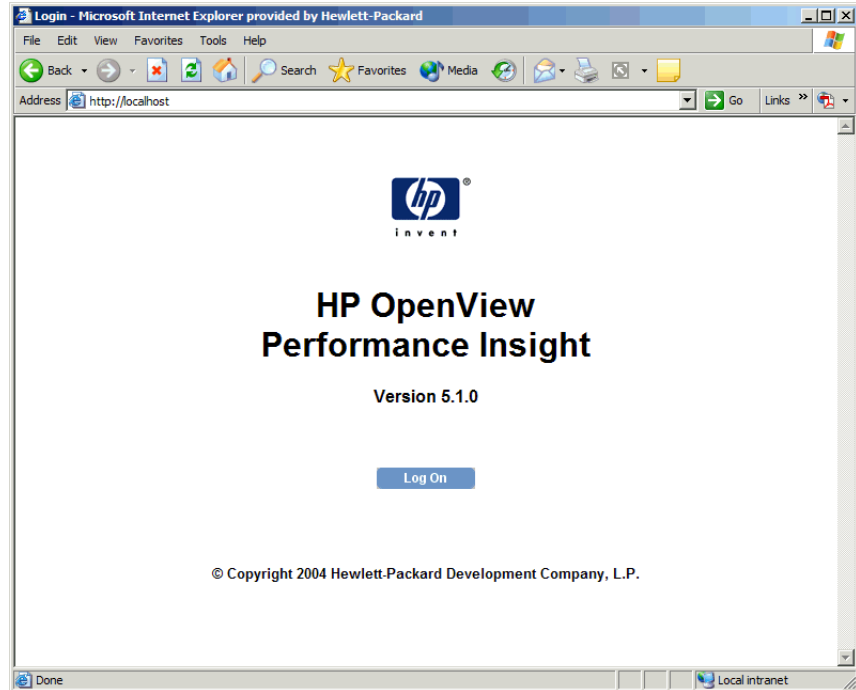
2 Click **Log on**.

The Connect to dialog box opens.
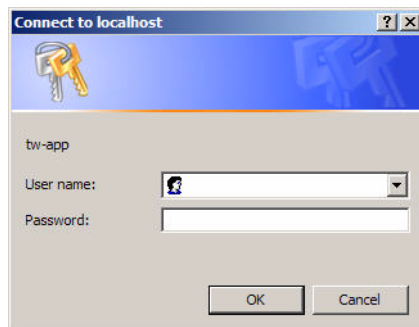
3 Type your username and password.

For more information about your user account or about creating user accounts, see your Administrator or refer to the *Performance Insight Administration Guide*.

4   Select **Save this password in your password list** if you want your password to automatically appear in the Password box each time you log on.

5   Click **OK**.

The Web Access Server appears as shown in Figure 1 on page 272. For more information about the Web Access Server, see Chapter 11, Using the Web Access Server.

▶   If the account that you are logged on to the Web Access Server with remains inactive for more than 30 minutes, the Enter Network Password dialog box opens, requiring that you enter your password to gain access to the application.

Using the Client Applications

For more information about how to use the client applications, see the following chapters:

- Chapter 2, Using Report Builder—Describes the Report Builder user interface.

- Chapter 3, Creating Reports—Describes how to create and modify report elements, set report building preferences, change Report Builder options, and save, print, open, and close reports.

- Chapter 4, Modifying Reports—Describes how to change element properties, modify graphs and tables, and create reports with deferred selections.

- Chapter 5, Linking Report Elements—Describes how to link one element to another in a report.

- Chapter 6, Modifying Data Selection—Describes how to determine the way a report's elements select data from the database and how to use OVPI's advanced data selection tools.

- Chapter 7, Scheduling and Generating Reports—Describes how to schedule and generate reports using the Web Access Server and the Schedule and Generate Tools.

- Chapter 8, Deploying Reports—Describes how to deploy and undeploy reports using the Deployment Wizard and the Deployment Tool.

- Chapter 9, Creating Forms—Describes how to create forms, which let you change the data contained in a single database table.

- Chapter 10, Using Report Viewer and Chapter 11, Using the Web Access Server—Describe how to view reports using Report Viewer and the Web Access Server, respectively. These are the reports you purchased with OVPI or the custom reports you creating using Report Builder.

- Appendix A, Element Properties—Describes the properties for each table and graph element that you can viewing when using Report Builder.

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Using Report Builder

Report Builder lets you build, customize, and open existing reports. You can use Report Builder to:

- Build historical performance reports that contain the following: multiple graphs, tables, graphics, text, and company logos; drill-down navigation between related graphs and tables for detailed knowledge of network and device problems.

- Customize the reports you create and any of the reports currently available from HP, which support many of today's major technologies.

- Open multiple reports of different types (that is, dataset and report files).

- View existing reports.

- Create forms, which are a special kind of report. A form is a user interface that lets you change the data contained in a single database table.

The following figure shows a sample report and its elements.

You must start Report Builder on the system where it is installed. For information about starting Report Builder, see Starting the Client Applications on page 17.

After you start Report Builder, the Report window appears in the Report Builder window. Figure 1 on page 25 shows the Report window.

The Report Builder Interface

Figure 1 shows the Report Builder window after you choose **New** from the File menu and log on to Report Builder.

Title bar
Menu bar
Toolbars

Components window

Properties list

Report window

Status bar
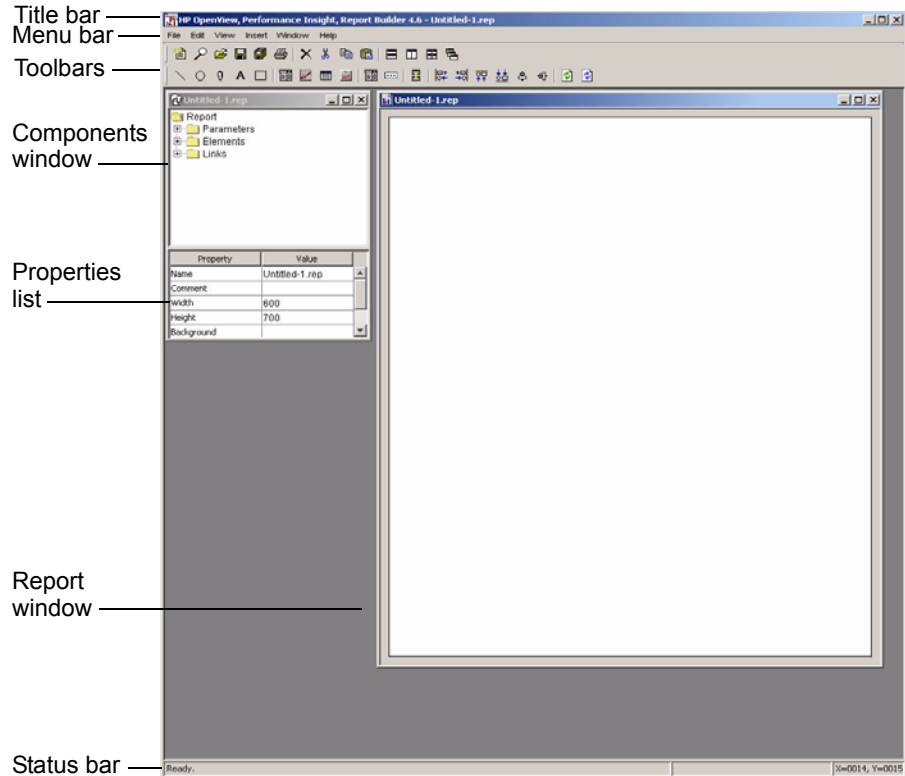
Figure 1   The Report Builder Window

Report Builder has an MDI (Multiple Document Interface) desktop. Using the MDI desktop, Report Builder lets you open, modify, and preview multiple reports of differing formats (report and dataset files). The MDI desktop uses dockable and document windows.

Report Builder Windows

Report Builder uses the following types of windows:

- A *dockable window* floats on top of the other windows or it snaps to a side of the application window.

  The Components, Browser, and Log Viewer windows are dockable windows. For more information, see Docking Windows on page 27 and Undocking Windows on page 28.

- A *document window* appears when you open an existing report or create a new one.

  The Report window is a document window. For more information, see Modifying Undocked and Document Windows on page 28.

The following figure shows the Browser window when it is undocked.
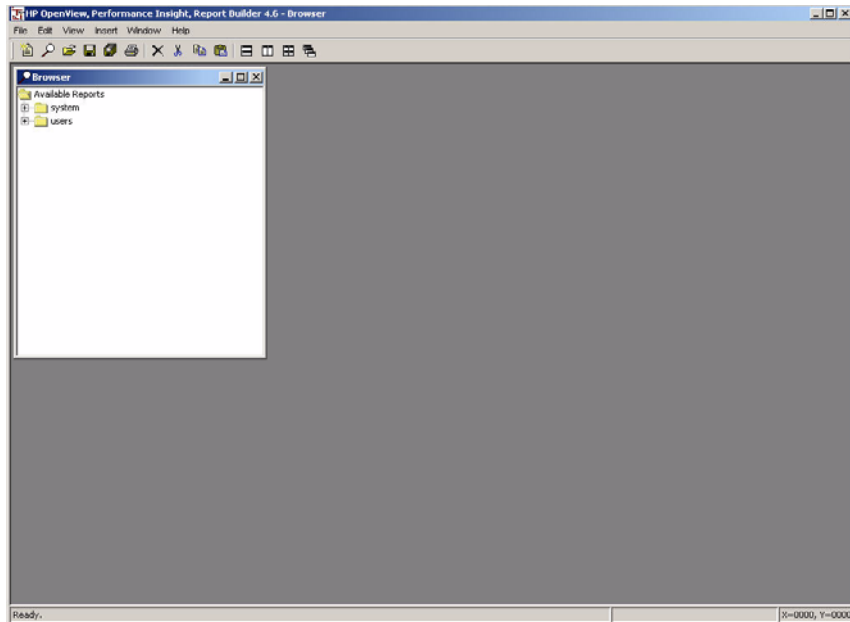
The following figure shows the Browser, Components, and Log Viewer
windows when they are docked. (The Browser and Components windows are
arranged in a tabbed-page format when more than one is docked on the same
edge of the Report Builder window.)
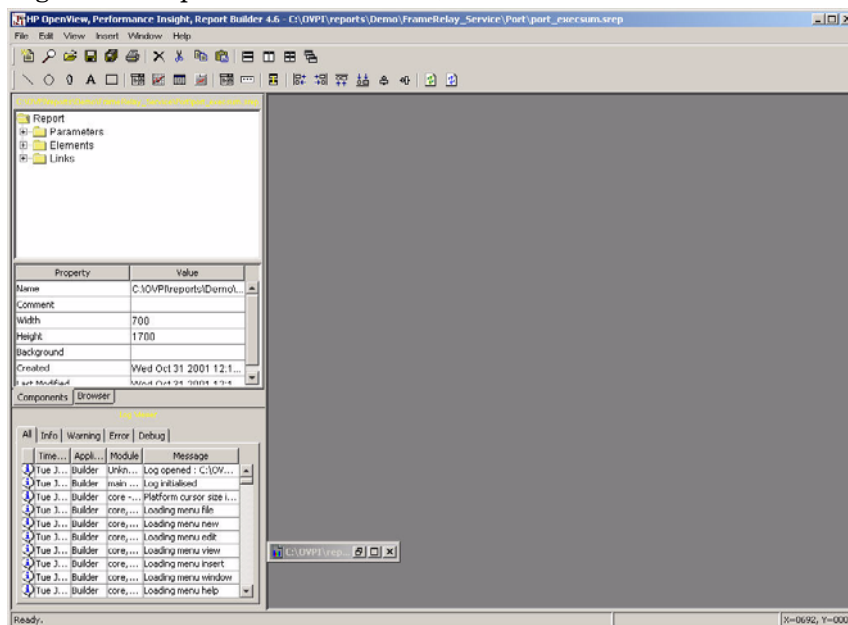
Docking Windows

To dock a window:

1   Click the title bar of the window you want to move with the left mouse
    button.

2   Drag the window to any edge (left, top, right, or bottom) of the application
    window.

    The window snaps to the edge. For the top or bottom edge, the window
    snaps horizontally; for left or right edge, the window snaps vertically.

Undocking Windows

To undock a docked window:

• Press the **SHIFT** key and click the pointer on the window's title bar.

Modifying Undocked and Document Windows

You can minimize, maximize, close, and move undocked and document windows like any other window for your operating system.

To move a document window:

• Click the title bar of the window you want to move and drag it to the location you want.

You can minimize, maximize, restore, close, and resize undocked and document windows just like you do when you are running Windows. Click the Minimize, Maximize, Restore, or Close buttons in the upper right-hand of the window. To resize, place the pointer over any edge of the window and drag.

Title Bar

The title bar is the horizontal bar at the top of the Report Builder window. It displays information about the current window. Figure 1 on page 25 shows the title bar.

Menu Bar

Report Builder has the following menus: File, Edit, View, Insert, Window, and Help.

Report Builder also lets you use your keyboard to perform some of its operations. To the right of each menu or submenu option is a notation showing the option's *shortcut key*. The shortcut key is the key sequence that produces the same result as selecting the menu option from the menu.

File Menu

Table 1 lists the options on the File menu.

Table 1   Report Builder File Menu Options

Menu Option and Shortcut Key	Description
New	Lets you create a new report or form.
Open (**CTRL+O**)	Displays the Open dialog box, which lets you open an existing report.
Browse	Displays the Browser window, which lets you open reports that have been deployed to the system and users folders on the Web Access Server. For more information about deploying reports, see Chapter 8, Deploying Reports.
Close	Closes the active Report window.
Close All	Closes all of the open Report windows.
Save (**CTRL+S**)	Saves the report with the current file name to the current directory location. When you save a report for the first time, the Save dialog box will open.
Save As	Opens the Save dialog box, which lets you save your report to any of the available formats.

Table 1   Report Builder File Menu Options (cont'd)

Menu Option and Shortcut Key	Description
Save All	Saves all of the opened reports with their current file names to the current directory location.
Deploy	Opens the Deployment Wizard, which lets you deploy reports to the `users` or `system` folders on the Web Access Server. For more information about deploying reports, see Chapter 8, Deploying Reports.
Print (**CTRL+P**)	Opens the Print dialog box, which lets you print a report and specifying several different printing options.
Disconnect from server	Disconnects you from the server. A confirmation dialog box opens to confirm that you want to disconnect from the server.
Exit	Exits Report Builder.

On UNIX systems, the Open, Save As, Print, and Page Setup dialog boxes appear differently than those for Windows systems. Refer to your operating system-specific documentation for information about how to use these dialog boxes.

Edit Menu

Table 2 lists the options on the Edit menu.

Table 2   Report Builder Edit Menu Options

Menu Option and Shortcut Key	Description
Undo (**CTRL+Z**)	Lets you reverse the effect of the previous operation, if it is possible to do so. For example, you can undo an operation that modifies a report; however, if you change a preference, you can not undo it.
Redo (**CTRL+Y**)	Lets you perform the last operation you did before choosing **Undo**. For example, if you delete a circle and then restore it using **Undo**, when you choose **Redo**, Report Builder deletes the circle again.
Cut (**CTRL+X**)	Removes the selected object from the report and places it on the clipboard.
Copy (**CTRL+C**)	Copies the selected object and places it on the clipboard.
Paste (**CTRL+V**)	Pastes the object that you previously cut or copied.
Delete (**DELETE** key)	Deletes the selected object or objects but does *not* place the object or objects on the clipboard.
Select All (**CTRL+A**)	Selects all the objects in the active report window.
Align Top	Aligns the top edges of all the selected objects.
Align Left	Aligns the left edges of all the selected objects.
Align Right	Aligns the right edges of all the selected objects.
Align Bottom	Aligns the bottom edges of all the selected objects.

Table 2   Report Builder Edit Menu Options (cont'd)

Menu Option and Shortcut Key	Description
Align Vertical	Aligns the centers of the selected objects vertically in the center of the Report window.
Align Horizontal	Aligns the centers of the selected objects horizontally in the center of the Report window.
Refresh (**CTRL+F5**)	Refreshes the selected element or elements in the current Report window.
Refresh All (**F5**)	Refreshes all the elements in the current Report window.
Preferences (**ALT+ENTER**)	Displays the Preferences dialog box, which lets you set your report creation preferences. For more information, see Creating Reports on page 47.
Options (**ALT+O**)	Displays the Options dialog box, which lets you change Report Builder options. For more information, see Specifying Options on page 109.
Parameter Values (**ALT+P**)	If the current report has parameters defined, this option displays the Modify Parameter Values dialog box, which lets you change any of the parameters in a report. For more information, see Modifying Parameter Values on page 197.

View Menu

Table 3 lists the options on the View menu.

Table 3   Report Builder View Menu Options

Menu Option	Description
Components	Displays the Components window if it is not already displayed.
Log File	Displays the Log Viewer window, which displays the contents of Report Builder's log file (`builder.log`). The log file messages are categorized by type (all, info, warning, error, and debug).
Log Output	Displays the Output Viewer window, which displays the log file messages as they are written to the `builder.log` file.
Grid	Displays a grid in the Report window, which you can use to size and position elements.
Links	Displays the links for the selected source object.
Toolbars	Lets you show or hide the active toolbars.
Status Bar	Lets you show or hide the status bar.

Insert Menu

Table 4 lists the options on the Insert menu.

Table 4   Report Builder Insert Menu Options

Menu Option	Description
Graph	Lets you add a graph to a report.
Table	Lets you add a table to a report.
Combo Box	Lets you add a combination box to a report.
Input Field	Lets you add an input field to a form.

Table 4   Report Builder Insert Menu Options (cont'd)

Menu Option	Description
Input Combo Box	Lets you add an input combination box to a form.
Tabbed Area	Lets you add a tabbed area to a report.
Image	Lets you add an image to a report.
Line	Lets you add a line to a report.
Label	Lets you add a label (text) to a report.
Circle	Lets you add a circle to a report.
Rectangle	Lets you add a rectangle to a report.
Link	Lets you link two or more elements (graph, table, and tabbed page) in a report. For more information about how to link elements in a report, see Linking Elements on page 161.

Window Menu

The Window menu lets you control Report Builder windows. Table 5 lists the options on the Window menu.

▶ Ensure that all the windows that you want to tile are open. You cannot tile minimized windows.

Table 5   Report Builder Window Menu Options

Menu Option	Description
Tile	Arranges the open Report windows so that they fill the entire Report Builder window without overlapping.
Tile Vertically	Arranges all of the open Report windows side-by-side, so that they fill the entire window without overlapping.
Tile Horizontally	Arranges the open Report windows top to bottom so that they fill the entire window without overlapping.
Cascade	Arranges all of the open Report windows in an overlapping fashion so that each title bar is visible.
Open Windows List	Lists, in the order in which you opened them, all the Report windows opened during the current session. A bullet appears next to the report that you are currently viewing.

Help Menu

Table 6 lists the options on the Help menu.

Table 6   Report Builder Help Menu Options

Menu Option	Description
Help Topics	Displays a list of topics available within the Help system.
About Report Builder	Displays version and copyright information for Report Builder.

Toolbars

Report Builder has a General toolbar and a Report Builder toolbar. They contain buttons for the most frequently used tasks.

General Toolbar

The following figure shows the General toolbar; by default, it always appears in the toolbar area of the Report Builder window.
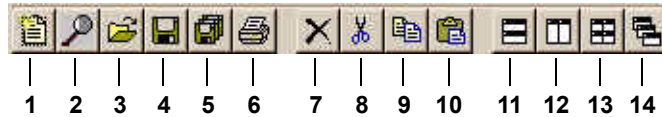
1. New	7. Delete	13. Tile
2. Browse	8. Cut	14. Cascade
3. Open	9. Paste	
4. Save	10. Copy	
5. Save All	11. Tile Horizontally	
6. Print	12. Tile Vertically	

Report Builder Toolbar

The Report Builder toolbar appears below the General toolbar when the Report window is the active window. The following figure shows the Report Builder toolbar.
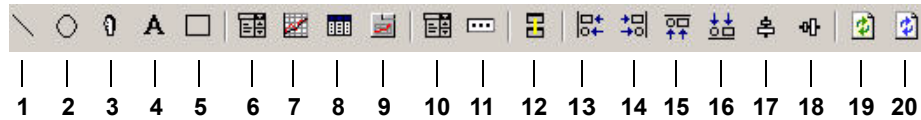
1. Line	8. Table	15. Align Top
2. Circle	9. Tabbed Area	16. Align Bottom
3. Image	10. Input Combo Box	17. Align Vertical
4. Label	11. Input Field	18. Align Horizontal
5. Rectangle	12. Link Elements	19. Refresh
6. Combo Box	13. Align Left	20. Refresh All
7. Graph	14. Align Right	

Components Window

The Components window displays a report's elements and the elements' properties. The following figure shows the Components window.

Components window ————

Components tree ————

Properties list ————
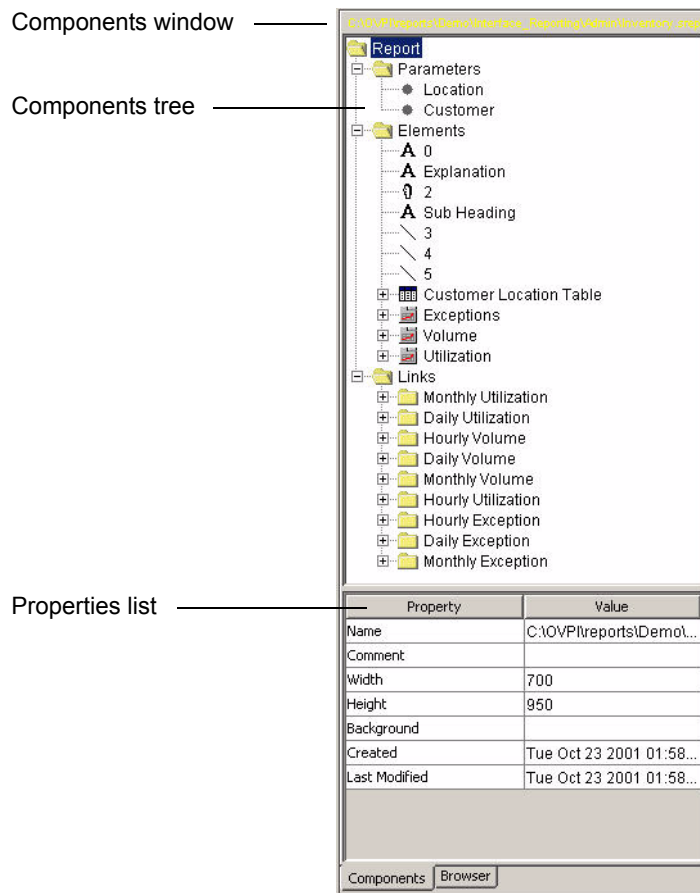
The Components window comprises the following panes:

- **Components tree** – Displays the hierarchical contents of the report that is currently displayed in the Report window. A report's content is organized into levels. You can expand and collapse these levels. When you select items in the level, the Properties list displays the properties of that level. For more information about the hierarchical contents of a report, see .

- **Properties list** – Lists the properties and values for the selected level or item in the Components tree. You can select most properties in the list and modify them. For more information about modifying properties, see Changing Element Properties on page 123.

Report Levels

Within a report, there are three hierarchies of information: Parameters, Elements, and Links. For example, each time you create an element in a report, Report Builder adds an element item to the Elements level of the report. The following figure shows the levels and the items that can appear in the Elements level of a report.
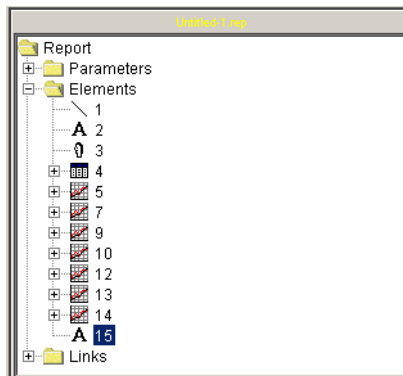
You can expand the hierarchical levels of a report just as you do when you view the contents of a Windows system using Windows Explorer. You can expand the Elements level of a report to see the additional levels and items it contains, or collapse those levels.

If you click on a level or an item and it has properties, they will appear in the Properties list.

To change level and item properties, you can do *one* of the following depending on the level or item that is selected:

• Change the properties displayed in the Properties list.

• Right-click a level or an item to select options from a shortcut menu.

For more information about modifying properties, see Chapter 3, Creating Reports.

Elements

The Elements level contains a report's elements, the elements' properties, and their data queries. An *element* is a graphic object (for example, a line or an image, a label, a table, a graph, or a tabbed page).

The following figure shows how the Table level appears.
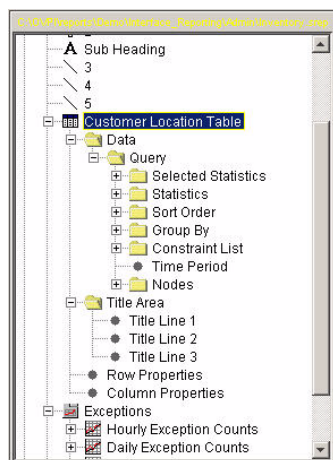
The following figure shows how the contents of the Graph level appears.
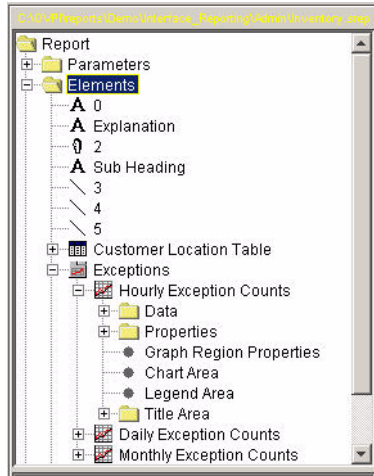
Table 7 lists the levels that each table and graph element contain.

Table 7   Graph and Table Levels' Contents

Level	Element	Contains...
Data	Both	The folder for data queries (Query). The Query folder contains the following folders: Selected Statistics, Statistics, Sort Order (for selected statistics), Group By, Constraint List (which contains Time Period, the time period for data selection), and Nodes (the nodes for data selection).
Title Area	Both	Title properties
Legend Area	Graph	Legend properties
Properties	Graph	Properties for the following: X-axis and the y-axis, region, chart, and legend
Row Properties	Table	Row properties
Column Properties	Table	Column properties

The following figure shows how the contents of a Tabbed Area level appears.
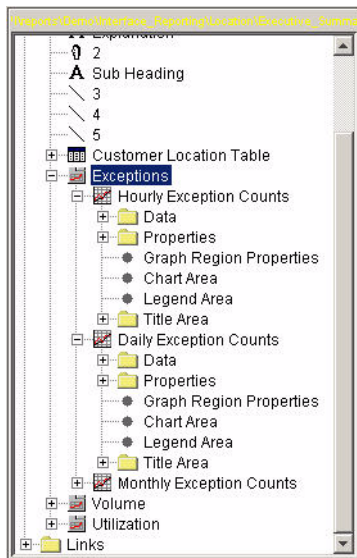
Tabbed areas contain the levels listed in Table 7 for tables and graphs; however, those levels are contained beneath the tab they appear on.

Parameters

A *parameter* specifies a name for a value. This name can be used in constraints, where the current value will be automatically substituted. For more information about creating parameters, see Creating Parameters on page 190.

The following figure shows how the contents of the Parameters level may appear when parameters are defined in a report.
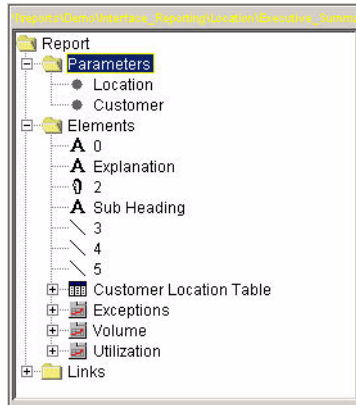
Links

One element can link to another element in a report. You can link tables, graphs, and tabbed pages. For more information about linking elements, see Linking Elements on page 161.

The following figure shows how the contents of the Links level may appear when a report contains links.
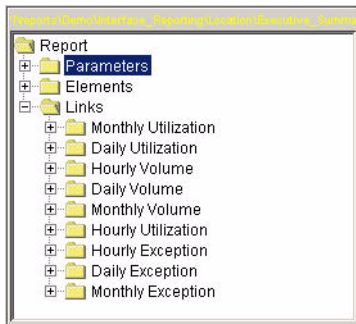
Report Window

The Report window appears in the Report Builder window after you open a new or existing report. Figure 1 shows the Report window.

When the Report window is active, you can create a new report in it or modify the report it displays. When you close the Report window, you close the report file.

The current list of open reports appears in the Window menu in the order in which you opened them; a bullet appears next to the active Report window as shown in the following figure.
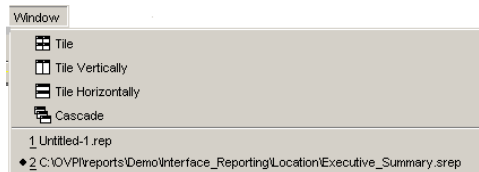
Logging Windows

Report Builder can display two different types of logging windows, the Log Viewer and the Output Viewer windows.

Log Viewer Window

The following figure shows the Log Viewer window; it displays the contents of Report Builder's log file (builder.log). The log file messages are categorized by type (all, info, warning, error, and debug). (This is a dockable window.)
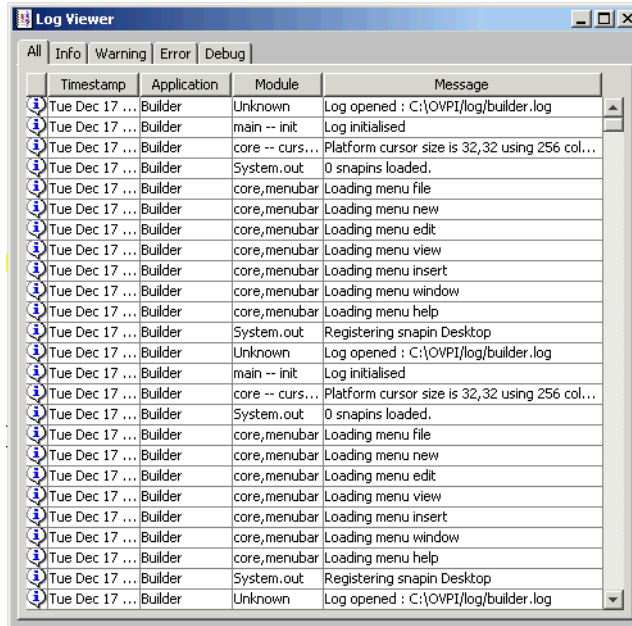
To display the Log Viewer window, choose **Log File** from the View menu.

To clear the messages in the window, right-click the Log Viewer window and choose **Clear** from the shortcut menu.

Output Viewer Window

The following figure shows the Output Viewer window; it displays the log file messages as they are written to the `builder.log` file. (This is a dockable window.)
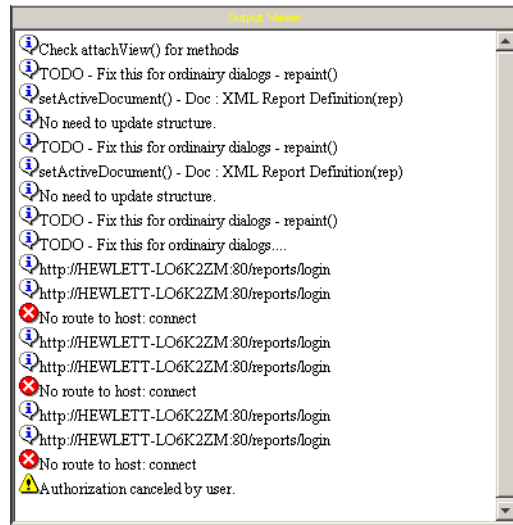
To display the Output Viewer window, choose **Log Output** from the View menu.

Status Bar

The status bar, which is located at the bottom of the Report Builder window, displays the status information for the current operation. The following figure shows the status bar.

1. Status text   2. Progress bar   3. Current pointer location

The status bar has the following components:

- Status text. Displays messages about the current operation.

  For example, when a report is loaded, the following message appears in the status text area:

  `Report loaded`

- Progress bar. Displays a completion percentage for operations that may take some time.

- Current pointer location. The coordinates display the current location of the mouse pointer in relation to the upper left-hand corner of the Report window. This is useful when you are drawing an element in the Report window.

Creating Reports

Using HP OpenView Performance Insight's (OVPI) Report Builder, you can create new reports or modify existing reports. This chapter describes how to create a report. Specifically, it describes how to do the following:

- Create, select, resize, move, cut and paste, and delete report elements.
- Set the preferences (defaults) that Report Builder will use when you create a report.
- Change Report Builder's options.
- Save, print, open, and close reports.
- Export reports, tables, graphs, and graph overlay data.

Creating a Report

To create a report:

1   Do *one* of the following:

- To create a new report, do one of the following:

— Choose **New** from the File menu, and then choose **Report** from the shortcut menu.

— Click 📄 on the general toolbar, choose **Report** from the Create New dialog box, and then click **OK**.

- To modify a report on your system, follow the procedure in Opening Reports on Your System on page 50, and then proceed with Step 2.

- To modify a report on the Web Access Server, choose **Browse** from the File menu.

The Login dialog box opens.

> ► You only have to log on the first time you open or browse for an existing report.

2 Enter your username and your password, and click **Login**.

- If you are creating a new report, the Components and Report windows appear. By default, Report Builder creates a blank report with the following filename: Untitled-1.rep. The Report Builder toolbar displays.

- If you are modifying a report on the Web Access Server, go to Step 2 in Opening Reports on the Web Access Server on page 51, and then proceed with Step 3 in this procedure.

3 Reposition the windows as needed (see Report Builder Windows on page 26).

4 Use the Report Builder toolbar, the Insert menu, or the shortcut menus available in the Components tree to create your report.

To	See
Display a grid in the Report window.	Displaying the Grid on page 53
Create elements (images, labels, graphic objects, tables, graph, and tabbed areas).	Adding Elements on page 53
Select elements.	Selecting Elements on page 96
Position and transfer elements (move, microposition, resize, copy, cut, and paste).	Positioning and Transferring Elements on page 97
Delete elements.	Deleting Elements on page 100

To	See (cont'd)
Align elements.	Aligning Elements on page 101
Refresh the Report window.	Refreshing Elements on page 103
Change the Report Builder options.	Specifying Options on page 109

5   After you create elements, you can do any of the following:

- Link the report's tables, graphs, and tabbed areas (see Linking Elements on page 161).

- Modify your report by doing the following:

  — Modify graphs (see Modifying Graphs on page 126).

  — Modify tables (see Modifying Tables on page 148).

  — Create a deferred selection (see Creating Reports with Deferred Selections on page 152).

  — Modify how graph and table elements will select data from the database (see Chapter 6, Modifying Data Selection).

  — Specify more advanced ways (constraints and parameters) to define data selection (see Creating Constraints on page 185 and Creating Parameters on page 190).

6   After you create your report, do any of the following:

To	See
Save the report.	Saving Reports on page 117
Print the report.	Printing Reports on page 118
Close the report.	Closing Reports on page 119
Generate and schedule the report.	Chapter 7, Scheduling and Generating Reports
Deploy the report to the Web Access Server in order to view it using the Web Access Server.	Chapter 8, Deploying Reports
View the report using Report Viewer or the Web Access Server.	Viewing Reports on page 262 Viewing Deployed Items on page 281

Opening Reports

You can open the following types of reports:

- Report Definition (`.rep`) — A type of report that retrieves data from the database each time you run the report.

- Dataset (`.srep`) — A type of report that contains a snapshot of data taken from a database. For example, you can save a `.rep` file as a `.srep` file and use it as a demo report.

You can open a report by using any one of the following methods:

- Open dialog box – Lets you open reports that are located on your system. See .

- Browser window – Lets you open reports that have been deployed to the Web Access Server. See .

- **builder** command – Lets you open reports on your system or those that have been deployed to the Web Access Server. For more information about the **builder** command, refer to the *Performance Insight Reference Guide*.

- Drag-and-drop – Lets you drag a report from your file management application (for example, Windows Explorer) and drop it into the Report Builder window. See .

▶ When using Report Builder only, you can open dataset reports (`.srep`) without logging on to the application.

Opening Reports on Your System

To open a report on your system:

1 Do one of the following:

- On the General toolbar, click [icon].

- From the File menu, click **Open**.

The Open dialog box opens.
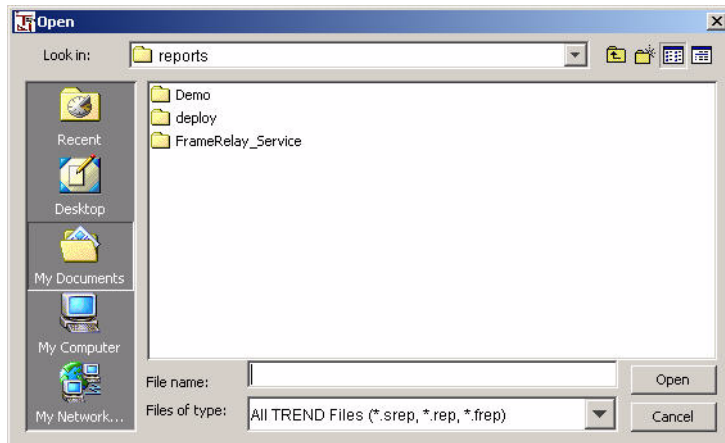
2   Navigate to the folder that contains the report you want to open.

3   To open the report, do *one* of the following:

•   Double-click the report.

•   Select the report, and then click **Open**.

Opening Reports on the Web Access Server

To view a report on the Web Access Server, the report must be deployed there first. You can deploy reports to the Web Access Server using any of the following applications:

•   Deployment Wizard (see Using the Deployment Wizard on page 228)

•   Web Access Server (see Deploying and Undeploying Reports on page 274)

To open a report located on the Web Access Server:

1   Do one of the following:

•   On the General toolbar, click .

•   From the File menu, click **Browse**.

The Browser window opens.
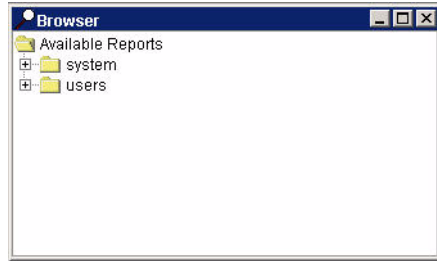
Reports are deployed to the following folders:

- System – All users can view the reports deployed in this folder; however, only the Administrator can deploy reports here.

- Users – This folder contains user-specific folders, which contain deployed reports. There is one folder for each user in the Users folder. Only the user who owns the folder and the Administrator can view the reports deployed in this folder.

2   Expand the folder that contains the report you want to open. A list of reports in the folder appears.

3   Double-click the report you want to open.

Opening Reports Using Drag-and-Drop

You can drag a report from your file management application (for example, Windows Explorer) and drop it into the Report Builder window.

To open a report using the drag-and-drop method:

1   Using your file management application, find the report that you want to open.

2   Ensure that Report Builder is running.

3   Drag the report to the Report Builder window.

   If you have not logged on to the application yet, log on using the Login dialog box which will open.

   The report is displayed.

Displaying the Grid

You can display a grid to help you size and position elements in the Report window. When the grid is displayed, elements that you create or move will snap to the grid.

To display the grid, choose **Grid** from the View menu.

Adding Elements

You can add elements to a report using the Report Builder toolbar, the Insert menu, and the shortcut menu, which is available when you right-click the Elements level in the Components tree.

You can add the following kinds of elements:

- Images – See Adding Images on page 54.

- Labels – See Adding Labels on page 56.

- Graphic objects (circles, rectangles, and lines) – See Adding Graphic Objects on page 59.

- Tables – See Adding Tables and Graphs on page 62.

- Graphs – See Adding Tables and Graphs on page 62.

- Combo Box – See Adding a Combination Box on page 59.

- Tabbed areas – See Creating Tabbed Areas on page 91.

After you add an element to a report, the element will appear in the Report window, and an element item will appear in the Components tree of your report. For example, after you add an image, the text "Image" appears in the Components tree. You can change an element's name (see Changing Element Names on page 102).

Adding Images

You can add an image (for example, a company logo) to your report. The following file formats are supported:

- `.gif`
- `.jpg`
- `.png`

Adding an Image

To add an image:

1   Do one of the following:

- On the Report Builder toolbar, click ⬚ .
- From the Insert menu, click **Image**.
- Right-click the report's Elements level, and choose **Insert Image** from the shortcut menu.

   The pointer changes to a crosshair.

2   Do *one* of the following:

- To create an element of a default size (200 x 200 pixels), click the pointer in the Report window.
- To create an element of an exact size, position the pointer (a crosshair) in the Report window where you want the upper-left corner of the element, and then drag the pointer until you reach the desired size.

The Open dialog box opens.
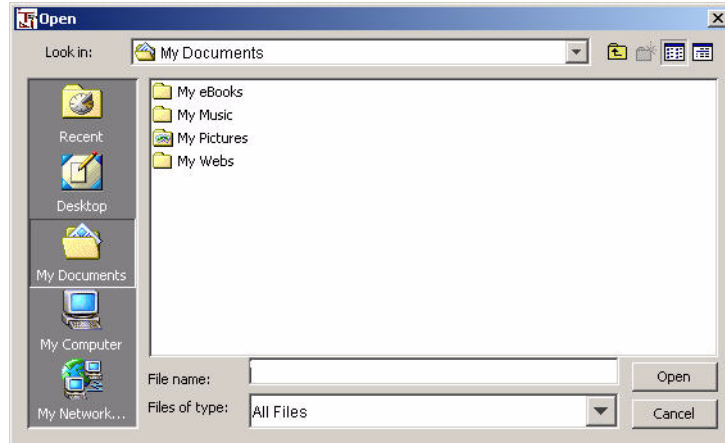
3   Navigate to the folder that contains the file you want to include.

4   Do one of the following:

- Select the file, and click **Open**.
- Double-click the file.

The image appears in the Report window, and an "Image" item appears in the Components tree. You can change an element's name (see Changing Element Names on page 102).

Editing an Image

To edit an image:

1   Select the image in the Report window or in the Components tree.

The Properties list displays the image's properties and the current values for those properties.

An image's properties are as follows: Name, Description, Width, Height, X, Y, Foreground, and File Name. For a description of each of these, see Appendix A, Element Properties.

2   Click the Value box next to any property to change its value.

For example, to change the image:

a   Click the Value box next to File Name. The Open dialog box opens.

    b   Locate a new image.

    c   Do *one* of the following:

       — Select the file, and click **Open**.

       — Double-click the file.

    The new image appears in the Report window.

3   To update the value, click in another Value box or move the pointer over the image.

Adding Labels

To add a label:

1   Do one of the following:

- On the Report Builder toolbar, click $\boxed{\mathbf{A}}$.

- From the Insert menu, click **Label**.

- Right-click the report's Elements level, and choose **Insert Label** from the shortcut menu.

2   Do *one* of the following:

- To create an element of a default size (200 x 200 pixels), click the pointer in the Report window.

- To create an element of an exact size, position the pointer (a crosshair) in the Report window where you want the upper-left corner of the element, and then drag the pointer until you reach the desired size.

A red box appears. By default, the text, "Label", appears in the box.

3   Click the pointer in the box. An insertion point appears.

4   Enter the text you want.

The label appears in the Report window, and a "Label" item appears in the Elements level of the report. You can change an element's name (see Changing Element Names on page 102).

For more information about how to align labels, see Aligning Elements on page 101.

Modifying a Label

You can do the following to modify a label:

- Edit label text.

  You can edit label text using the Report window or the report's Properties list.

- Change text attributes (font, size, bold, italics).

Editing Label Text

You can edit label text by using the Report window or the Properties list. You can also use the following key sequences to edit label text: **CTRL+C** (copy), **CTRL+X** (cut), and **CTRL+V** (paste).

To edit label text using the Report window:

1   Click the label to select it. An insertion point appears.

2   Edit the text.

To edit label text using the Properties list:

1   Click the label in the Report window. The label element is selected in the components tree.

2   In the Properties list, click the Value box next to Text. The Label Text dialog box opens.
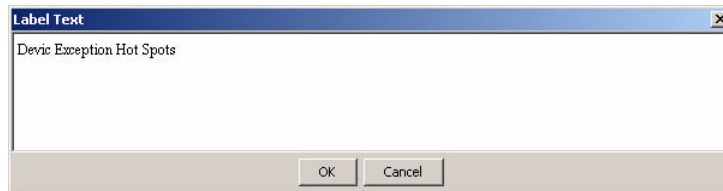
3   Edit the text.

4   Click **OK**.

Changing Text Attributes

To change text attributes:

1 Select the label in the Report window or in the Components tree.

The Properties list displays the label's properties and the current values for those properties.

An image's text attribute properties are as follows: Font Name, Font Size, Bold, and Italic. For a description of each of these, see Appendix A, Element Properties.

2 In the Properties list, click the Value box next to the property you want to change, and select or type another value.

3 To apply the change, do *one* of the following:

- Place the pointer over the label in the Report window.

- Click in any other Value box in the Properties list.

- *Text box only*: Press **ENTER** after you type the value.

Copying, Cutting, Pasting, and Deleting a Label

To copy, cut, paste, or delete a label:

1 Click the label in the Report window to select it.

2 Do the following:

- To copy a label, choose **Copy** from the Edit menu or press **CTRL+C**.

- To paste a label, choose **Paste** from the Edit menu or press **CTRL+V**. (The label is pasted on top of the label that you copied.)

- To cut a label, choose **Cut** from the Edit menu or press **CTRL+X**.

- To delete a label, do *one* of the following:

  — Press the **DELETE** key.

  — Choose **Delete** from the Edit menu.

  — Right-click the label, and choose **Delete Label** from the shortcut menu.

Adding Graphic Objects

To add a line, circle, or rectangle:

1   Do one of the following:

  • On the Report Builder toolbar, click the button for the object you want to add.

Graphic Object	Toolbar Button
Line	
Circle	
Rectangle	

  • From the Insert menu, click the object you want to add.

  • Right-click the report's Elements level, and choose the object you want to add from the shortcut menu.

2   Do *one* of the following:

  • To create an element of a default size (200 x 200 pixels), click the pointer in the Report window.

  • To create an element of an exact size, position the pointer (a crosshair) in the Report window where you want the upper-left corner of the element, and then drag the pointer until you reach the desired size.

The object appears in the Report window, and a "Line", "Circle", or "Rectangle" item will appear in the Elements level of the report, depending on the type of object you added. To change the name of the element, see Changing Element Names on page 102.

Adding a Combination Box

You can add a combination box to a report. You might use the combination box to update a drilldown value in a table or a graph.

For example, suppose you want to create a report that filters an entire interface set by several common criteria and then displays this information in a table. First, you would need to set up several combination boxes for the criteria selection, and then you would need to link those boxes to the table that will display the information. Thus, when the report is complete, the table would show only the interfaces that met the selection criteria.

One such combination box that might be created in this scenario might be a box that lets you choose an interface based on customer assignment. The procedure in this section shows how such a combination box might be created.

To add a combination box to a report:

1 Do *one* of the following:

- On the Report Builder toolbar, click 📇 .

- From the Insert menu, click **Combo Box**.

- Right-click the form's Elements level, and choose **Combo Box** from the shortcut menu.

2 Do *one* of the following:

- To create an element of a default size (200 x 200 pixels), click the pointer in the Report window.

- To create an element of an exact size, position the pointer (a crosshair) in the Report window where you want the upper-left corner of the element, and then drag the pointer until you reach the desired size.

The Combo Box wizard opens.

3 Enter a name for the combo box (for example, Customer Selection) and then click **Next**. (A name and a description is optional.)

4 To select a database table that the combination box will display:

a Expand a data source folder (for example, Generic)

b Select a data table (for example, KV_CUSTOMER).

c Click **Next**.

5 To select the statistics that you want:

a To select a statistic, do *one* of the following:

— Double-click a statistic in the Choose from box.

— Select a statistic in the Choose from box, and click ⬇.

b To remove a statistic from the Select Statistics dialog box, do *one* of the following:

— Double-click a statistic in the Selected statistics box.

— Select a statistic in the Selected statistics box, and click ⬅.

c Click **Next**.

For example, for customer selection, you might choose cust_name, Key ID, and cust_id.

6 In the Display Statistic list, click the statistic that you want to assign to the combination box and then click **Next**.

For example, select cust_name to assign the customer's name to the box.

7 Do the following:

a Review the summary of the information that the combination box will contain.

b If necessary, click **Back** to return to make a change. After you make any changes, click **Next** until you return to the summary.

c Click **Finish**.

A combination box is created in the Report window. The combination box for customer selection mentioned in the example scenario may look similar to the following after it is created:
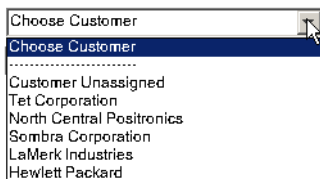
You would need to link any combination boxes to the table that will display the information.

When Customer Unassigned is selected, the associated table will shows all rows for which the cust_id statistic is not defined. When a specific customer is selected, the associated table shows only the rows that pertain to the selected customer.

After you create a combination box, you can use the Components tree to change its properties. Specifically, you can add a label (for example, "Select Customer" to the top of a combination box, which will appear as the first option in a combination box. This option will choose data from the destination element without applying any constraints.

To locate these properties, select the Combination box in the Components tree. In the properties list, you will see the following: Enable No Constraints Option, No Constraints Label, and Default to No Constraints. For more information about each of these properties, see Appendix A, Element Properties.

Adding Tables and Graphs

The Table and Graph wizards let you add tables and graphs elements to reports. The wizards prompt you to specify some or all of the following information depending on the type of element you are creating and the method you are going to use to create that element:

- Name and Description

  Lets you enter a name for the element and a description. These become the element's Name and Description properties in the report's Properties list.

- Select a Data Source

  Lets you select a database table from which to obtain data for the element. Report Builder interrogates the database and displays a list of the different reporting groups found.

  A *group* is a related set of database tables, typically organized by technology (such as RMON or Frame Relay) or by vendor (such as Empire or Cisco). Under each group, there are folders organized by technology that contain tables or a list of database tables. The tables are listed by their SQL names and include raw, rate, and summary tables.

- Choose the Time Column's Name

  Lets you choose the time column's name if you have selected a table from the Property Tables or Generic categories, which collect their data based on time.

- Select Statistics

  Lets you select the statistics the element will display. A *statistic* is usually an expression or an SQL table column name. This includes SQL aggregate functions like min., max, and avg.

- Set Time Period

  Lets you select the time period for which the element will select data.

- Add Titles

  Lets you specify the title of the element.

- Nodes, interfaces or both

  Lets you select the nodes, interfaces or both from which the element will retrieve data if you have selected a table from the Managed category.

You can defer node and interface selection until you view the report. For more information about how to defer node and interface selection, see Creating Reports with Deferred Selections on page 152.

- *Graph only*: Select Graph Attributes

  Lets you select whether the graph's data should be graphed by time or by node if you selected a table from the Managed category.

- *Graph only*: Select Graph Style

  Lets you select one of the following graph styles: Area, Stacking Area, Bar, Stacking Bar, Pie, Plot, Scatter Plot.

- *GOS Graph only*: Y-axis labels

  Lets you select the GOS labels and values that will appear on the y-axis of the GOS graph.

- *GOS Graph only*: Statistic weights and GOS values

  Lets you select the values needed to perform the weighted average of each statistic.

Adding a Graph

Task 1: Select the graph option.

Do one of the following:
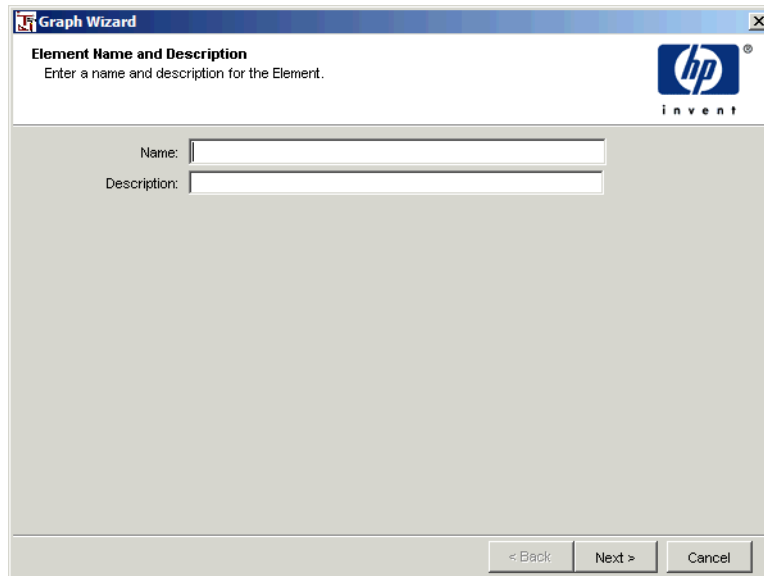
- On the Report Builder toolbar, click .
- From the Insert menu, click **Graph**.
- Right-click the report's Elements level, and choose **Insert Graph** from the shortcut menu.

Task 2: Specify the size of the graph in the report.

Do one of the following:

- To create an element of a default size (200 x 200 pixels), click the pointer in the Report window.
- To create an element of an exact size, position the pointer (a crosshair) in the Report window where you want the upper-left corner of the element, and then drag the pointer until you reach the desired size.

Figure 1 shows the Element Name and Description window.

Figure 1   Element Name and Description Window

➤   Supplying this information is optional. To enter a name and description, go to
Task 3; otherwise, click **Next** and go to Task 4 on page 66.

Task 3:   If needed, specify a name for the table and a description of it.

1   In the Name box, enter a name for the element. (This becomes the
element's Name property in the report's Properties list.)

2   In the Description box, enter a description of the element. (This becomes
the element's Description property in the report's Properties list.)

3   Click **Next**.

Task 4:   Choose a graph style.

Figure 2 shows the Select Graph Style window.
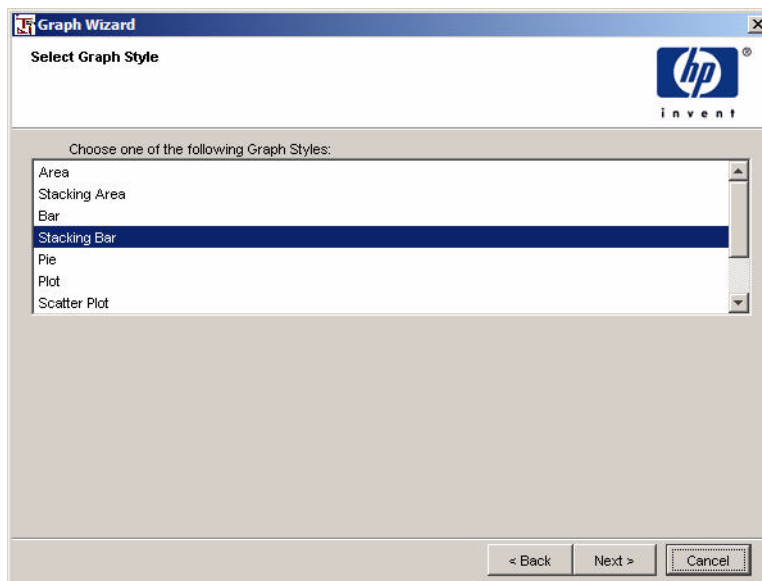
Figure 2   Select Graph Style Window

1   Choose a graph style.

2   Click **Next**.

Task 5:   Select a data source for the graph.

Figure 3 shows the Select a Data Source window.
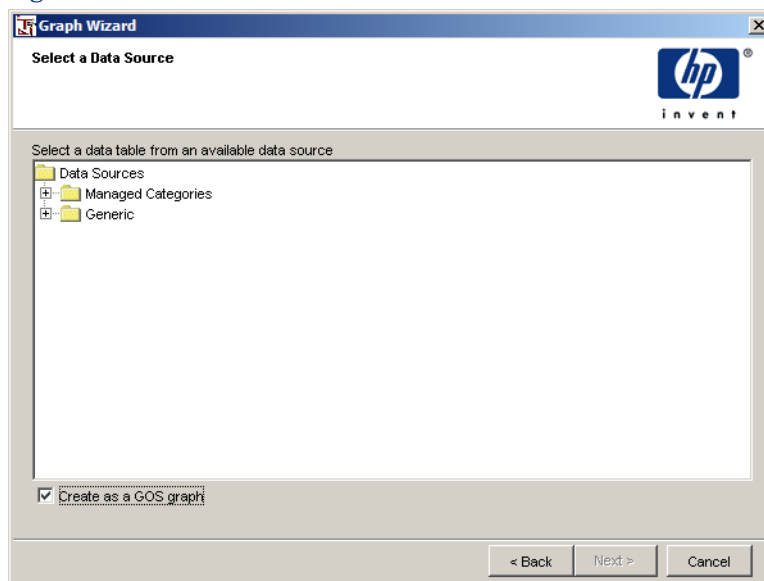
Figure 3   Select a Data Source Window

1   Expand the data source folders and select the data table that you want
    from one of the following folders:

   • Managed Category. This folder contains all the different data
     collections that are configured within OVPI. All tables found within
     this folder are registered data tables that are managed by report
     packs. Selecting a table from this folder will give you access to the
     time-series data associated with the specific property table of the
     management category. An implicit data join will be made between the
     data table and property table pair.

     You will be allowed to build a query against a data table and its
     property table. The set of available statistics is all of the columns in
     the data table and all of the columns in the property table.

   • Generic. This folder contains all the data collections found in the
     database. Thus, if you want to graph data from generic or non-OVPI
     tables, these tables would appear in this folder and not in the
     Managed Category folder.

2   To create a Grade of Service (GOS) graph, select the Create as a GOS graph box.

Grade of service is used for system health reporting and Service Level Agreements (SLAs). See Creating Grade of Service Graphs on page 77 for more information.

3   Click **Next**.

Occasionally, there is no data available for a graph; for example, this can happen when polling cycles are missed or network errors occur. You can decide how to graph missing data by setting the Hole properties after you create the graph. For more information, see Displaying Missing Graph Data on page 146.

Task 6:   Select how the data should be graphed.

Figure 4 shows the Select Graph Attributes window.
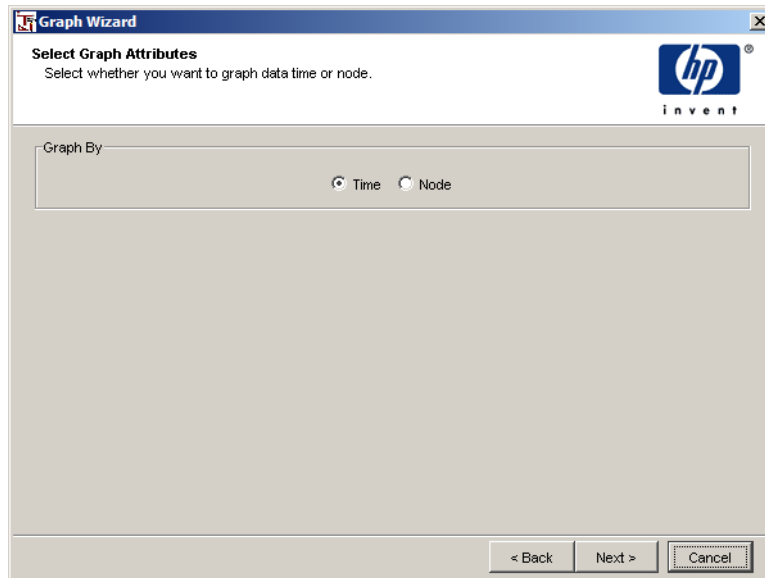
Figure 4   Select Graph Attributes Window

1   Do one of the following:

- Click **Time** to graph the data by time.

- Click **Node** to graph the data by node.

2 Click **Next**.

3 Do one of the following depending on the type of data source you have selected for the graph:

- Managed Category. Go to Task 9 on page 71.

- Generic. Do one of the following depending on the way in which you choose to graph the data:

  — Time. Go to Task 7.

  — Node. Go to Task 8 on page 70.

Task 7:   Select the name of the time column.
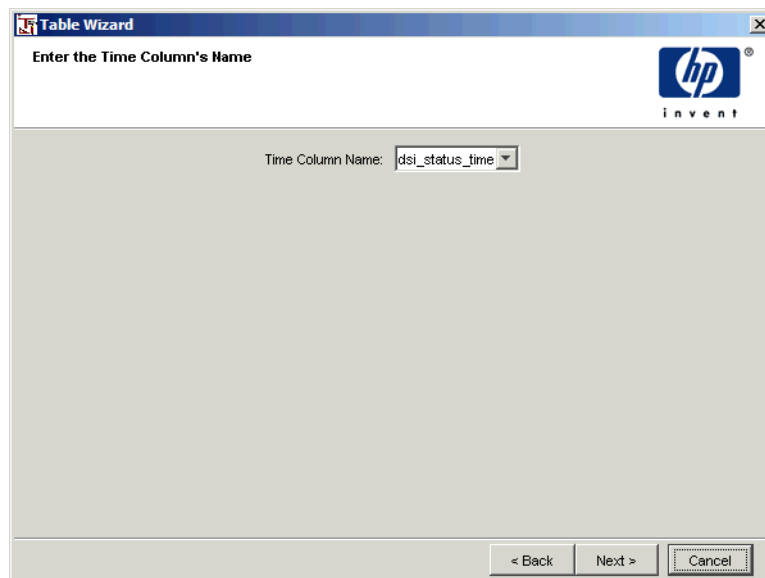
Figure 5   Enter the Column's Name Window

1 Select the name of the time column from the Time Column Name list.

2 Click **Next**.

3 Go to Task 9 on page 71.

Task 8: **Select the node columns.**
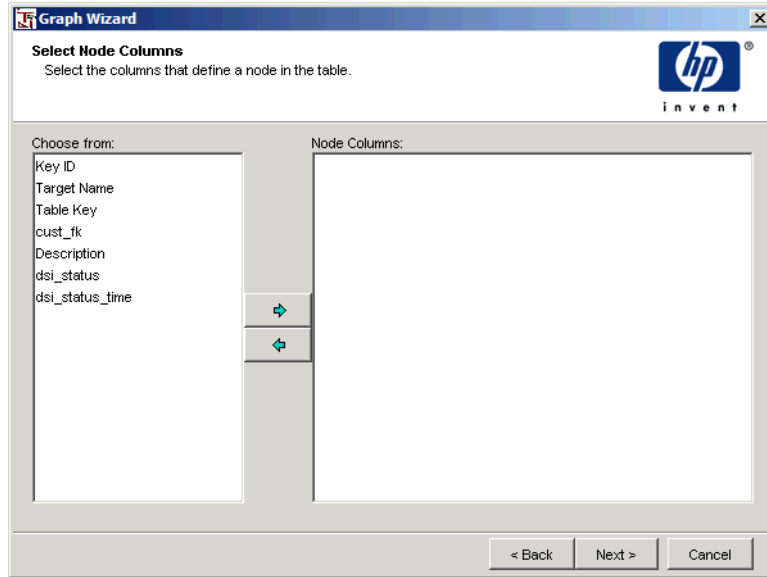
Figure 6   Select Node Columns Window

1   To select a node column, do *one* of the following:

   •   Double-click a node column in the Choose from box.

   •   Select a node column in the Choose from box, and click [→].

2   To remove a node column from the Node Columns box, do *one* of the
     following:

   •   Double-click a node column in the Node Columns box.

   •   Select a node column in the Node Columns box, and click [←].

3   Click **Next**.

Task 9:   Select the statistics that the graph will display.

Figure 7 shows the Select Statistics window.
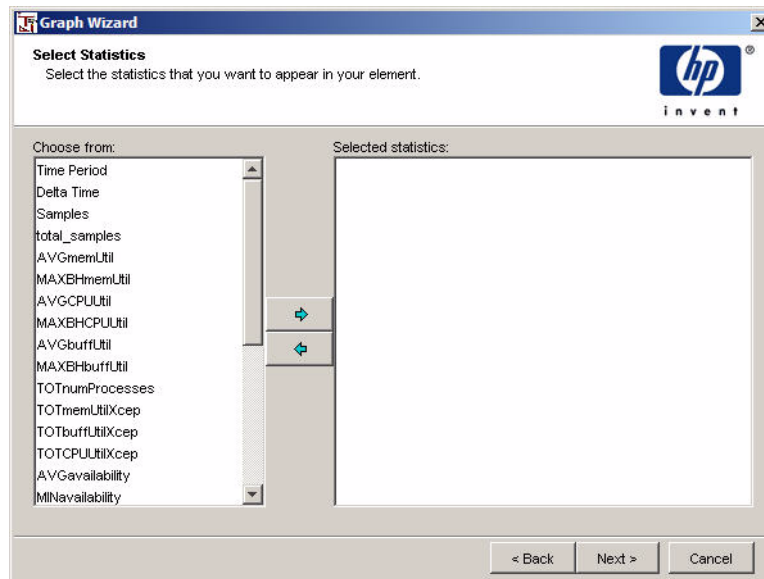
Figure 7   Select Statistics Window

To select and remove statistics:

1   To select a statistic, do *one* of the following:

- Double-click a statistic in the Choose from box.

- Select a statistic in the Choose from box, and click ⇨ .

2   To remove a statistic from the Select Statistics dialog box, do *one* of the following:

- Double-click a statistic in the Selected statistics box.

- Select a statistic in the Selected statistics box, and click ⇦ .

3   Click **Next**.

If you selected a table from the managed category, the Select Nodes/Interfaces window opens; go to Task 10 on page 72; otherwise, go to Task 11 on page 73.

Figure 8 shows the Select Nodes/Interfaces window.
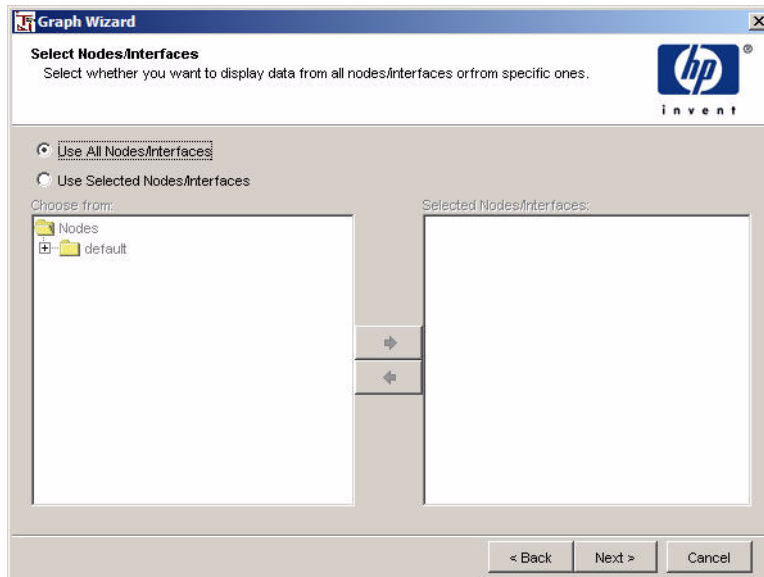
Figure 8   Select Nodes/Interfaces Window

Task 10: Select the nodes and interfaces from which the graph will display data.

Do *one* of the following:

- Click **Next** to select data from all nodes and interfaces (**Use All Nodes/Interfaces**), which is the default.

- Click **Use Selected Nodes/Interfaces** to select specific nodes and interfaces.

  To select specific nodes and interfaces, do the following:

  a Expand a node's folder to display its interfaces.

  b To select a node or an interface, do *one* of the following:

  — Double-click a node or an interface in the Choose from box.

  — Select a node or an interface in the Choose from box, and click ![arrow icon].

  ▶ If you select a node, all of its interfaces are automatically selected.

  c To remove a node or an interface, do *one* of the following:

— Double-click a node or an interface in the Selected Nodes/Interfaces box.

— Select a node or an interface in the Selected Nodes/Interfaces box, and click ◀.

d When you have selected the nodes and interfaces that you want, click **Next**.

Depending on which wizard window opens next, do the following:

- Create y-axis Labels window. (See Figure 12 on page 80.) This window opens if you selected the **Grade of Service** option in Task 1 on page 66. To complete your GOS graph, see Creating a GOS Graph on page 80.

- Set Time Period window. (See Figure 12 on page 80.) This window opens if you did *not* select the **Grade of Service** option in Task 1 on page 66. Proceed with Task 11.

Task 11: Set a time period for the graph.

Figure 9 shows the Set Time Period window.
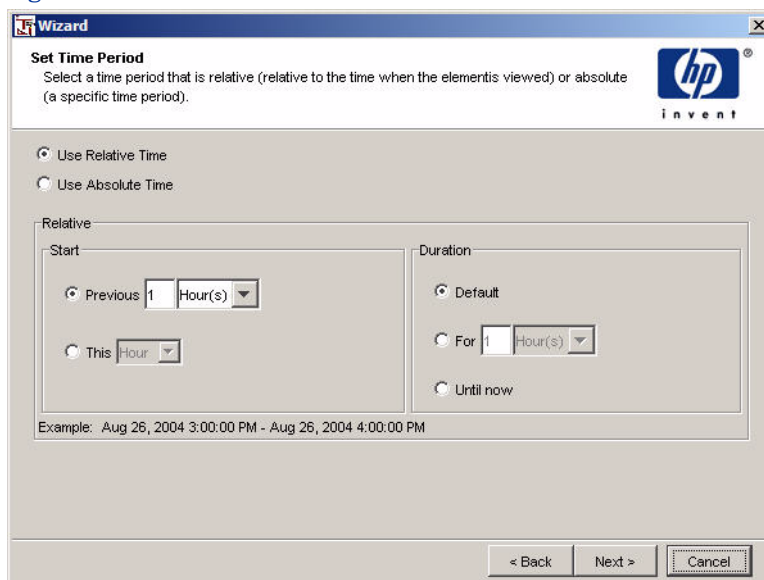
Figure 9   Set Time Period Window

- Select **Use Relative Time**. Go to Task 12.

- Select **Use Absolute Time**. Go to .

Task 12: Set a relative time period.

1 In the Start box, do *one* of the following:

- To select a current time period, click the **This *time period*** button. Click the ***time period*** arrow and select an option. For example, if the time period is This Week, the report displays data for the current week.

- To select a previous time period, click the **Previous *n time period*** button. Enter a number in the box, and then click the ***time period*** arrow, and select an option. For example, if the time period is Last 1 Week(s), the report displays data for the last full week (Sunday to Sunday) prior to the current date.

2 In the Duration box, do *one* the following:

- Click **Default** to use the default duration period.

- Click **For *n time period*** to set the duration. Enter a number in the box, and then click the ***time period*** arrow, and select an option.

- Click **Until Now** to display data for selected time period up until the current time. For example, if it is Thursday, and you select a time period of 1week, the report will display data for the prior week (Sunday to Sunday) through Thursday.

3 Click **Next**.

4 Go to .

Task 13: Set an absolute time.

The initial start and end times in the Set Time Period window (absolute time) represent the range of available data in the database.
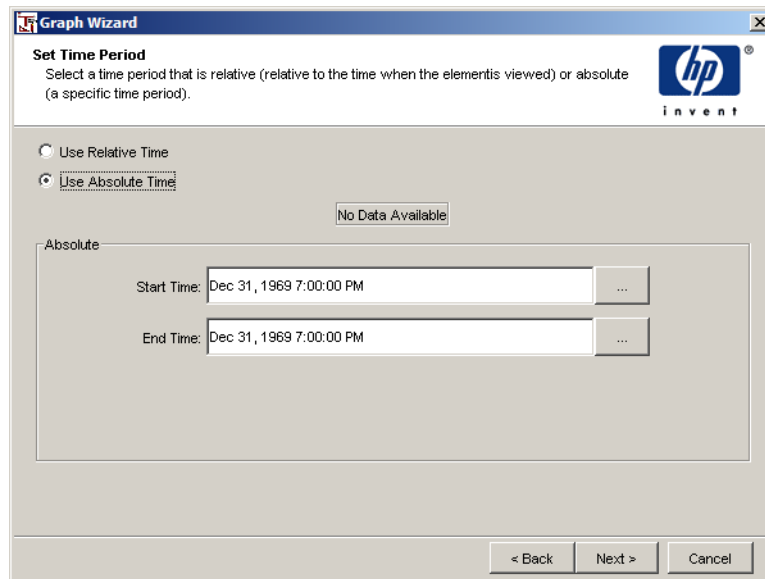
1   Click the Browse button next to the Start Time box or the End Time box. A window similar to this one opens:
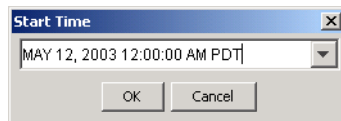
2   Click the down arrow to display a calendar, similar to the one below:

3 Click the Month and Year arrows to select the month and year you want.

4 Click the *Hour*, *Minutes*, *Seconds*, and *Time of Day* arrows to select the time.

5 Click a date in the calendar.

After you click a date, the calendar window closes, and the selected date and time display in the Start Time (or End Time) window. You can click the down arrow to reopen the calendar if you want to make changes.

6 Click **OK** when you finish setting the date and time.

7 Click **Next**.

Task 14: Specify one or more titles for the graph.

Figure 10 shows the Add Titles window.
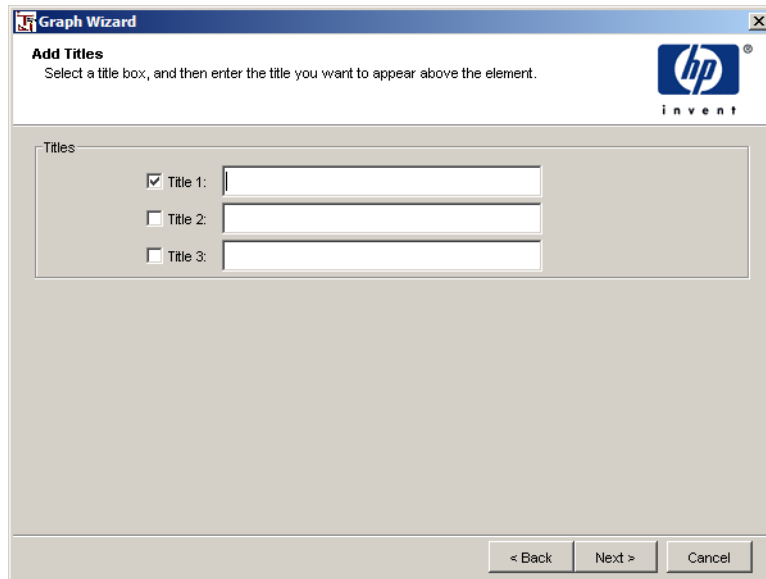
Figure 10 Add Titles Window

1 Select a Title*n* check box.

2 Enter a title in the text area. A title can have up to three lines.

3 Click **Next**.

Task 15: Close the graph wizard.

Figure 11 shows the Summary window opens
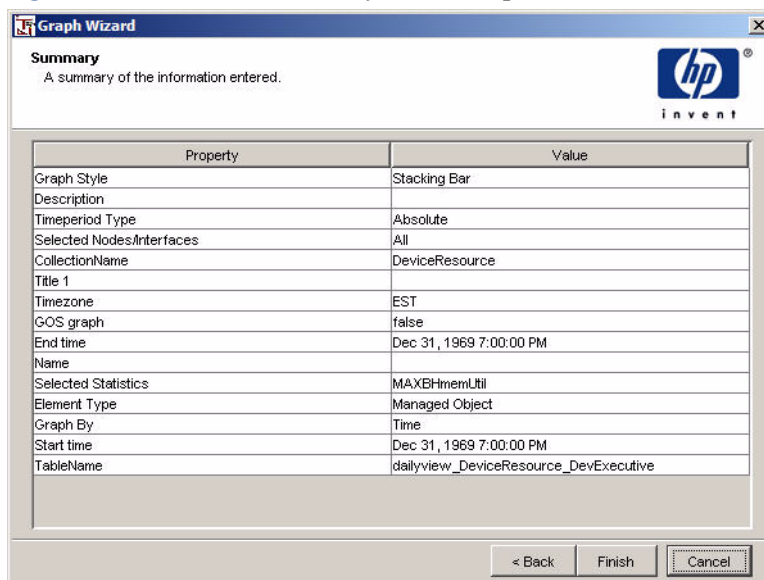
Figure 11 Summary Window

Click **Finish**.

The graph appears in the Report window, and a graph item appears in the Elements level of your report.

Creating Grade of Service Graphs

When you create a graph, you have the option of making the graph a Grade of Service (GOS) graph. GOS is used for system health reporting and Service Level Agreements (SLAs). GOS converts sets of individual historical performance statistics into a graph using a weighted stacked-bar format.

You can select any set of metrics and assign a grading scale to each based on the relative importance of that metric. A grading scale (for example, excellent, good, fair, and poor) allows you to concentrate troubleshooting efforts immediately on areas where performance is substandard.

Grade of Service reports alleviate data overload that can result from massive amounts of network data available from countless devices and sources. Critical parameters for a given device are rolled up into an overall indicator that reflects that device's performance level.

Grade of Service Example

Suppose you want to compute the GOS for a particular LAN segment. You determine that the significant parameters contributing to your LAN GOS are Utilization, Collisions, Errors, and Overhead. Table 1 lists the relative contributions of those parameters.

Table 1   Example — Parameter Contributions to GOS

Parameter	Weighting
Utilization	40%
Collisions	25%
Errors	25%
Overhead	10%

You decide to include the following categories of service in your GOS graph: Excellent, Good, Fair, and Poor.

In this case, a score of 1 for an individual parameter or for weighted, combined parameters will fall in the excellent range. Similarly, a score of 2 will be good; a score of 3 will be fair, and a score of 4 will be considered poor performance.

Additionally, you must also determine what ranges of scores for individual parameters constitute Excellent, Good, Fair, or Poor service. Table 2 lists the ranges of scores for your parameters.

Table 2   Example — Score Ranges for Service Level Categorization

Excellent	Good	Fair	Poor
< 5%	6–15%	16–30%	> 30%
< 5%	6–10%	11–15%	> 15%
< 1%	2–5%	6–10%	> 10%
< 5%	6–10%	11–15%	> 15%

If, at a given time, you receive a Utilization value of 6% (Good=2), Collisions of 4% (Excellent=1), Errors of 3% (Good=2), and Overhead of 13% (Fair=3); your GOS for that time period is calculated as follows:

$$(0.40 \times 2) + (0.25 \times 1) + (0.25 \times 2) + (0.10 \times 3)$$
$$0.80 + 0.25 + 0.50 + 0.30 = 1.85$$

In this case, the GOS is between 1 and 2; this score falls in the Good range.

Creating a GOS Graph

To create a GOS graph, Complete tasks 1–8 in the procedure described in
Adding Tables and Graphs on page 62. Figure 12 shows the Create Y-axis
Labels window, which opens after you selected the **Grade of Service** option in
Task 5 on page 67.
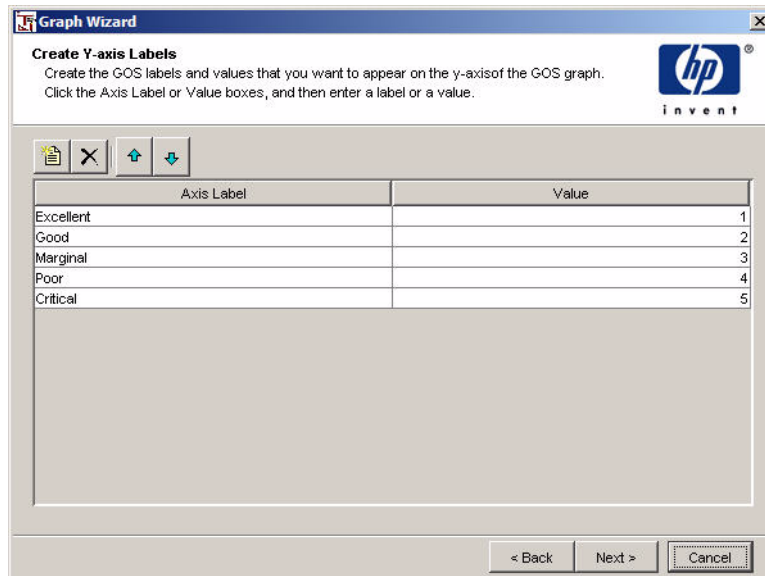
Figure 12 Create Y-axis Labels Window

**Task 1:   Create the GOS labels and values that you want to appear of the Y-axis of
the graph.**

You can have as many labels as you like; each label has a value associated
with it. The values shown by default in the Create Y-axis Labels window
represent the result of the weighted average computation described in
Creating Grade of Service Graphs on page 77.

1   In the Create Y-axis Labels dialog box, do the following:

a   To edit a label, click the Axis Label or Value boxes, and enter a new
axis label or value.

b   To add a label to the list, click 📄 .

c   To delete a label from the list, select the label, and click ✕ .
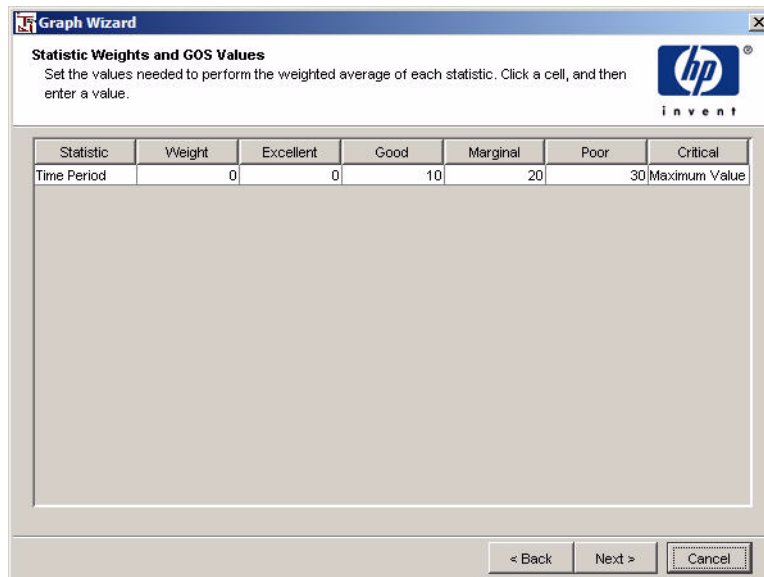
      d To rearrange the order of the labels in the list, select a label from the list, and then do *one* of the following:

        – Click ⬆ to move a label up in the list.

        – Click ⬇ to move a label down in the list.

    2 When you are finished, click **Next**.

Task 2: Select the values needed to calculate the weighted average of each statistic.

Figure 13 shows the Statistic Weights and GOS Values window.

Figure 13 Statistic Weights and GOS Values Window

In the example described in Grade of Service Example on page 78, the parameters In Utilization and Out Utilization both contribute 50% each to the GOS weighting. Both statistics have the same valuations (0% - 10% is Excellent, 11% - 15% is Good, 16% - 35% is Poor, and 36% and greater is Critical).

1 To modify the values, click the cell you want to change.

2 Type a new value.

You can use the **TAB** key to advance to the next box.

> ➤ Before you click **Next** in the Statistic Weights and GOS Values
> dialog box, ensure that you verify that the sum of all the weights is
> 100, and that each statistic's weighted value increases.

3 Click **Next**.

4 To complete the graph, go to Task 11 on page 73.

You can change the y-axis labels and weighted values after you create the
graph. To change these values, see Changing GOS Y-Axis Labels on page 145
and Changing GOS Weighted Values on page 146, respectively.

Adding a Table

To add a table:

Task 1:   Select the table option.

Do one of the following:

- On the Report Builder toolbar, click [BBB] .

- From the Insert menu, click **Table**.

- Right-click the report's Elements level, and choose **Insert Table** from the
  shortcut menu.

Task 2:   Specify the size of the table in the report.

Do one of the following:

- To create an element of a default size (200 x 200 pixels), click the pointer
  in the Report window.

- To create an element of an exact size, position the pointer (a crosshair) in
  the Report window where you want the upper-left corner of the element,
  and then drag the pointer until you reach the desired size.

Task 3: If needed, specify a name and description for the table.

The Element Name and Description window opens (Figure 1 on page 65).

▶ Supplying this information is optional. To enter a name and description, go to Task 3; otherwise, click **Next** and go to Task 10 on page 89 of this procedure.

1 In the Name box, enter a name for the element. (This becomes the element's Name property in the report's Properties list.)

2 In the Description box, enter a description of the element. (This becomes the element's Description property in the report's Properties list.)

3 Click **Next**.

Task 4: Select a data source for the table.

The Select a Data Source window opens.
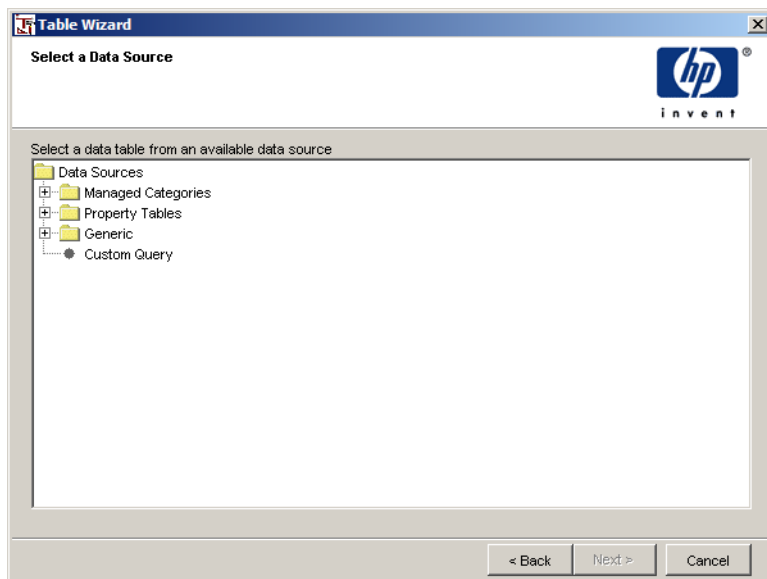
Figure 14 Select a Data Source Window

1   Expand the tree until you find the data table you want.

The following folders are available:

- **Managed Categories**. This folder contains all the different data collections that are configured within OVPI. All tables found within this folder are registered data tables that are managed by report packs. Selecting a table from this folder will give you access to the time-series data associated with the specific property table of the management category. An implicit data join will be made between the data table and property table pair.

- **Property Tables**. This folder contains property tables. These are not data holding tables. These tables list all the objects managed by OVPI. A single query will be made to the selected table with no joins.

- **Generic**. This folder contains a list of all database tables that can be accessed by the OVPI clients. These tables can be anything from the actual tables required to manage OVPI itself, to the actual data and property tables. This is for advanced users. A single query will be made to the selected table with no joins.

- **Custom Query**. Lets you type an SQL SELECT statement, which will select data from a table in the database that you are currently connected to.

2   Select the data table, then click **Next**.

Depending on the type of table you selected, one of the following happens:

- If you selected a table from the property or generic categories, the Determine if the Table is Time-Based window opens. Go to Task 5.

- If you selected Custom Query, the Enter the Generic SQL Statement window opens. Go to Task 7 on page 87.

- If you selected a table from the managed category, the Select Statistics window (Figure 7 on page 71) opens. Go to Task 8 on page 87.

Task 5: **Specify if the data table is based on time.**

The Determine if the Table is Time-Based window opens.
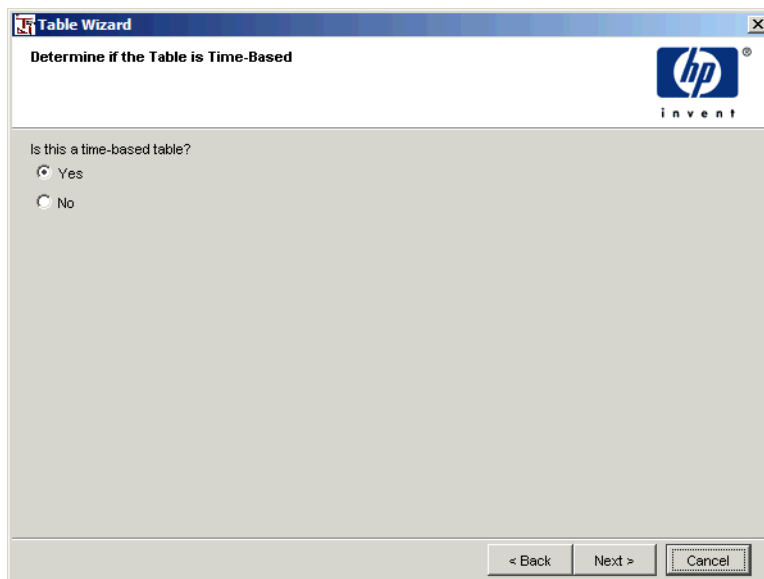
Figure 15 Determine if the Table is Time-Based Window

1 Specify if the table you selected from the Select a Data Source window is time-based by clicking **Yes** or **No**.

2 Click **Next**.

Do one of the following:

- If you clicked **Yes**, the Enter Time Column's Name window opens. Go to .

- If you clicked **No**, go to .

Task 6:   Select the name of the time column.
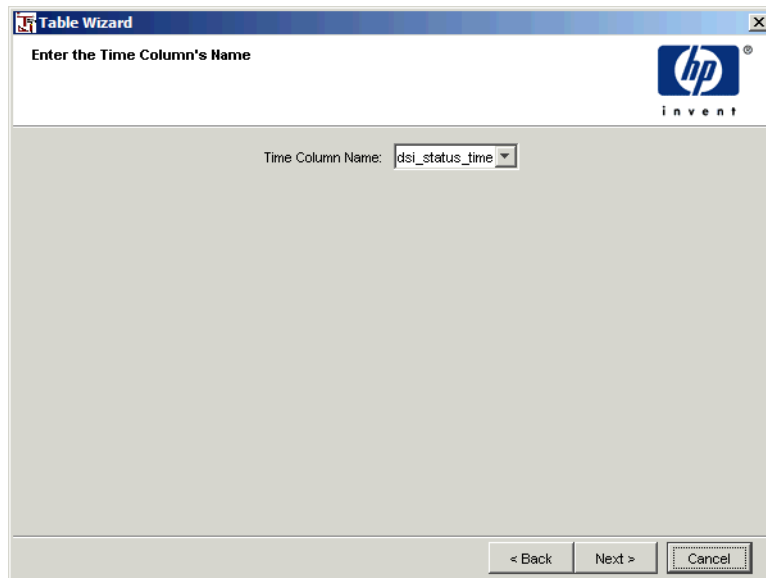
Figure 16 Enter the Column's Name Window

1   Click the Time Column Name arrow, and select the name of the time
column from the list.

2   Click **Next**, and go to Task 8 on page 87.

Task 7:   Type your generic SQL statement.

The Enter the Generic SQL Statement window opens.
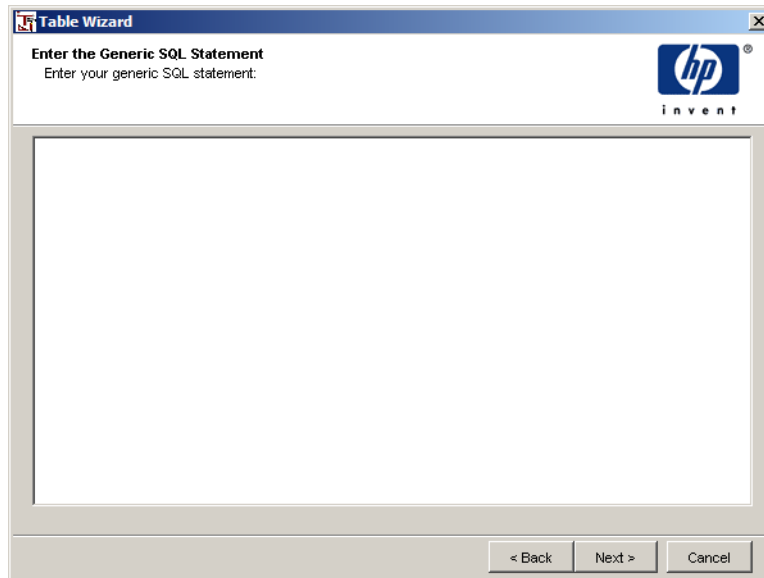
Figure 17 Enter the Generic SQL Statement Window

1   In the text area, type an SQL statement that will define the data for the
    table.

2   Click **Next**.

The Add Titles window (Figure 10) opens. Go to Task 11 on page 89.

Task 8:   Select the statistics that the table will display.

The Select Statistics window opens (Figure 7 on page 71).

1   To select a statistic, do *one* of the following:

    •   Double-click a statistic in the Choose from box.

    •   Select a statistic in the Choose from box, and click ➡ .

2   To remove a statistic from the Select Statistics window, do *one* of the
    following:

    •   Double-click a statistic in the Selected statistics box.

- Select a statistic in the Selected statistics box, and click ⬅.

3 Click **Next**.

Depending on the category of table you selected, the following will occur.

- If you selected a table from the managed category, the Select Nodes/Interfaces window opens (Figure 7 on page 71). Go to Task 9.

- If you selected a table from the property or generic categories that was time-based, the **Set Time Period** window opens (Figure 9 on page 73). Go to Task 10 on page 89.

- If you selected a table from the property or generic categories that was not time-based, the **Add Titles** window opens (Figure 10 on page 76). Go to Task 11 on page 89.

Task 9: Select nodes and interfaces.

To select nodes and interfaces, do *one* of the following:

- Click **Next** to select data from all nodes and interfaces (**Use All Nodes/Interfaces**), which is the default.

- Click **Use Selected Nodes/Interfaces** to select specific nodes and interfaces.

    To select specific nodes and interfaces, do the following:

    a Expand a node's folder to display its interfaces.

    b To select a node or an interface, do *one* of the following:

    — Double-click a node or an interface in the Choose from box.

    — Select a node or an interface in the Choose from box, and click ➡.

    ▶ If you select a node, all of its interfaces are automatically selected.

    c To remove a node or an interface, do *one* of the following:

    — Double-click a node or an interface in the Selected Nodes/Interfaces box.

    — Select a node or an interface in the Selected Nodes/Interfaces box, and click ⬅.

      d   When you have selected the nodes and interfaces that you want, click **Next**.

Task 10: Set a relative or absolute time period for data selection.

The Set Time Period window opens (Figure 9 on page 73).

To select a relative time period:

1   Click **Use Relative Time**.

2   To select a current time period, click the *time period* arrow and select a **This** *time period* option (**This Hour**, **This Week**, **This Month**, or **This Year**). For example, if the time period is **This Week**, the report displays data for the current week.

3   To select a previous time period, click the **Last** arrow, select an option, and then enter a number in the Last box. For example, if the time period is Last 1 Week(s), the report displays data for the last full week (Sunday to Sunday) prior to the current date.

4   Select the **Until Now** check box to display data for selected time period up until the current time. For example, if it is Thursday, and you select a time period of 1week, the report will display data for the prior week (Sunday to Sunday) through Thursday.

5   Click **Next**.

To select an absolute time period:

1   Click **Use Absolute Time**. See the instructions in Task 13 on page 75.

2   Click **Next**.

Task 11: Specify one or more titles for the graph.

The Add Titles window opens (Figure 10 on page 76).

1   Select a **Title*n*** box.

2   Enter a title. A title can have up to three lines.

3   Click **Next**.

The Summary window opens.
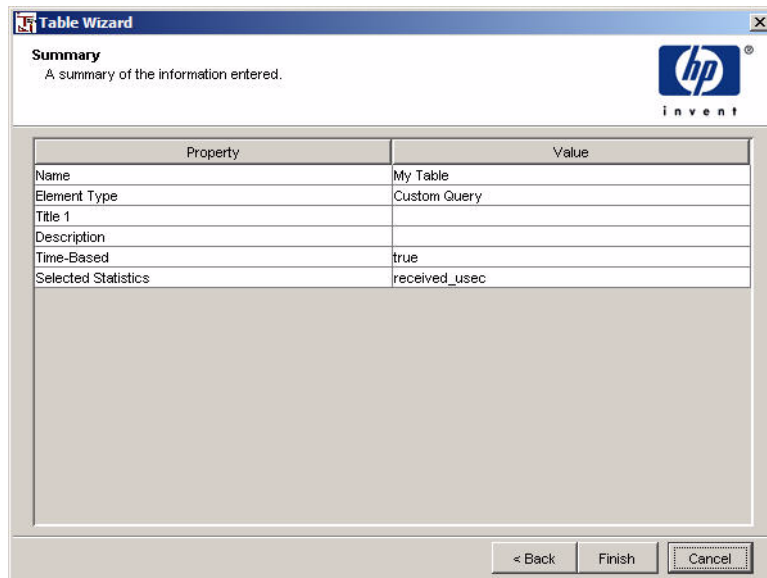
Task 12: Close the table wizard.

Click **Finish**.

The table appears in the Report window, and a table item appears in the Elements level of your report. You can change an element's name (see Changing Element Names on page 102).

Creating Tabbed Areas

A *tabbed area* allows multiple elements (tables and graphs) to appear in the same area of the report. Each element has its own tab. You can view the element by selecting its tab. Figure 18 shows how a tabbed area appears in a report.
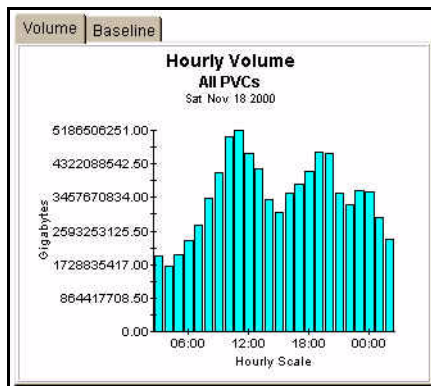
Figure 18 Report Builder—Tabbed Area

Creating a Tabbed Area

To create a tabbed area in a report:

1 Do one of the following:

  • On the Report Builder toolbar, click [icon].

  • From the Insert menu, click **Tabbed Area**.

  • Right-click the report's Elements level, and choose **Insert Tab** from the shortcut menu.

2 Do *one* of the following:

  • To create an element of a default size (200 x 200 pixels), click the pointer in the Report window.

  • To create an element of an exact size, position the pointer (a crosshair) in the Report window where you want the upper-left corner of the element, and then drag the pointer until you reach the desired size.

A tabbed area appears in the Report window, and a **Tab** item appears in the **Elements** level of the report. You can change an element's name (see Changing Element Names on page 102).

Deleting a Tabbed Area

To delete a tabbed area, do *one* of the following:

- Right-click the **Tab** item in the Components tree, and choose **Delete Tab Area** from the shortcut menu.

- Right-click the tabbed area in the Report window, and choose **Delete Tabbed Area** from the shortcut menu.

Adding Tabs to a Tabbed Area

To add a tab to a tabbed area:

1 To add a table or graph tab to a tabbed area, do *one* of the following:

- Right-click the **Tab** item in the Components tree, and choose **Insert Graph in Tab** or **Insert Table in Tab** from the shortcut menu.

- Right-click the tabbed area in the Report window, and choose **Add Graph Tab** or **Add Table Tab** from the shortcut menu.

    ▶ If you want to add a tab to a tabbed area that already contains tabs, right-click on a tab's label to display the appropriate shortcut menu. If you do not click on a tab's label, the graph or table shortcut menu is displayed.

The Enter a Label for the Tab window opens.
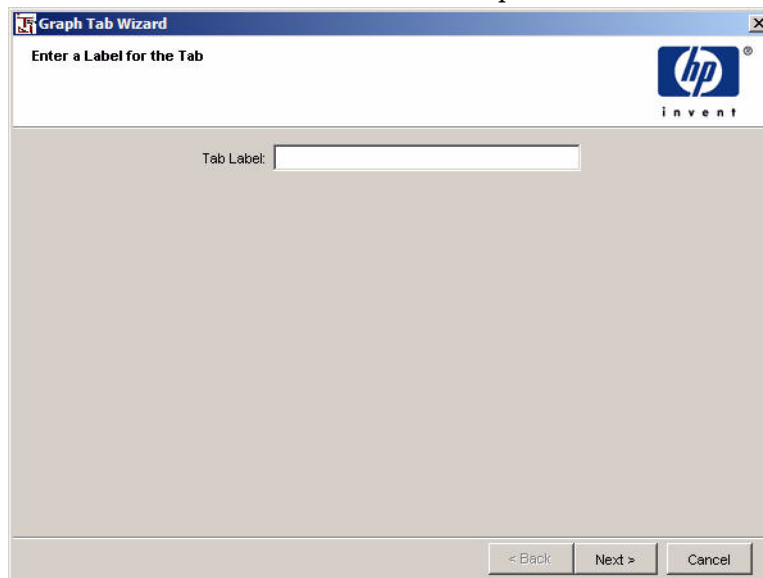
2 In the Tab Label box, type the a label for the tab, and click **Next**.

3 Do *one* of the following:

- To create a graph, go to and complete the procedure.

- To create a table, go to and complete the procedure.

Modifying Tabs

You can cut, copy, paste, and delete a tab.

To copy, cut, paste, or delete a tab:

1 Right-click the name of the tab in the tabbed area in the Report window. A shortcut menu opens.

2   Choose any of the following options from the shortcut menu:

- **Copy Selected Tab**. Lets you copy a tab.

- **Paste to Tabs**. Lets you paste a tab.

- **Cut Selected Tab**. Lets you cut a tab.

- **Delete Selected Tab**. Lets you delete a tab.

- **Delete Tabbed Area**. Lets you delete the tabbed area.

Setting Tab Order

To change the order in which tabs are arranged in a tabbed area:

1   Right-click the **Tab** item in the Components tree, and select **Set Tab Order** from the shortcut menu.

The Set the Tab Order dialog box opens.
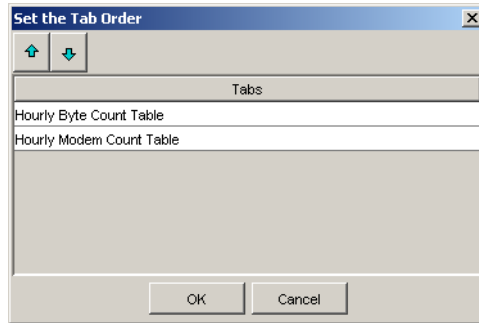
2   Select a tab from the Tabs list.

3   Do *one* of the following:

- Click [↑] to move the tab toward the front the list.

- Click [↓] to move the tab toward the end of the list.

Creating Report Links

Reports can contain links to other reports, applications, and Uniform Resource Locators (URL). A *report link* takes specific information from an element (graph, table, image, or label) in a report (the source report), and uses the information as the input to a report parameter (in the case of a report to report link) or to an argument (in the case of a report to application or URL link).

When you trigger the link in the source report, the destination of the link (report, application, or URL) is displayed with the specified information from the source report.

► Report links are created in reports using the Management Console's Catalog Manager application. To use Catalog Manager, you must have an account with Administrator privileges. Refer to the *Performance Insight Administration Guide* for more information about using Catalog Manager to create links.

If a report you are viewing with Report Builder contains a link, the cursor will change from an arrow to a hand when it is placed over the link. Additionally, depending on the type of element used for the link, the following occurs:

• Elements that are the destination of a report link are surrounded by a blue border.

Blue border—
Hand cursor—

• Text in a label or in a table column is underlined.

This behavior is illustrated in the following example:

If an element is linked to multiple items, the Select a Link dialog box will open. Select the link you want to open, and click **OK**.

Selecting Elements

You can select one element or multiple elements. After you select an element, handles outlining the element indicate that it has been selected. The following figure shows examples of selected elements:

| Rectangle | Tabbed Area | Label |
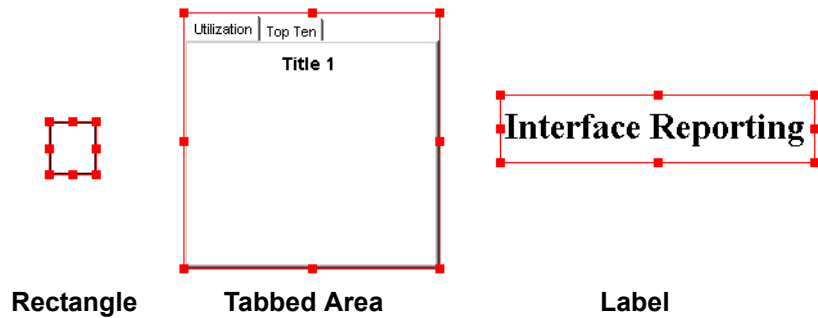
Selecting an Element

To select an element, do any of the following:

- In the Report window, click the element. The element is highlighted in the Components tree.

- Select the element in the Components tree. Handles appear around the object in the Report window.

- Place the pointer above and to one side of the element, then press and hold the left mouse button and drag the pointer so a rectangle surrounds the element.

Selecting Multiple Objects

To select multiple elements, do any of the following:

- Hold down the **SHIFT** key and click each element you want to select.

- Place the pointer above and to one side of the elements, then press and hold the left mouse button and drag the pointer so a rectangle surrounds the elements.

▶ You cannot select multiple elements in the Components tree.

Canceling Element Selection

To cancel the selection of an element, move the pointer away from the selected element's outline, and click the left mouse button anywhere in the Report window.

To cancel the selection of all elements, do either of the following:

- Place the pointer outside of the selected group of elements, and then click the left mouse button

- Press **ESC**.

To cancel the selection of one element within a group of selected elements, place the pointer over the selected element's outline, hold down the **SHIFT** key, and then click the element.

Positioning and Transferring Elements

You can move, resize, copy and paste, and cut and paste elements.

▶ Report Builder pastes an element in the same location where it was copied or cut. When pasted at the same location as an existing element, the element or elements are offset down and to the right of the original element.

Moving Elements

To move an element:

1   Place the pointer on the element you want to move, and then press and hold **CTRL**.

The moving pointer (an arrow-ended crosshair) appears.

2   Drag the element to the new location.

Micropositioning Elements

You can move elements precisely, 1 pixel at a time. This type of movement is called *micropositioning*.

To microposition an element or a group of elements:

1   Select the element or the group of elements you want to microposition (see Selecting Elements on page 96).

2   Press **CTRL+ARROW** key. (Press the appropriate arrow key to move the element left, right, up, or down.)

For example, if you press **CTRL+RIGHT ARROW**, the selected element or elements will move 1 pixel to the right.

Resizing Elements

You can resize an element by dragging its sizing handles.

To resize an element:

1   Select the element you want to resize. For more information about how to select an element, see Selecting Elements on page 96.

2   Place the pointer over a resize handle of the element.

The sizing handle (a double-ended arrow) appears.

3   Drag the sizing handle until the element is the size you want.

Alternatively, you can also change the size and position of an element by changing the element's properties in the Components tree. For more information, see Changing Element Properties on page 123.

Copying and Pasting

You can copy and paste elements within a report or between reports.

To copy and paste an element or a group of elements:

1   Select the element or the elements you want to copy (see Selecting Elements on page 96).

2   Do *one* of the following:

   •   On the Report Builder toolbar, click .

   •   From the Edit menu, click **Copy**.

   •   **CTRL+C**

3   Click in the Report window to paste the element or elements.

4   Do one of the following:

   •   On the Report Builder toolbar, click .

   •   From the Edit menu, click **Paste**.

   •   **CTRL+V**

Cutting and Pasting

You can cut and paste elements within a report or between reports.

To cut and paste an element or a group of elements:

1   Select the element or the elements you want to cut (see Selecting Elements on page 96).

2   Cut the element or group of elements by doing one of the following:

   •   On the Report Builder toolbar, click .

   •   From the Edit menu, click **Cut**.

   •   **CTRL+X**

3   Click in the Report window to paste the element or elements.

4   Do *one* of the following:

- On the Report Builder toolbar, click 📋.
- From the Edit menu, click **Paste**.
- **CTRL+V**

Deleting Elements

You can delete element in the Report window or in the Components tree. (To delete a tab or a tabbed area, see Deleting a Tabbed Area on page 92 and Modifying Tabs on page 93.)

To delete an element:

1   Select the element in the Report window (see Selecting Elements on page 96) or in the Components tree.

2   Do one of the following:

- On the Report Builder toolbar, click ☒.
- From the Edit menu, click **Delete**.
- Right-click the element in the Report window or in the Components tree, and choose **Delete *Element*** from the shortcut menu, where *Element* is the kind of element you selected.
- *Report window only*: Press **DELETE**.

Aligning Elements

You can rearrange elements in the Report window by aligning them relative to each other.

To align one or more elements:

1   Select the elements you want to align (see Selecting Elements on page 96).

> The elements are aligned with the element that is the closest to the alignment location. For example, if you want to align the tops of two elements, the element that is furthest from the top is aligned according to the placement of the element that is nearest to the top of the Report window.

2   Select an alignment option.

To align...	Toolbar Button	Edit Menu Option
Left edges		**Align Left**
Right edges		**Align Right**
Top edges		**Align Top**
Bottom edges		**Align Bottom**
Element centers vertically		**Align Vertical**
Element centers horizontally		**Align Horizontal**

Changing Element Names

After you create an element in your report, the element will appear in the Report window, and the element will appear in the Components tree of your report. For example, after you create an image, the text "Image" appears in the Components tree. You can change the element's name. For example, you can rename "Image" to "Company Logo".

> In a report, each element's item name must be unique.

To change an element's name:

1 Select the element.

Its properties are displayed in the Properties list of the Components window.

2 Click the Value box next to the **Name** property in the Properties list.

3 Enter a name for the element.

If you supply a name already used by another element, the following message appears.

4 Move the pointer to the Report window to apply the name change.

Refreshing Elements

To refresh the selected element or elements in the current Report window, do *one* of the following:

• On the Report Builder toolbar, click [icon].

• From the Edit menu, click **Refresh**.

To refresh all the elements in the current Report window, do *one* of the following:

• On the Report Builder toolbar, click [icon].

• From the Edit menu, click **Refresh All**.

Displaying Online Help

To display online Help, select **Help Topics** from the Help menu.

If you have not specified a Web browser in which the online Help will display, the Options dialog box opens, displaying only the Browser tab.

For more information about how to specify a Web browser, see Specifying a Web Browser for Online Help on page 111. If you click **Cancel** in the Options dialog box, a message appears reminding you that you must specify a Web browser and how to do so.

For more information about Help Topics, see the section on "Displaying Online Documentation" in the *HP OpenView Performance Insight Administration Guide*.

Setting Report Builder Preferences

By default, Report Builder has a standard set of properties that it uses when you create a report. You can set these properties using the Preferences dialog box.

To set preferences, choose **Preferences** from the Edit menu. The Preferences dialog box appears.
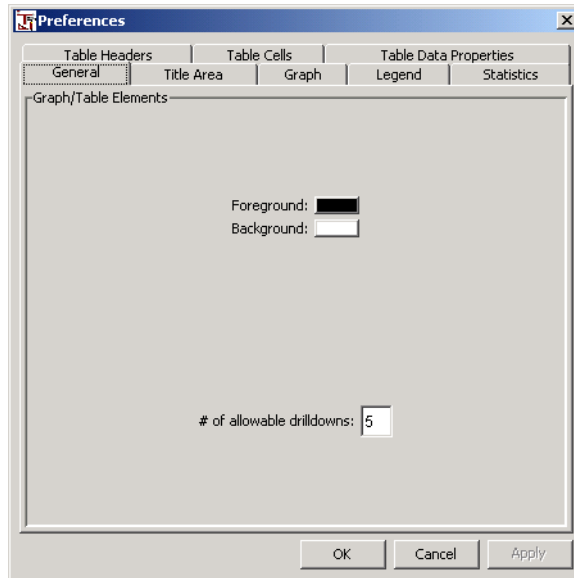
Alternatively, you can change these properties in report's Properties list on a report-by-report basis. The following example shows the properties displayed on the General tab of the Preferences dialog box as they appear in a graph's Properties list:

Foreground ——————

Background ——————

Allowable Drilldowns ——————

Types of Report Preferences

There is a default set of preferences for following report areas: General, Title Area, Graph, Legend, Statistics, Table Headers, Table Cells, and Table Data Properties.

In addition to setting the values of these options as preferences, you can also change their values at any time in the report's Properties list. See Appendix A, Element Properties for details.

General

Following are the options available for graph and table elements when you select the General tab in the Preferences dialog box:

- Foreground (See page 324.)
- Background (See page 314.)
- Allowable Drilldowns (See page 312.)

Title Area

Following are the options available for graph and table elements when you select the Title Area tab in the Preferences dialog box:

- Border Style (See page 315.)
- Background (See page 314.)
- Foreground (See page 324.)
- Font Name (See page 323.)
- Font Size (See page 323.)
- Bold (See page 315.)
- Italic (See page 329.)

Graph

Following are the options available for graph data when you select the Graph tab in the Preferences dialog box:

- Graph by (See page 325.)
- Rotation (See page 342.)
- Elevation (See page 321.)
- Depth (See page 319.)
- Foreground (See page 324.)
- Background (See page 314.)
- Border Style (See page 315.)
- Border Thickness (See page 315.)

- Font Name (See page 323.)
- Font Size (See page 323.)
- Bold (See page 315.)
- Italic (See page 329.)

Legend

Following are the options available for graph legends when you select the Legend tab in the Preferences dialog box:

- Format (See page 324.)
- Orientation (See Legend Orientation on page 333.)
- Foreground (See page 324.)
- Background (See page 314.)
- Border Style (See page 315.)
- Border Thickness (See page 315.)
- Font Name (See page 323.)
- Font Size (See page 323.)
- Bold (See page 315.)
- Italic (See page 329.)

Statistics

Following is the option available for table and graph elements when you select the Statistics tab in the Preferences dialog box: Font.

You can choose a default font for the text in your tables and graphs, including a typeface (such as Times New Roman) and type size (such as 10 point). You can also select bold (B) or italic (*I)* as the type style.

Table Headers

Following are the options available for graph and table elements when you select the Table Headers tab in the Preferences dialog box:

- Foreground (See page 324.)

- Background (See page 314.)
- Border Style (See page 315.)
- Border Thickness (See page 315.)
- Font Name (See page 323.)
- Font Size (See page 323.)
- Bold (See page 315.)
- Italic (See page 329.)

Table Cells

Following are the options available for table cell values when you select the Table Cells tab in the Preferences dialog box:

- Foreground (See page 324.)
- Background (See page 314.)
- Border Style (See page 315.)
- Border Thickness (See page 315.)
- Border Sides Left (See Show Cell Left Border on page 345.)
- Border Sides Right (See Show Cell Right Border on page 345.)
- Border Sides Top (See Show Cell Top Border on page 346.)
- Border Sides Bottom (See Show Cell Bottom Border on page 345.)
- Margin Width (See page 336.)
- Margin Height (See page 336.)
- Border Thickness (See page 315.)
- Show Column Labels (See page 346.)
- Allow Column Resize (See page 312.)
- Multiline Column Labels (See page 338.)
- Show Row Labels (See page 346.)
- Track Cursor

Table Data Properties

Following is the option that is available for fixed table columns when you select the Table Data Properties tab in the Preferences dialog box: Number of Fixed Columns. See page 339.

A *fixed column* is one that does not scroll horizontally. Specifically, the Number of Fixed Columns option specifies that the *n* leftmost columns of a table should not scroll horizontally. For example, suppose the leftmost column of a table contained a device name. You would set the Number of Fixed Columns option to 1 to be able to view the device name.

Setting Preferences for a Report

To set your report preferences:

1   From the Edit menu, click **Preferences**. The Preferences dialog box opens.

2   Select the tab for the type of preference you want to change. For more information about the preference types, see Types of Report Preferences on page 105.

3   Change any settings necessary.

4   Click **OK**.

Specifying Options

Using the Options dialog box (Figure 19 on page 110), you can do the following:

•   Change the Web Access Server's host name, port number or both (Server tab).

•   Specify a Web browser in which the online Help will display (Browser tab).

•   Enable or disable logging, specify a destination directory for the log file, and enable or disable debug tracing (Logging tab).

- Override the Cell Background color defined by a rule and use the color specified by the table's Selected Cell Background property instead and set the look and feel of the application (Display tab).

- Set the look and feel for the graphical user interface.

- Use all or minimal features of the wizards for graphs, tables, and combo boxes (Wizards tab).

- Specify character encoding.

➤ The Options dialog box for Report Viewer contains only the Server, Logging, and Browser tabs.

Figure 19 shows the Options dialog box for Report Builder.
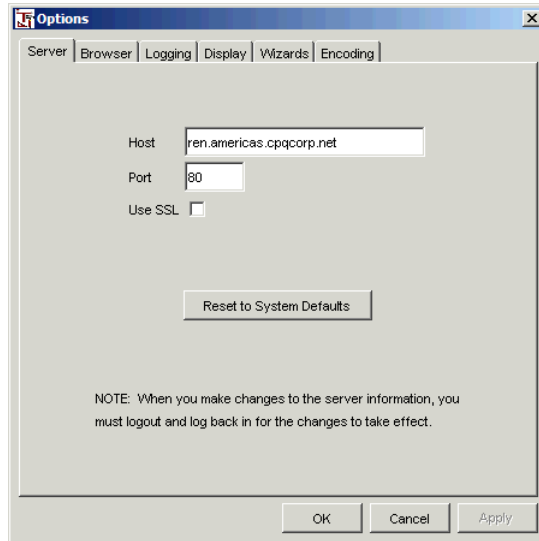
Figure 19 Options Dialog Box

Changing Web Access Server Information

When you installed OVPI, you supplied information about the Web Access Server. The *Web Access Server* controls Report Builder's access to the database. Using the Options dialog box, you can change the Web Access Server's host name, port number or both after your initial installation of OVPI.

To change Web Access Server information:

1 From the Edit menu, click **Options**. The Options dialog box opens, as shown in Figure 19.

2 Click the Server tab.

3 Do one or both of the following:

- In the Host box, enter the name of the Web Access Server.

- In the Port box, enter the port number of the Web Access Server.

4 Click the **Reset to System Defaults** button to reset the values for the Host and Port boxes to their original default values.

5 Click **OK**.

> You must close and reopen Report Builder to have the Web Access Server changes take effect.

Specifying a Web Browser for Online Help

Before you can display the online Help documentation, you must specify a Web browser in which the documentation will display. For a list of supported Web browsers, see Prerequisites on page 16.

To specify a Web browser:

1 From the Edit menu, click **Options**. The Options dialog box opens, as shown in Figure 19 on page 110.

2 Click the Browser tab, and do *one* of the following:

- Enter the Web browser's full path and application file name in the Browser Application box.

- Click the ellipsis button. The Open dialog box opens. Locate the Web browser's application file name and double-click it.

For example, the full path and application file name for Microsoft Internet Explorer might be as follows:

```
C:\Program Files\Plus!\Microsoft Internet\IEXPLORE.EXE
```

3 Click **OK**.

Specifying Log File and Debug Settings

Logging information is generic and not always useful when trying to identify problems. Debugging information is usually more helpful when trying to find out where an error has occurred.

Using the Options dialog box, you can enable or disable logging, specify a file name, path, or both for the application's log file, and enable or disable debug tracing.

The application's defaults are as follows:

- Logging is enabled.

- The application's log files are located in *installation_directory*/log and called viewer.log (Report Viewer) and builder.log (Report Builder), respectively. In this instance, *installation_directory* is the directory into which you installed OVPI.

- Debug tracing is disabled.

To specify logging and debugging settings:

1   From the Edit menu, click **Options**. The Options dialog box opens, as shown in Figure 19 on page 110.

2   Click the Logging tab.

3   To specify logging status, do *one* of the following:

- To enable logging, select **Enable logging**.

- To disable logging, click to clear the **Enable logging** check box.

4   To change the name or path of the application's log file, do *one* of the following:

- Enter the new location, file name, or both in the Log File box.

- Click the ellipsis (**...**) button to display the Open dialog box, locate the log file, and then click Open.

   ▶   If the log file you specify does not exist, the application will create it for you in the directory you specified.

5   To specify debug tracing status, do *one* of the following:

- To enable debug tracing, select **Enable debug tracing**.

- To disable debug tracing, click to clear the **Enable debug tracing** check box.

Note the following points:

- If logging and debug tracing are enabled, the debug tracing information is included in the application's log file.

- If logging is disabled and debug tracing is enabled, the debugging information is sent to a window *only* if the application was started from a shell window (UNIX).

- If the application was not started from a window, you will not be able to see the debug tracing information unless you enable logging and view the application's log file.

6 Do *one* of the following:

- Click **Apply** to apply each change.

- Click **OK** to apply all of your changes and close the Open dialog box.

Overriding a Rule's Cell Background Property

When you select a row in a table, it is highlighted. If there is a rule applied to the statistic that specifies a specific color for the Cell Background property, the row is highlighted with that color. For example, suppose you created a rule for the Key ID statistic that applies a red background to any Key ID data that is less 3. If you select the row associated with the Key ID statistic, the row is highlighted with red.

If there is no rule associated with the statistic in the selected row, Report Builder uses the color associated with the table's Selected Cell Background property; by default, this is yellow. To see this value, expand the table in the component's tree and click **Cell Properties**.

You can override the Cell Background color applied by a rule and use the table's Selected Cell Background color instead for all table rows.

To override a rule's Cell Background color:

1   From the Edit menu, click **Options**. The Options dialog box opens, as shown in .

2   Click the Display tab.

3   Click the **Selection color will override colors defined by Rules**.

4   Click **Apply**.

Setting the Look and Feel

You can set the look and feel of the graphical user interface.

To set the look and feel:

1   From the Edit menu, click **Options**. The Options dialog box opens, as shown in .

2   Click the Display tab.

3   Select *one* of the following options from the Look and Feel list:

   • **Windows**. Uses the Windows look and feel.

   • **Metal**. Uses the default Java look and feel.

   • **Motif**. Uses the Motif look and feel (UNIX only).

   • **System Default**. Uses the look and feel of your current operating system (Windows or Motif).

4   Click **OK**.

Specifying Wizard Features

You can specify whether you want to use all or minimal features of the wizards for graphs, tables, and combo boxes. By default, Report Builder uses the full wizards.

To change the features of the wizards:

1   From the Edit menu, click **Options**. The Options dialog box opens, as shown in .

2 Click the Wizards tab.

3 Click *one* of the following:

- **Use full wizards**—The full wizard walks you through all the steps needed to fully create an element.

- **Use minimal wizards**—The minimal wizard walks you through only the most basic steps needed to create an element. You must complete the remaining required steps later.

4 In the Display Statistics by box, select how you want statistics to appear in any report that you create. For example, if you want statistics to display by their alias, click **Alias**.

5 Click **OK**.

Specifying Statistic Display

You can select how statistics will display in wizard windows. For example, suppose you decide to display statistics by their descriptions rather than by their alias names, which is the default. When you run the graph wizard, the Select Statistic window will list the available statistics by their descriptions.

To specify statistic display:

1 From the Edit menu, click **Options**. The Options dialog box opens, as shown in Figure 19 on page 110.

2 Click the Wizards tab.

3 Click *one* of the following:

- **Alias**. Displays statistics by their aliases.

- **Description**. Displays statistics by their descriptions.

  > If a statistic does not have a description, its alias is displayed instead.

- **Label**. Displays statistics by their labels.

- **Name**. Displays statistics by their names.

4 Click **OK**.

Specifying Character Encoding

Character encoding is the method used to represent characters digitally by assigning a unique code to each character in order to convert it to bytes. When you import or export non-ASCII data using any file other than XML, OVPI lets you specify character encoding.

Character encoding may be necessary when you save a file as CSV or import a group definition. For example, Japanese typically uses UCS or SJIS character encoding. By default, OVPI uses the default encoding for the operating system you are using.

To specify character encoding:

1 From the Edit menu, click **Options**. The Options dialog box opens, as shown in Figure 19 on page 110.

2 Click the Encoding tab.

3 Select the encoding you want to use from the File encoding box.

4 Click **OK**.

Saving Reports

After you create a report, you can save it to one of the following formats:

- Dataset (`.srep`)
- Report Definition (`.rep`)

To save a report:

1 Do *one* of the following:

- To save a report with its current file name, choose **Save** from the File menu or click 🔲 on the General toolbar.

- To save all reports with their current file names, choose **Save All** from the File menu or click 🗐 on the General toolbar.

- To save a report with a different file name or format, choose **Save As** from the File menu.

If you chose **Save As** from the File menu, or if you have never saved the report, the Save dialog box opens.
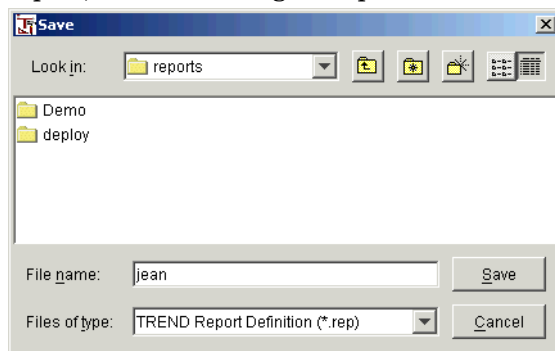
2 Do one or both of the following:

- Enter the file name in the File Name box.
- Click the Files of Type arrow, and select a format.

3 Click **Save**.

Exporting Reports

You can export a report to the following formats: CSV (comma separated value) and PDF (Portable Document Format).

To export a report:

1   From the File menu, click **Export As**.

    The Export dialog box opens.

2   Navigate to the folder in which you want to save the report.

3   Click the Files of type arrow, and select a format (PDF, CSV, or Zipped CSV).

    > If you want to use TrueType fonts in a PDF file, see Appendix B, Using TrueType Fonts in PDF Files for more information about how to configure OVPI for TrueType fonts.

    Choosing the zipped CSV format produces a zip file that contains a `.csv` file for each element in the report.

4   Type a file name in the File name box.

5   Click **Save**.

Printing Reports

To print a report:

1   Do one of the following:

    •   Click [printer icon].

    •   From the File menu, click **Print**.

The Print dialog box opens.
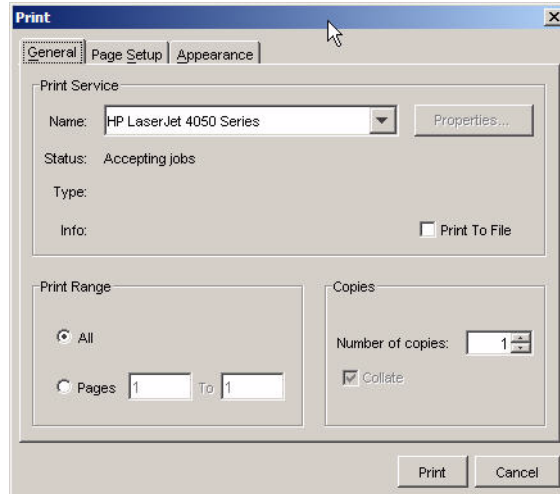
The dialog box contains the following tabs:

- General. This tab lets you specify a printer, whether you want to print to a file, a print range, and the number of copies to print.

- Page Setup. This tab lets you specify the paper size, the printer tray for the paper, the paper orientation, and the paper margins.

- Appearance. This tab lets you specify color appearance, color quality, how the image should appear on the printed page, and job attributes (a banner page, printing priority, a job name, and a username).

2   Make any changes necessary, and click **OK**.

Closing Reports

To close a report, do *one* of the following:

- From the File menu, click **Close** to close the current Report window.

- From the File menu, click **Close All** to close all open Report windows

If you have not saved the report, the following dialog box opens:

To save a report before you close it, click **Yes**. The Save dialog box opens. For more information about saving a report, see Saving Reports on page 117.

Exporting Elements or Data to CSV Format

You can export an element (graph or table) or graph overlay data to comma separated value (CSV) format.

To export to CSV format:

1   Right-click the element.

2   Do *one* of the following:

  •   Choose **Export Element as CSV** if you want to export a graph or a table.

  •   Choose **Export Graph Overlay Data as CSV** if you want to export graph overlay data.

  The Open dialog box opens.

3   Navigate to the folder in which you want to save the CSV file.

4   Specify a file name in the File name box, and then click **Open**.

Printing Graphs and Tables

To print a graph or a table:

1   Right-click the graph or the table.

2   Choose **Print Graph** or **Print Table** from the shortcut menu.

  The Print dialog box opens.

3   Make any changes necessary, and click **OK**.

4

Modifying Reports

This chapter describes how to modify the features of a report. Specifically, it describes how to do the following:

- Change element properties.
- Modify graphs and tables.
- Create reports with deferred selections.

Changing Element Properties

There are a few ways to change the properties of an element in a report. Depending on where you choose to change an element's properties (the Report window or the Components window) affects the ways in which you can change the element.

➤ If you change the properties of any element frequently, you should consider changing the defaults that Report Builder uses when it creates that element. For more information about setting report building preferences, see Setting Report Builder Preferences on page 104.

Using the Report Window

To change an element's properties:

- Right-click the element you want to change. A shortcut menu displays. Depending on the type of element, the commands on the shortcut menu will differ.

  The shortcut menu for graphs displays as follows:

Add Overlay...
Remove Overlay
Set Time Period...
Change Constraint Values...
Select Nodes/Interfaces...
Displayed Data ▶
Grid ▶
Legend ▶
Style ▶
Change Max Rows...
Display Data Table
Export Element as CSV...
Display Overlay Data Table
Export Graph Overlay Data as CSV...
View in new Frame
Print Graph...
Delete Graph

  For more specific instructions about how to modify graphs and tables using the shortcut menu, see Modifying Graphs on page 126 and Modifying Tables on page 148, respectively.

Using the Components Window

To change an element's properties using the Components window:

1. In the report's Components tree, expand Elements. A list of the report's elements are displayed.

   When you click on an element, its properties appear in the associated Properties list.

2. Click the Value box next to the property you want to modify.

   You can expect to change a property using one of the following:

   - Text box

Font Size	11

- Drop-down combo box

Property	Value
Background	
Foreground	
Border Style	None
Border Thickness	2
Font Name	sansserif
Font Size	sansserif
Bold	sansserif.bold
Italic	sansserif.bolditalic
Rows	sansserif.italic
Columns	serif
Legend Orientation	serif.bold
Visible	serif.bolditalic
Anchor	serif.italic
Format	L N

- Select a Color dialog box
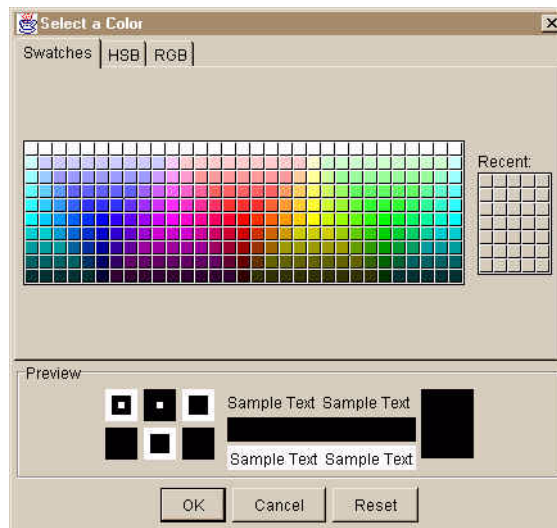
- *Property Name* window
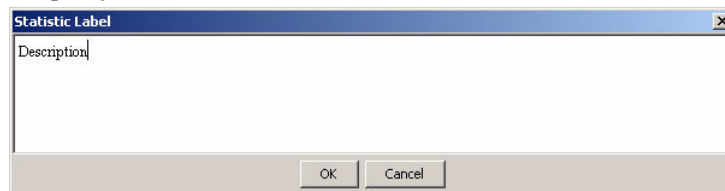
This window opens when carriage returns are allowed in text.

3   Do one of the following:

- To change a value using a text box or a drop-down combo box, do one of the following:

  — Type a value in the text box.

  — Select the value from the drop-down combo box.

  The value is updated when you move the pointer to the Report window.

- To change a value using the Select a Color dialog box, select a color, and click **OK**.

- To change text using the *Property Name* window, type the text you want, and click **OK**.

Modifying Graphs

Report Builder supplies defaults for several of a graph's properties when the graph is created. (For more information about these defaults, see Setting Report Builder Preferences on page 104.)

This section describes how to change some of the most common features. Specifically, it describes how to do the following:

- Add an overlay.

- Display a grid.

- Reposition a legend.

- Modify legend text.

- Change a graph's style.

- Change the maximum number of rows of data that is returned from the database.

- Display a data table or an overlay data table.
- Modify a graph's title.
- Change the rotation and depth of bar and stacked bar graphs.
- Zoom in on a region of a graph.
- Define axis properties.
- Change y-axis labels and weighted values (GOS graphs only).
- Select how to display missing data in a graph.

You can also do the following:

- Change nodes, interfaces, or both (see Selecting Nodes and Interfaces on page 180).
- Change the time period (see Selecting a Time Period on page 184).
- Modify constraint values (see Modifying Constraint Values on page 189).

Adding Overlays

After you create a graph, you can specify whether it will contain an overlay. An *overlay* is a set of data that is superimposed over another set of data. A sample overlay is shown in Figure 1. The first set of data is referred to as the *main* data. The second set of data is referred to as the *overlay* data.

Figure 1 shows an overlay report where the plot (which represents Percent Memory Used) overlays a bar, which represents CPU Utilization.
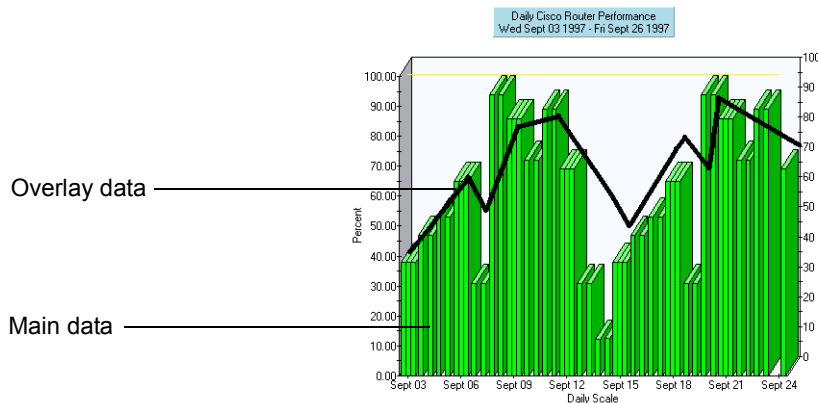
Figure 1   Graph Overlay Example

The main data and overlay data can share the same y-axis or can use a different y-axis. If the main graph and the overlay graph share the y-axis, they must display the same type of data, for example, utilizations. Figure 2 shows an example of a shared y-axis.
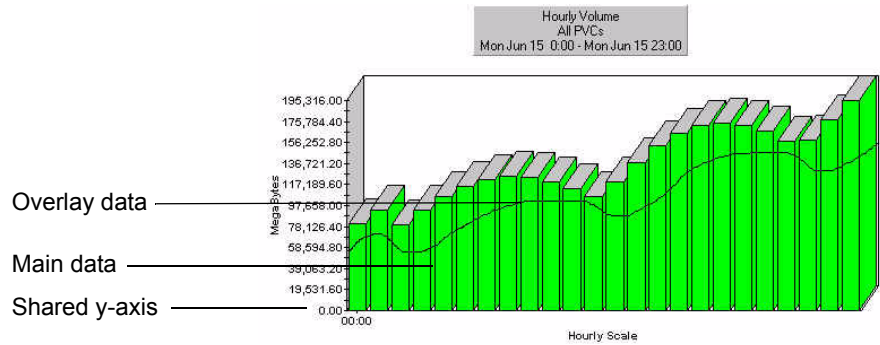
Figure 2   Graph Overlay Example – Shared Y-Axis

When you create a graph, you can also specify that it have one of the following types of overlays:

- Basic – A *basic* overlay graph displays data for multiple statistics on the same graph for the same time period.

  For example, the difference between an overlay graph and any graph displaying multiple statistics, is that with an overlay report one statistic may appear as one type of graph (for example, a bar graph) and the other statistic may appear as a different graph type (for example, a line graph).

- Baseline – A *baseline* overlay graph is similar in appearance to an overlay graph. For a baseline graph, data is collected over a period of time (the default is 42 days) and then used as a baseline or average to compare against data for a specific time period. A baseline can be thought of as an average or expected value. Therefore, when baseline data is superimposed over raw data, the raw data can be determined to be normal or abnormal based on its relationship to the baseline.

  For example, data for Cisco router performance can be collected for 42 days and then averaged so that you have data about typical router performance for each day of the week. That baseline data can then be

displayed on the same report as data for the current week. By viewing a baseline report, you can compare the current week's router performance against an average week.

A graph can only have one overlay. If you add an overlay to a graph that already has an overlay, the current overlay will be replaced by the new overlay.

Adding an Overlay to a Graph

To add an overlay to a graph:

Task 1: **Choose the overlay option.**

1 Do one of the following:

- Right-click the graph in the Report window.
- Right-click a Graph level in the report's Components tree.

2 Choose **Add Overlay** from the shortcut menu.

The Create a Graph Overlay window opens.
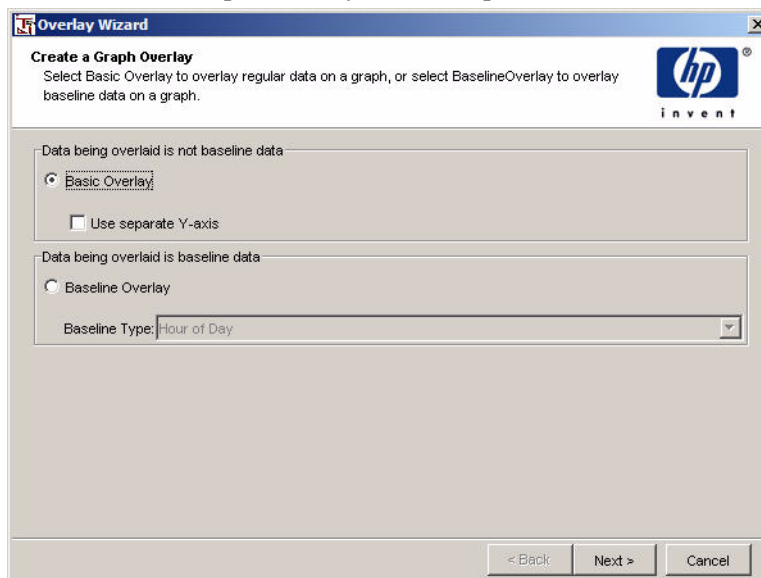
Task 2:   Select the type of overlay.

Do one of the following depending on the type of overlay you want.

- If you want a basic overlay, do the following:

    a   Click **Basic Overlay**, which lets you overlay the data from one graph onto another.

    b   If necessary, select the **Use Separate Y-Axis** box if the data being displayed in the basic graph and the overlay graph have very different y-axis values.

    For example, the y values for the basic graph might range from 1 to 1000 and the values for the overlay graph might only range from 1 to 100. If you use the same y-axis, the overlay graph will appear almost flat. If you choose a second y-axis, then the basic graph axis appears on the left and the overlay axis appears on the right. The overlay graph in Figure 1 on page 128 has two y-axes, although they both have the same scale.

    c   Click **Next**.

- If you want a baseline overlay, do the following:

    a   Click **Baseline Overlay**, which lets you overlay baseline data over data for a different time period.

    b   In the Baseline Type list, click the type of baseline which specifies the level of detail for the baseline data. Available options are **Hour of Day**, **Hour of Day of Week**, and **Day of Week**.

    c   Click **Next**.

The Select a data source for the Overlay window opens.
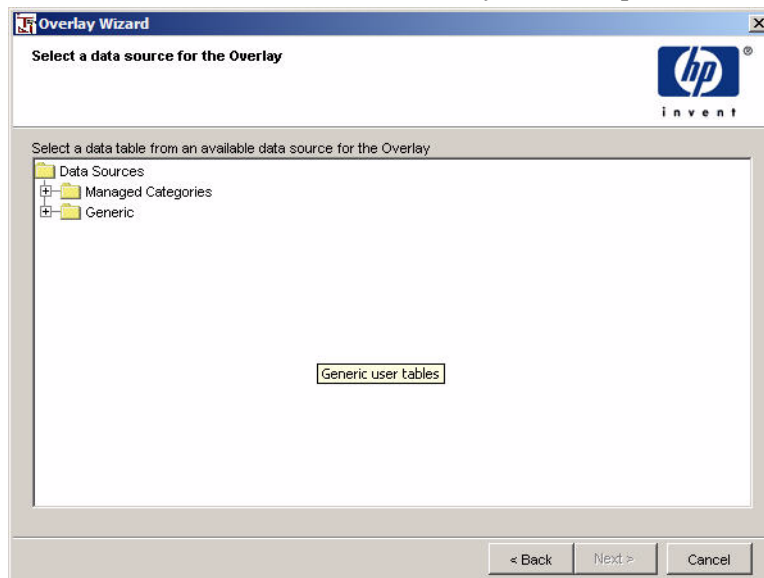
Task 3: Select a data table for the overlay.

1 Expand the folder that contains the data table you want for the overlay. The contents of the folder displays.

2 Click the data table you want.

3 Click **Next**.

The Select Statistics window opens. See Figure 7 on page 71.

Task 4: Select statistics for the overlay.

1 To select a statistic, do *one* of the following:

• Double-click a statistic in the Choose from box.

• Select a statistic in the Choose from box, and click $\boxed{\Rightarrow}$.

2 If needed, to remove a statistic, do *one* of the following:

• Double-click a statistic in the Selected statistics box.

• Select a statistic in the Selected statistics box, and click $\boxed{\Leftarrow}$.

3 Click **Next**.

The Summary window opens.
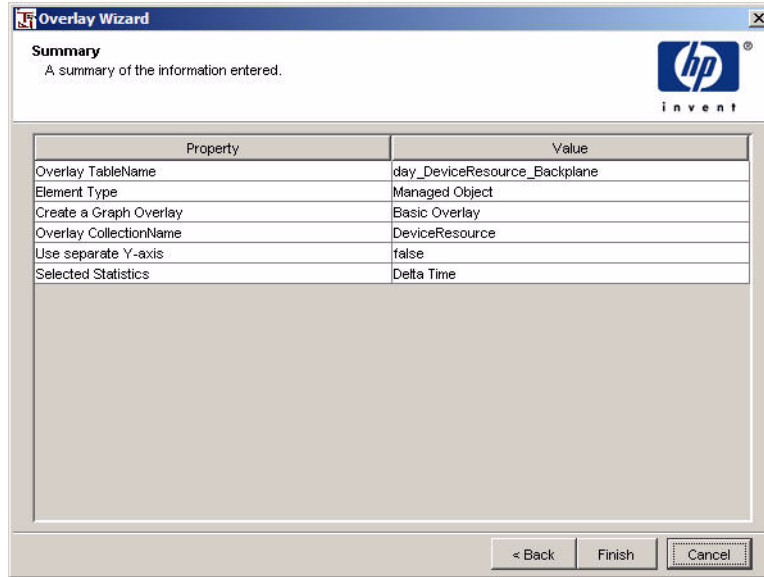
4 Click **Finish**.

Changing Overlay Properties Using the Components Window

After you create an overlay graph, you can specify the time period is uses and whether or not it should use a new y-axis.

To change overlay properties:

1 In the report's Components tree, expand Elements and then expand the graph that contains the overlay.

2 Click **Overlay Properties**.

3 In the Properties list, click in the Value box next to any of the following properties to modify their values:

- Use main time period in overlay. Lets you specify if the overlay graph will use the main graph's time period.

- Use new Y axis in overlay. Lets you specify if the overlay graph will use a new y-axis.

- Use source time period in overlay. Lets you specify if the overlay graph (the destination object) will use the source object's time period. For more information about source and destination objects, see Chapter 5, Linking Report Elements.

4 Select an option from the list (True or False).

The value is updated when you click in another Value box or move the pointer to the Report window.

Deleting an Overlay

To delete an overlay:

1 Right-click the graph.

2 Choose **Remove Overlay** from the shortcut menu.

Displaying Grid Lines

You can specify grid lines for a graph's x-axis, y-axis, or both. You can display grid lines using the shortcut menu or a report's Components tree.

Using the Shortcut Menu

To display grid lines for a graph using the shortcut menu:

1 Right-click a graph in the Report window.

2 On the shortcut menu, point to **Grid**, and select the axis on which you want the grid lines to display.

The Change Grids dialog box opens.

3 Enter the number of grid lines you want on the axis in the Grids box, and then click **OK**.

Using the Components Tree

To display grid lines for a graph using the Components tree:

1 In the report's Components tree, expand Elements ⇨ *Graph Name* ⇨ Properties, and then click **X Axis** or **Y Axis**.

2 Click the Value box next to Grids, and type the number of grid lines you want to appear on the axis.

3 Move the pointer to the Report window to apply the change.

Repositioning Legends

You can control where a graph's legend is positioned or not display it. Table 1 lists the legend position options.

Table 1   Legend Position Options

Option	Displays...
None	No legend
North	At the top of the graph
South	At the bottom of the graph
East	To the right of the graph
West	To the left of the graph
NorthEast	To the top and to the right of the graph
NorthWest	To the top and to the left of the graph
SouthEast	To the bottom and to the right of the graph
SouthWest	To the bottom and to the left of the graph

You can change a legend's position using the shortcut menu or a report's Components tree.

Using the Shortcut Menu

To change a legend's position using the shortcut menu:

1 Right-click a graph in the Report window.

2 On the shortcut menu, point to Legend, and then select a legend position (see Table 1).

Using the Components Tree

To change a legend's position using a report's Components tree:

1 In the report's Components tree, expand **Elements** ⇨ *Graph Name*, and then click **Legend Area**.

2 In the Properties list, click the Value box next to Anchor, and select an option from the list (see Table 1).

3 Move the pointer to the Report window to apply the change.

Modifying Legend Text

To modify a legend's text:

1 In the report's Components tree, expand **Elements** ⇨ *Graph Name*, and then click **Legend Area**.

2 In the Properties list, click the Value box next to Format.

3 Type text, one or more variables from Table 2, or both.

Using Variables in Graph Legends

You can use variables in graph legends. A *variable* is set to display a certain type of information. You can combine a variable with other variables and text in any legend. Table 2 lists the variables that are supported.

Table 2   Report Builder Legend Variables

Variable	Output
C	Displays the content specified in one of the following: • dsi_descr if dsi_descr is not NULL • dsi_key_table if dsi_descr is NULL
L	Displays a statistic's label
M	Displays the content specified in one of the following: • dsi_target_name • dsi_target_name followed by dsi_table_key, if the graph contains multiple nodes
N	Displays the content specified in one of the following: • dsi_target_name followed by the content of dsi_descr if dsi_descri is not NULL • dsi_target_name followed by the content of dsi_table_key if dsi_descr is NULL • dsi_target_name, dsi_table_key, dsi_descr, if the graph contains multiple nodes
!{*X*}	This is a substitution variable where *X* represents the alias of one of the selected statistics in the graph. For example, to display the value of the Description statistic, you would use the following: !{Description}

When C, M, and N are used in the legend of a graph that is the destination of a link, they will display the information for the data being displayed in that graph.

Changing Graph Style

Report Builder supports the following graph types: plot, scatter plot, hi-lo, hi-lo-open-close, candle, area, bar, stacking bar, pie, and stacking area.

You can change the style of a graph using the shortcut menu or a report's Components tree.

Using the Shortcut Menu

To change a graph's style using the shortcut menu:

1   Right-click a graph in the Report window.

2   On the shortcut menu, point to **Style**, and select the style you want.

Using the Components Tree

To change a graph's style using the Components tree:

1   In the report's Components tree, expand Elements ⇨ *Graph Name*, and then click Properties.

2   In the Properties list, click the Value box next to Graph Style, and select a style from the list.

3   Move the pointer to the Report window to apply the change.

Changing the Maximum Number of Rows Returned

The database can contain thousands of data entries, which span gigabytes of disk space. Thus, you can constrain the amount of data that is returned and subsequently displayed. The default number of rows returned is 50.

The data returned depends on the nature of the query. For example, if you specify in the query to sort the data by time in descending order, OVPI displays the most recent 50 rows of data.

Depending on the type of report you are viewing and how its data is distributed, 50 rows may not be enough data. You can change the number of rows displayed using the shortcut menu or a report's Components tree.

Using the Shortcut Menu

To change the number of rows using the shortcut menu:

1   Right-click a graph in the Report window.

2   Choose **Change Max Rows** from the shortcut menu. The Change Maximum Number of Rows dialog box opens.
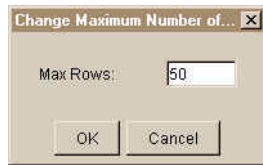
3   In the Max Rows box, enter the number of rows you want, and then click **OK**.

Using the Components Tree

To change the maximum number of rows using the Components tree:

1   In the report's Components tree, expand Elements ⇨ *Graph Name* ⇨ Data, and then click **Query**.

2   In the Properties list, click the Value box next to Maximum Rows.

3   Enter the number of rows.

4   Move the pointer to the Report window to apply the change.

Displaying Data Tables

You can display the data represented by each point on a graph or on an overlay graph by displaying the graph's data table.

To display a data table:

1   Right-click a graph.

2   Do *one* of the following:

- Choose **Display Data Table** from the shortcut menu.

- Select **Display Overlay Data Table** from the shortcut menu.

The data table will appear in a separate window similar to the following:

3 To close the window, click ⊠ in the upper-right corner of the window.

Modifying Graph Titles

When you create a graph using the Graph wizard, you can enter up to three titles for the graph.

To modify a title:

1 In the report's Components tree, expand Elements ⇨ *Graph Name* ⇨ Title Area, and then click **Title***n*.

2 In the Properties list, click the Value box next to Title Text, and type text, one or more variables from Table 2, or both.

3 Move the pointer to the Report window to apply the change.

4 Repeat the steps to change another title.

Using Variables in Titles and Legends

You can use variables in graph titles and legends. A *variable* is set to display a certain type of information. You can combine a variable with other variables and text in any title. Table 3 lists the variables that are supported.

► You should only use the C, M, and N variables in the title of a graph that is the destination of a link. For a linked graph, they will display the appropriate data for the row selected in the source table. For an unlinked graph, they will display no data.

Table 3   Report Builder Title and Legend Variables

Variable	Displays...
C	Displays the content specified in one of the following: • dsi_descr if dsi_descr is not NULL • dsi_key_table if dsi_descr is NULL
D	The time range selected in the Set Time Period dialog box.
E	The end time of the time range selected in the Set Time Period dialog box.
M	Displays the content specified in one of the following: • dsi_target_name • dsi_target_name followed by dsi_table_key, if the graph contains multiple nodes
N	Displays the content specified in one of the following: • dsi_target_name followed by the content of dsi_descr if dsi_descri is not NULL • dsi_target_name followed by the content of dsi_table_key if dsi_descr is NULL • dsi_target_name, dsi_table_key, dsi_descr, if the graph contains multiple nodes

Table 3   Report Builder Title and Legend Variables (cont'd)

Variable	Displays...
S	The start time of the time range selected in the Set Time Period dialog box
T	The range of dates with available data in the database (which may differ from the time range specified depending on the availability of data)
#{*X*}	This is a substitution variable is only used when two elements are linked. The value of *X* is the alias of a selected statistic from a selected row in the source element. If there are multiple source elements, the first source is used. For example, to take the value of Target Name from a selected row in a source table and have that value display in the title of a target graph or table, you would use the following: #{Target Name}

Changing Rotation, Elevation and Depth

Report Viewer displays graphs in three dimensions. You can change the depth, rotation, and elevation of a bar or stacked bar graph to give it a three-dimensional appearance. Values are evaluated in terms of degrees. A value of zero for any of these properties will result in a two-dimensional object.

Thus, you can increase:

- The elevation, which creates the effect of looking down on the graph

- The depth, which makes the graph's x-axis wider

- The rotation, which creates the effect as if you moved to the right of the graph

The following figure shows a graph before and after its rotation and depth has been changed:

Before

After
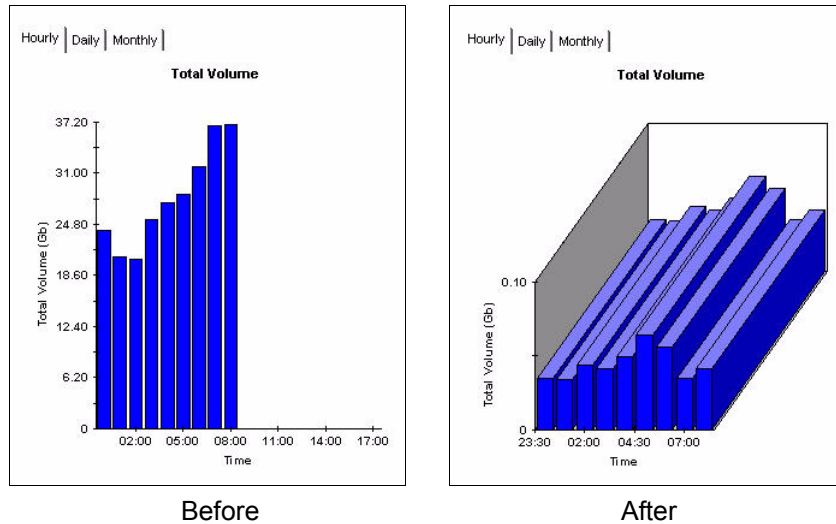
Using the Pointer

To change the rotation, elevation, or depth of a graph using the mouse:

1　Place the pointer over the graph.

2　Hold the **SHIFT** key and the left mouse button and drag the mouse in any direction until you reach the desired effect.

Using the Components Tree

To change the rotation, elevation, or depth of a graph using the Components tree:

1　In the report's Components tree, expand Elements ⇨ *Graph Name*, and then click **Chart Area**.

2　In the Properties list, do the following:

- Click the Value box next to Rotation, and type a number of degrees.

- Click the Value box next to Elevation, and type a number of degrees.

- Click the Value box next to Depth, and type a number of degrees.

3 Move the pointer to the Report window to apply the changes.

To return a graph to its original appearance:

1 Press and hold **CTRL**-**SHIFT**.

2 Double-click on the graph.

Zooming In

You can zoom in to focus on details in a graph. The following figure shows a graph before zooming in and after a selected area has been zoomed in on:
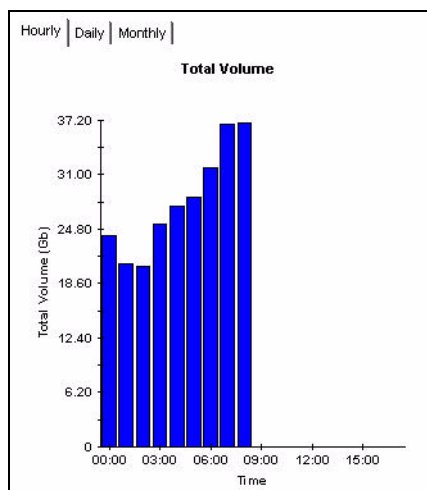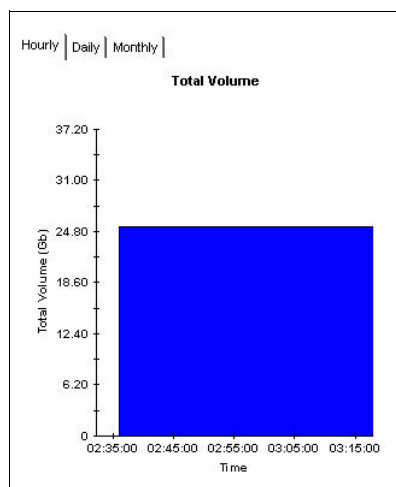
Before   After

To zoom in on a graph:

1 Place the pointer over the graph.

2 Press and hold **CTRL**+**SHIFT**, and then drag the pointer over the portion of the graph you want to zoom in on.

The graph will adjust to show the portion of the graph you selected.

To return a graph to its original appearance:

1 Press and hold **CTRL**-**SHIFT**.

2 Double-click on the graph.

Displaying Data Detail

When you view a graph, you may want to display information about a particular point on the graph. The following figure shows how data detail displays for a graph:
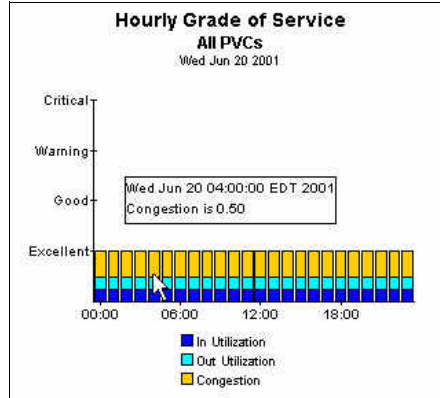
To display data detail for a point on a graph:

1   Place the pointer over a data point.

2   Press and hold the left mouse button.

    The information appears, showing the date and time at which the data was collected and the value of the data at that time.

Displaying Selected Statistics

If you want to add your own custom statistics for use in graphs and tables, see .

You can specify which statistics you want to appear in a graph when you view it.

To select statistics:

1   Right-click the graph.

2   Choose **Displayed Data** from the shortcut menu. A submenu lists the currently displayed statistics.

3   Select a statistic. you do not want to display, which should remove the check mark next to the statistic.

Changing GOS Y-Axis Labels

To change the y-axis labels for a GOS graph:

1 In the report's Components tree, expand Elements ⇨ *Graph Name* ⇨ Properties.

2 Right-click Y Axis, and choose **Add Y Axis Labels** from the shortcut menu. The Specify GOS Y-Axis Labels dialog box opens.
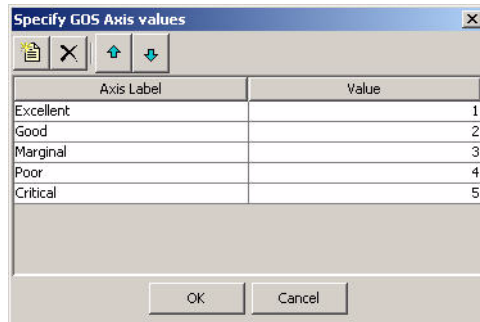
3 To change an axis label, click the Axis Label box, and enter a new label.

4 To change the value of an axis label, click the axis label's Value box, and enter a new value.

5 To reorder the labels, select the label you want to reorder, and do *one* of the following:

— Click [⬆] to move the label up in the list.

— Click [⬇] to move the label down in the list.

6 To delete a label, select the label, and click [✕].

7 To add a label, do the following:

a Click [📄]. A blank box appears below the last statistic in the list.

b Click the box, and type the label in the Axis Label box.

c Type its value in the Value box.

8 Click **OK**.

Changing GOS Weighted Values

To change the weighted values for a GOS graph:

1   In the report's Components tree, expand Elements ⇨ *Graph Name* ⇨ Data ⇨ Query.

2   Right-click **Selected Statistics**, and choose **Set GOS Weights** from the shortcut menu. The Set GOS Weights dialog box opens.

Statistic	Weight	Excellent	Good	Marginal	Poor	Critical
Reques...	0	0	10	20	30	Maximu...
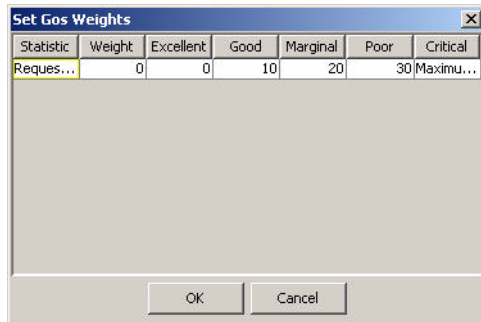
▶   You cannot change the values in the Statistic and Critical boxes.

3   Click in a box, and enter a new value.

4   Click **OK**.

Displaying Missing Graph Data

Occasionally, there is no data available for a graph; for example, this can happen when polling cycles are missed or network errors occur. You can select a visual cue to represent missing data in a graph by setting the graph's Hole properties.

To specify a visual cue for missing data:

1   In the report's Components tree, expand **Elements** ⇨ *Graph Name*.

2   Click **Properties**. You will see the following properties pertaining to holes in graph data:

   •   Hole Style. Lets you select how missing data is represented.

   •   Hole Mark. Lets select a visual cue for missing data in a graph.

   •   Hole Mark Color. Lets you select the color of the Hole Mark.

- Hole Mark Shape. Lets you select the shape of a symbol when symbol is selected as the Hole Mark.

- Hole Mark Size. Lets you select the size of a symbol when symbol is selected as the Hole Mark.

- Hole Mark in Legend. Lets you select whether the missing data is shown in the graph's legend.

- Hole Mark Label. Lets you select the text that will represent the missing data in the legend.

3   Click the Value box for Hole Style, and select one of the following values:

- Not Plotted. The graph plots a line, which will contain a hole (white space) where the missing data is located.

- Interpolation. The graph plots a line from the last known data point to the next known data point, interpreting what it thinks the missing data points might be.

- Last Value. The graph plots a straight line from the last known data point until it detects a known data point on the y-axis.

- Zero. The graph plots a line from the last known data point down to the x-axis until it detects a known data point on the y-axis.

4   Click the Value box for Hole Mark, and select one of the following values:

- None. The graph plots a line, which will contain a hole (white space) where the missing data is located.

- Bar. A bar will appear in the area of the graph containing the missing data.

- Symbol. A symbol will appear on the x-axis to indicate missing data.

5   If you chose a bar or symbol for the visual cue, click the Value box for Hole Mark Color, and select a color for the cue.

6   If you chose a symbol for the visual cue, do the following:

a   Click the Value box for Hole Mark Shape, and select the shape of the symbol.

b   Click the Value box for Hole Mark Size, and type the size in points for the symbol.

7   If you want the missing data to be noted in the graph's legend, do the
following:

   a   Click the Value box for Hole Mark in Legend, and select True.

   b   Click the Value box for Hole Mark Legend, and type the text that you
want to use in the legend (for example, "Missing Data").

8   Move the pointer to the Report window to apply the changes.

Modifying Tables

Report Builder supplies defaults for several of a table's properties when the
table is created. You can change many table properties using Report Builder.
(For more information about these defaults, see Setting Report Builder
Preferences on page 104.)

This section describes how to change some of the most common features.
Specifically, it describes how to:

• Modify a table's title.

• Change the order in which table columns appear.

• Add row labels.

• View a table in a new frame.

• Change the date or time format of a selected statistic.

You can also do the following:

• Change the maximum number of rows of data that is returned from the
database (see Changing the Maximum Number of Rows Returned on
page 137).

• Change nodes, interfaces, or both (see Selecting Nodes and Interfaces on
page 180).

• Change the time period (see Selecting a Time Period on page 184).

• Modify constraint values (see Modifying Constraint Values on page 189).

Changing Titles

To change a table's title:

1 In the report's Components tree, expand Elements ➪ *Table Name* ➪ Title Area.

2 Click **Title Line *n***.

3 In the Properties list, click the Value box next to Title Text.

4 Change the text.

5 Move the pointer to the Report window to apply the change *or* click in another Value box.

Changing the Order of Columns

You can change the order in which columns appear in a table.

➤ You can only move one column at a time.

To change the order of a table column:

1 Place the pointer on the column heading you want to move.

2 Drag the pointer over a column in either the left or right direction.

As you move the pointer, the column that you drag the current column over moves (to the left or to the right, depending on the direction in which you are dragging the pointer) past the column you are dragging.

3 Release the left mouse button.

4 Repeat steps 1 through 3 to move the column again.

Resizing Table Columns

You can resize the columns of a table displayed in a report.

To resize a table column:

1 Place the pointer before the column you want to resize and look for the double-ended arrow to appear.

2 Drag the arrow in either the left or right direction to expand the column.

3 Release the left mouse button when you reach the desired size.

4 Repeat steps 1 through 3 to resize a column again.

Adding Row Labels

You can add row labels to a table. The following figure shows how row labels appear when added to a table:

To add row labels to a table:

1 In the report's Components tree, expand the following: Elements ⇨ *Table Name*.

2 Click **Row Properties**.

3 In the Properties list, click the Value box next to Show Row Labels, and select **True**.

Viewing a Table in a New Frame

You can choose to view a table from a report in a window separate from the report's window.

To view a table in a new frame:

1 Right-click the table.

2 Select **View in new Frame** from the menu.

The table is displayed in its own window.

Changing the Date or Time Format of a Statistic

To change the date or time format of a selected statistic:

1   In the report's Components tree, expand the following: Elements ⇨ *Table Element* ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *Statistic Name*.

2   In the Properties list, click the Value box next to Text Date Format.

The Edit the Date Format combo box displays the current format.
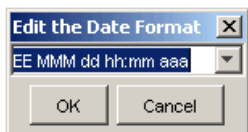
3   Click the drop-down arrow to display and select from the standard date and time formats, or type the desired format in the box.

Table 4 lists and describes each available component of the date and time format.

Table 4   Date and Time Format Values

Value	Description	Format	Example
a	Specify AM or PM (use with **h** option)	Text (AM or PM)	`hh:mm aa` can display `02:21 AM`
d	Day in month	Number (1-31)	5 or 05
D	Day of year	Number (1-366)	4 or 04
E	Day of week	Text	Tuesday
G	Era	Text (AD or BC)	AD
h	Hour in AM/PM (use with **a** option)	Number (1-12)	8 or 08
H	Hour in day	Number (0-23)	0 or 00
k	Hour in day	Number (1-24)	19
K	Hour in AM/PM (use with **a** option)	Number (0-11)	2 or 02
m	Minute in hour	Number (0-59)	6 or 06

Table 4   Date and Time Format Values (cont'd)

Value	Description	Format	Example
M	Month in year	Text or Number	July, 7, or 07
s	Second in minute	Number (0-59)	9 or 09
w	Week in year	Number (1-52)	3 or 03
W	Week of month	Number (1-5)	4 or 04
y	Year	Number	2004 or 04
z	Time zone	Text	EDT or Eastern Daylight Time

In most cases, the number of times you type a letter in the pattern determines how that piece of information is presented. Text information is displayed in an abbreviated form if the pattern letter is repeated less than four times. Otherwise, the unabbreviated form is used. For example, a **zzzz** pattern can display `Pacific Daylight Time`, and a **z**, **zz**, or **zzz** pattern can display `PDT`.

For numerals, the number of times a pattern letter is repeated determines how many digits are presented. For example, **hh:mm:ss** can present `01:51:15`, but **h:m:s** displays the same time value as `1:51:15`. Also, you can represent the year with two digits or four digits, as follows: **yy** can display `04`, and **yyyy** can display `2004`.

Finally, **M** or **MM** causes the month to be displayed as one or two digits (for example, `4` or `04`). However, three or more repetitions of **M** cause the month to be displayed as a text string (for example, `April`).

Creating Reports with Deferred Selections

Sometimes you may want to create a report that has a deferred selection. When you view the report, you must supply additional information before Report Viewer or the Web Access Server will display the report.

A report with a deferred selection asks you to specify one or both of the following for each element in the report that has a deferred selection:

- Nodes and interfaces – A node can contain multiple interfaces. For example, a node may be a Cisco router which has an Ethernet interface and a Token Ring interface. You can select a node and all its interfaces or you can select only certain interfaces. For more information about selecting nodes, see Selecting Nodes and Interfaces on page 180.

- Time range – A *time range* is the time period for the report. You can select an absolute period (specific dates) or a relative time period (a period of time relative to the time you view the report).

For example, a router performance report is an example of a report that can require a user to enter the following information before she can view the report:

- The router or routers to report on

- The time period to report on (if the time selection is deferred)

After you supply the information, the report is run based on that information. Additionally, you could view the report numerous times using different routers and time selections.

To create a report with a deferred selection:

1   In the report's Components tree, do *one* of the following:

- Expand Elements ⇨ *Element Name*.

- Expand Tabbed Area ⇨ Tabs ⇨ *Tab Name* ⇨ *Element Name*.

2   Expand Data ⇨ Query.

3   Do one or both of the following:

- To defer the time period selection, do the following:

— Click **Time Period**. Its properties appear in the Properties list.

— Click the Value box for Deferred, and choose **True** from the drop-down list.

- To defer the node and interface selection:

— Click **Query** in the Components tree. Its properties appear in the Properties list.

— Click the Value box for Deferred Node, and choose **True** from the drop-down list.

When you open the report, a dialog box appears asking you to supply nodes and interfaces, a time period, or both. For more information about opening a report with a deferred selection, see Opening a Report with a Deferred Selection on page 263 (Report Viewer) and Deferred Selections on page 286 (Web Access Server).

5

Linking Report Elements

After you create the elements for a report, you will probably want to link them. You create links between elements in order to display more detailed information about a selected item. For example, you might link a table to multiple graphs or link multiple combination boxes to a single table. This detailed information is referred to as a *drilldown*.

For example, you may want to create a link between a table and several graphs; the table would display summary statistics while the graphs would display other details about a selected item. shows a table linked to multiple graphs. As you select rows in the table, the graphs update with detailed data for the selected element in the table. (In this example, the table is the *source object*, and the graphs are the *destination objects*.)

You can link elements in any of the following manners:

- One source object linked to one destination object

- One source object linked to multiple destination objects

- Multiple source objects linked to one destination object

⚠ If you have a destination object with multiple source objects, it may cause data set reports (.srep) to become extremely large.

A source object displays summary statistics. A source object can be any table or graph that shows data by node. This kind of graph displays nodes and interfaces along its x-axis. The link has no effect on the data displayed in the source table.

A destination object displays the detailed information about an item from the source object. A destination object can be a table, a graph of any type, or a tabbed area (an element that contains multiple tables and graphs). The information in the destination object is dynamic; it changes based on what is selected in the source object.

Link Type Examples

This section shows examples of the kind of link types that are possible when you build element links. The example link types shown are as follows:

- One table linked to multiple graphs
- One graph linked to another graph
- One table linked to multiple graphs in a tabbed area
- Multiple combination boxes linked to a single table

Using a Table as a Source Object

You can link a table (source object) to a graph or to another table (destination object). Figure 1 shows how you can use this type of link to display summary information in a table and detailed information in several linked graphs.
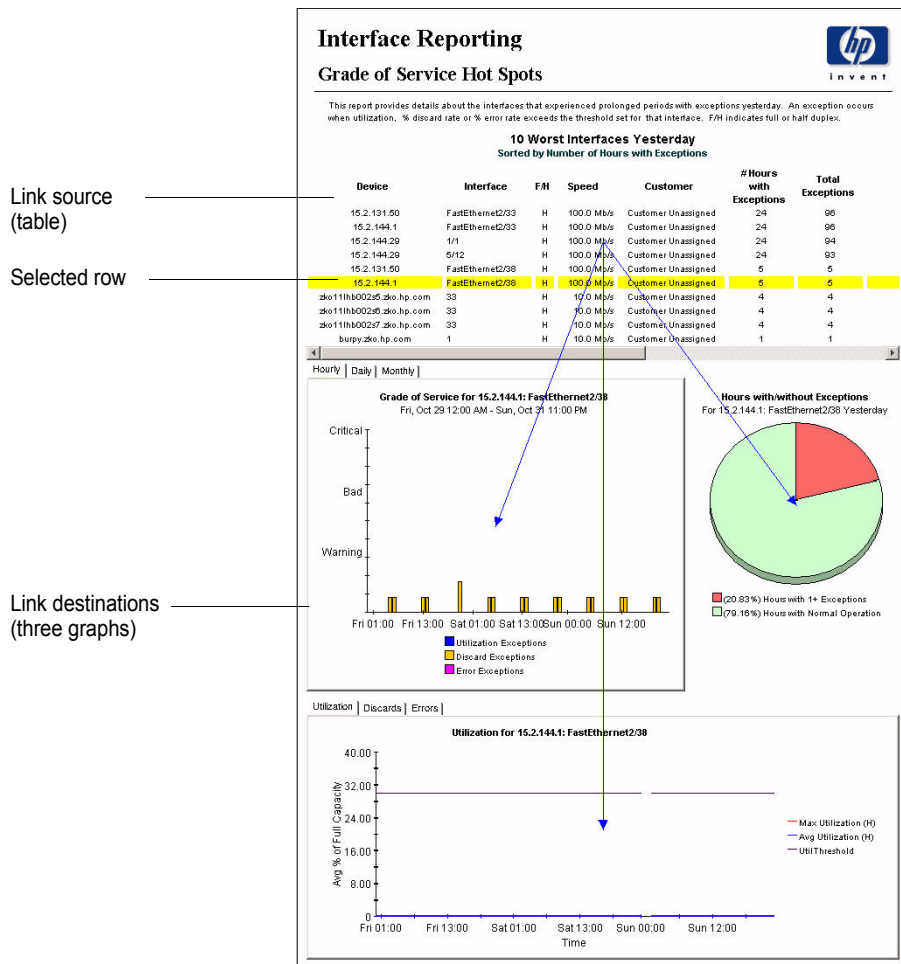
Figure 1   Linked Elements—Table as a Source Object

Using a Graph as a Source Object

You can link a graph with node and interface information displayed on its x-axis (source object) to either a graph or a table (destination object). This kind of graph is called a graph-by-node graph.

Figure 2 shows how you can use this type of link to display summary information in a graph and detailed information in a linked graph.
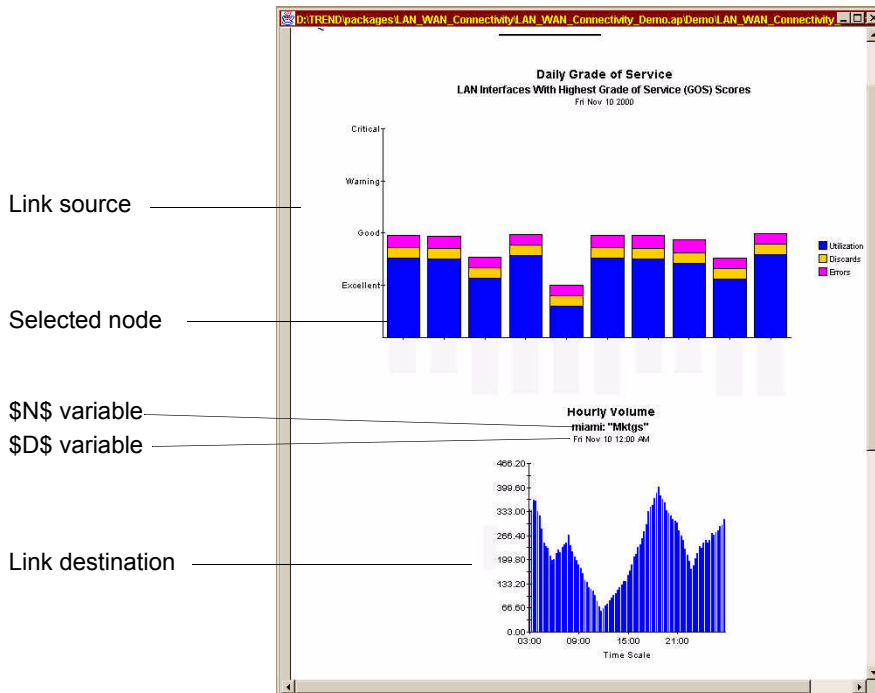
Figure 2   Linked Elements—Graph as a Source Object

> Using variables (N, T, and D) in a graph's title is an effective way to clarify the destination object in a report. Figure 2 uses N and D for the second and third lines of the title in the destination object. For more information about title variables, see Using Variables in Titles and Legends on page 140.

Linking to Elements in a Tabbed Area

You can create a link from a table or a graph (source object) to the elements in a tabbed area. A link is created to each element in the tabbed area; the tabbed area is not part of the link.

Following are the ways in which you can configure a link to a tabbed area:

- **Selecting a source row updates current tab panel only** – As different rows are selected in the source table, only the selected tab is updated.

➤ When you select this option, you link to the tab that is selected when you create the link.

- **Selecting a source row updates all tab panels** – As rows are selected in the source table, each tab in the tabbed area is updated to display detailed information for the node or interface selected. Typically, each tab in the tabbed area contains a graph or table that depicts a different statistic associated with the selected row in the source table. Each tab represents a link that you configure separately.

Figure 3 shows how you can use this type of link to display summary information in a table that is linked to detailed information in a tabbed area. Each tab could contain a different statistic associated with an item selected in the source.
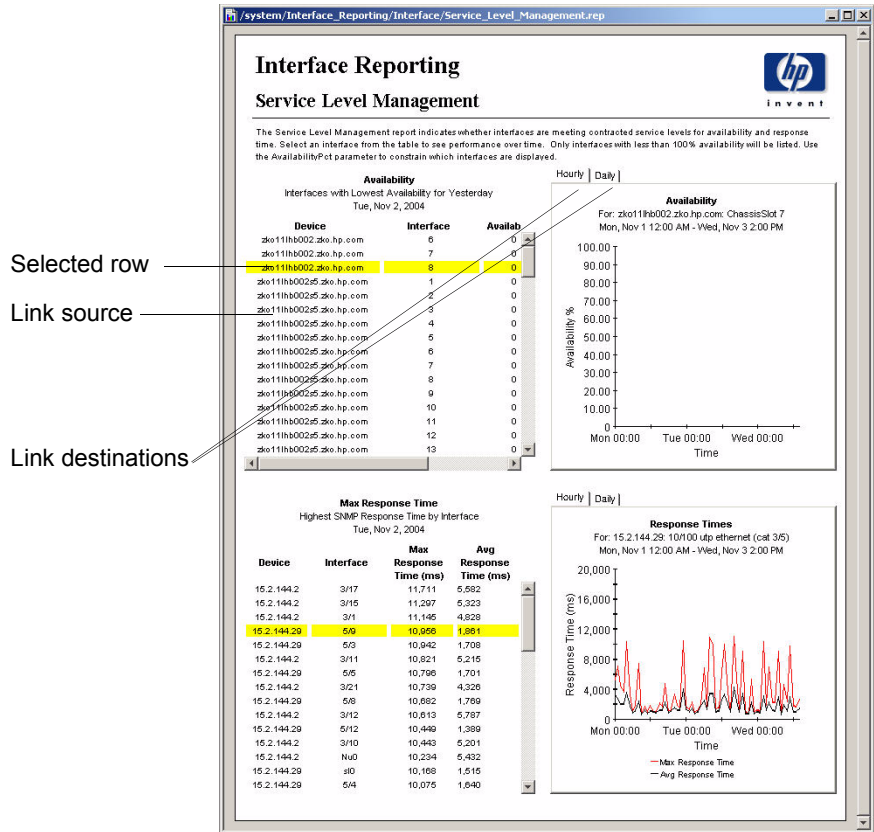
Figure 3   Multiple Destination Objects (Tabbed Areas)

Multiple Combination Boxes Linked to a Single Table

You can link multiple source objects to a single destination object. Figure 1 shows two instances of how multiple combination boxes can be linked to a single table.

In this example, the combination boxes are linked to two different tables. Using the combination boxes, you select the interfaces you want to display in the devices table; the table will show all the interfaces that meet your selection criteria. In addition, the combination boxes are also linked to a table that shows the total number of interfaces that meet the selection criteria.

Figure 4   Linked Elements—Multiple Source Objects

Linking Elements

The procedure in this section assumes that you have already created the source and destination objects (graph, table, or tabbed area) in your report. For more information about adding elements to a report, see Adding Elements

on page 53. For more information about deleting, modifying, or displaying report links, see Deleting Links on page 171, Modifying Links on page 171, and Displaying Links on page 172.

▶ The following procedure creates a link between one source and one destination object. When multiple source or destination objects are involved, you will need to repeat the procedure depending on how many links are involved. For example, to link two tables to one graph, you would first link one table to the graph, and then you would repeat the procedure to create a link from the second table to the same graph.

To link two report elements:

Task 1:   Start the Link wizard.

1   Do one of the following:

   •   Click 🔳 on the toolbar.

   •   On the Insert menu, click **Link Elements**.

   •   In the report's Components tree, right-click the **Links** level, and choose **Insert Relation** from the shortcut menu.

   The pointer changes to a crosshair.

2   Place the pointer on the source object in the Report window, and drag the pointer to the destination object.
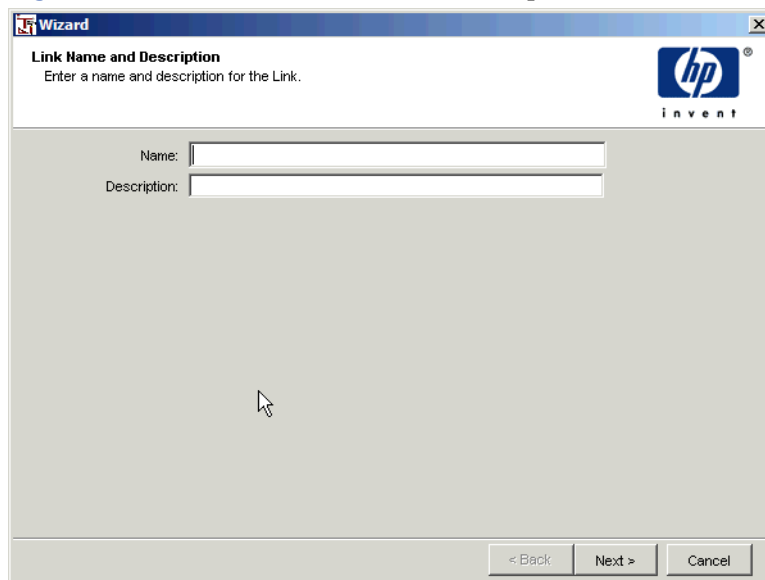
   As you drag the pointer, a line is drawn.

▶ When you reach the destination object, the will turn be red if the link is valid. (For more information about the types of objects you can link, see Link Type Examples on page 156.) If you cannot link the two objects, the line is black and disappears when you release the mouse button.

Task 2:   Enter a name and description for the link.

Figure 5 shows the Link Name and Description window.

Figure 5   Link Name and Description Window

Supplying a name and description is optional. Do either of the following:

• Supply a name and a description by doing the following:

   a In the Name box, enter a name for the element. This becomes the
         element's Name property in the report's Components list.

    b   In the Description box, enter a description of the element. This becomes the element's Description property in the report's Components list.

    c   Click **Next**.

•   Click **Next** and go to Task 3.

Task 3:   Select the kind of link you want to create and specify how its time range will be created.

Figure 6 shows the Configure Link window.
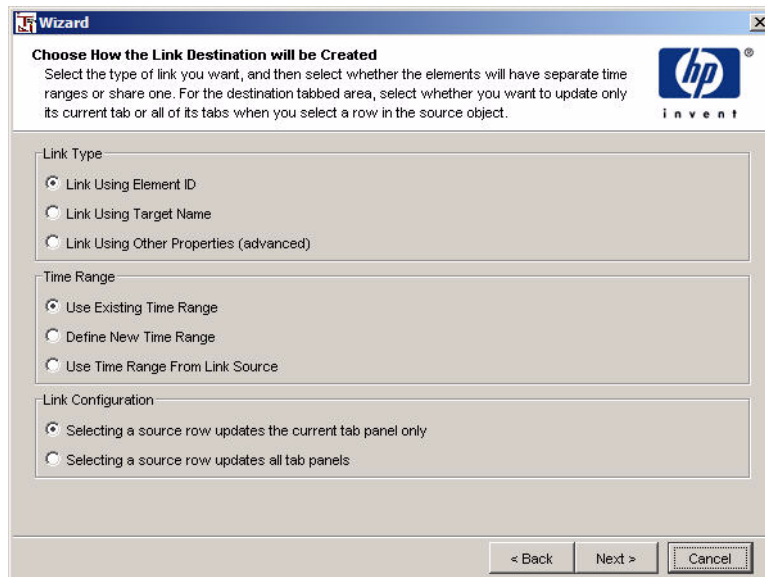
> The Link Configuration box in the window only appears when the link's destination object is a tabbed area.

Figure 6   Configure Link Window

1   In the Link Type box, select one of the following options:

•   **Link Using Element ID**. When an item is selected in the source object, the element ID is passed to the destination object. For example, the source object can contain information about a particular device and its interfaces and the destination object can show more detail on a particular interface.

- **Link Using Target Name**. When an item is selected in the source object, the target name of the selected item is passed to the destination object. For example, starting with information about an interface on a specific device, you can drill down to information about that device.

- **Link Using Other Properties (advanced)**.Lets you link a source object and a destination object based on one statistic. When an item is selected in the source object, a user-specified set of columns is passed to the destination object. For example, the source object can contain information about a particular device, and the destination object can show information related to that device. For more information about Advanced Properties links, see Advanced Property Links on page 169.

2   In the Time Range box, select one of the following options:

- **Use Existing Time Range**. Uses the time range that currently exists for the destination object.

- **Define New Time Range**. Lets the source and destination have different time ranges. For example, the source object could display daily utilization information for the past month, and the destination object could display hourly utilization information for the past 12 hours.

- **Use Time Range From Link Source**. Forces the source and destination objects to use the source object's time range.

   ➤   The Link Configuration box in Step 3 only appears when the link's destination object is a tabbed area. If your destination object is not a tabbed area, go to Step 4.

3   In the Link Configuration box, select one of the following options:

- **Selecting a source row updates the current tab panel only**. As different rows are selected in the source table, only the selected tab is updated.

- **Selecting a source row updates all tab panels**. As rows are selected in the source table, each tab in the tabbed area is updated to display detailed information for the node or interface selected. Typically, each tab in the tabbed area contains a graph or table that depicts a different statistic associated with the selected row in the source table.

4   Click **Next**.

Task 4:   Do one of the following:

- If you selected **Link Using Other Properties** and **Define New Time Range** in the Configure Link window, the Create Link Constraints window opens. Go to Task 5.

- If you selected the **Link Using Element ID** or **Link Using Target Name** options and the **Define New Time Range** option in the Configure Link window, go to Task 7.

- If you did not select the **Link Using Other Properties** option or the **Define New Time Range** option in the Configure Link window, go to Task 8.

Task 5:   Create the link constraints.

Figure 7 shows the Create Link Constraints window.
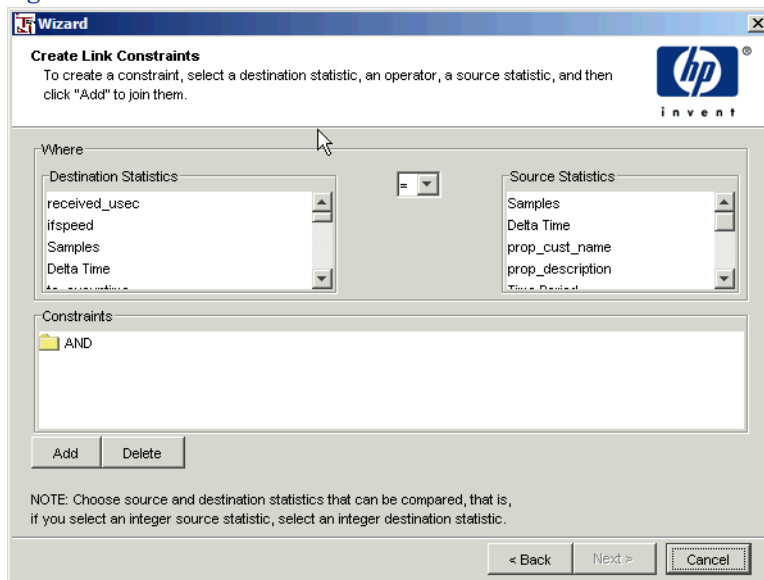
Figure 7   Create Link Constraints Window

1   In the Destination Statistics box, click the destination statistic you want.

2   In the Source Statistics box, click the source statistic you want.

> When choosing statistics to link, it is important to choose statistics that can be compared. For example, if you choose a statistic which is an integer in the Source Statistics box, you should not choose a string in the Destination Source box.

3   Select an operator from the list that will be used to link the statistics.

> ⚠ Do not choose the equals or not equals operators for floating point statistics that have fractional values. Equality-based comparisons are not likely to work as expected due to rounding.

4   Click **Add** to link the statistics together using the statistics.

The resulting constraint appears in the Constraints box.

5   Repeat steps a through c to add additional constraints.

6   If necessary, select a constraint in the Constraints box, and click **Delete** to remove it.

7   When you are finished, click **Next**.

Task 6: Do one of the following:

- If you selected the **Define New Time Range** option, the Set Time Period window opens. Go to Task 7.

- If you did **not** select the **Define New Time Range** option, go to Task 8.

Task 7:   Set a relative or absolute time period for data selection.

Figure 8 shows the Set Time Period window.
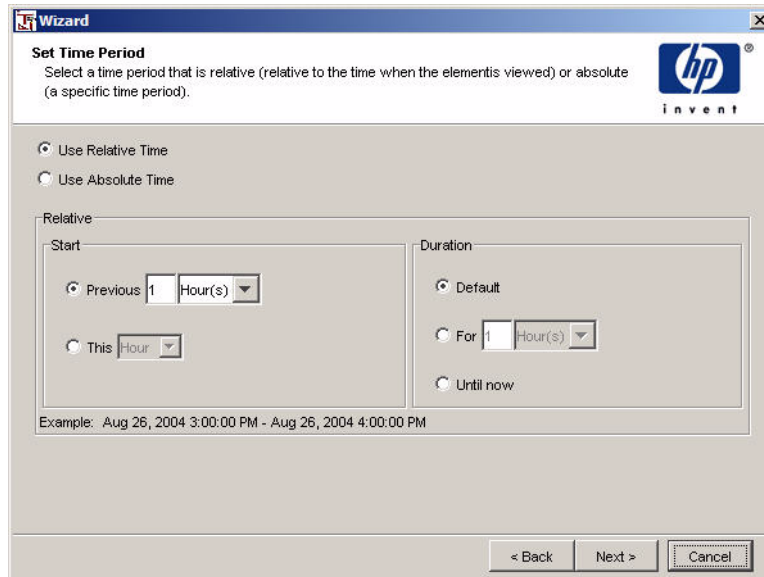
Figure 8   Set Time Period Window

1   Do one of the following:

- Click **Use Relative Time**. See the instructions in Task 12 on page 74.

- Click **Use Absolute Time**. See the instructions in Task 13 on page 75.

2   Click **Next** in the Set Time Period window.

Task 8: Review the link summary and create the link.

Figure 9 shows the Summary window.
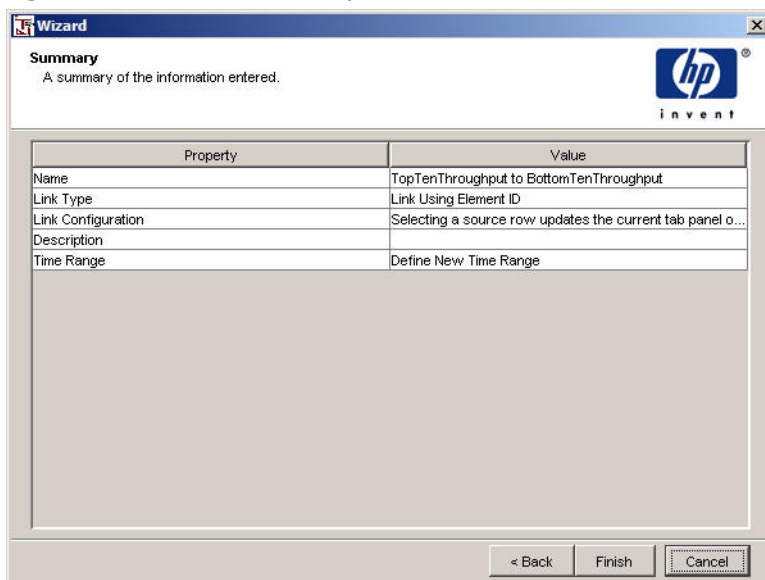
Figure 9   Summary Window

1 Review the Summary window.

2 If necessary, click **Back** to return to a previous window to make a change. After you make any change, click **Next** until you return to the Summary window.

3 Click **Finish** to create the link.

Advanced Property Links

A link between two statistics represents a constraint that is resolved when the report is viewed. For example, each time a row is selected in a drill-down source, new data is supplied to the drill-down destinations.

When a source and a destination objects have advanced links, destination data is retrieved as follows:

1 The user selects a row in a table or a bar in a graph.

2   HP OpenView Performance Insight begins to update all the destination graphs and tables.

3   If a destination object has an advanced link, it resolves data from its source, and applies the link.

For example, in the Create Link Constraints window that follows, the AVGmemUtil values for the source and destination objects are linked together.
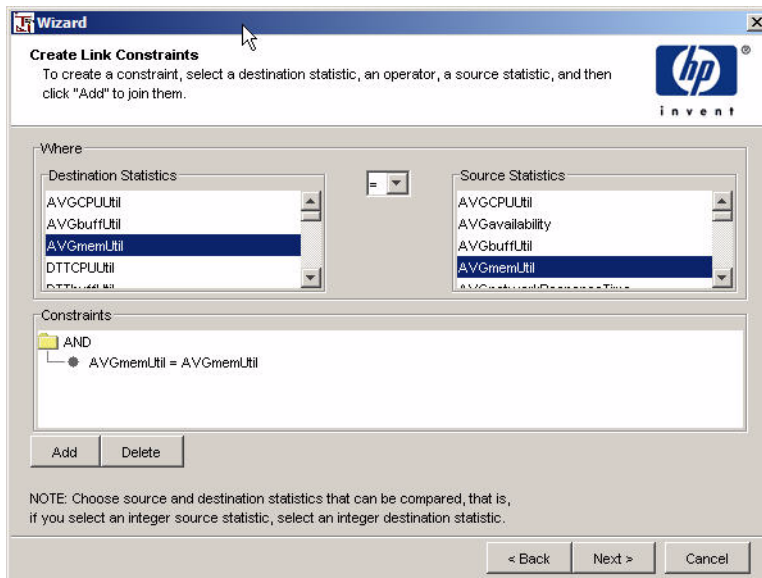
The destination object extracts the AVGmemUtil value from the selected row in the source object. It uses that value as a constraint on its own data and displays data where its AVGmemUtil would equal the AVGmemUtil value from the source object. The destination object then constrains the data it displays by all other links listed in the Constraints box.

Deleting Links

To delete a link:

1   In the report's Components tree, expand the Links level. The list of links appears.

2   Right-click on the link you want to delete, and select **Delete Link** from the shortcut menu.

Modifying Links

You can modify a link by doing any of the following:

•   Change the link's name.

    By default, a link is assigned a number as a name when you create it. You can change this to a more meaningful name comprised of text.

•   Create a description for the link.

    You can create a description for a link, which will appear in its Properties list.

•   Change the link's type.

•   Specify whether or not the link uses the source object's time period.

•   Advanced link only: Change the link's constraints.

To modify a link:

1   In the report's Components tree, expand the Links level. A list of links appear.

2   Click the link you want to modify. Its properties appear in the Properties list.

3 Do any of the following:

— Click the value next to the Name box, and type a name for the link.

— Click the value box next to the Description box, and type a description for the link.

— Click the value box next to the Link Type box, and select one of the link types.

— Click the value box next to Use Source Time Period box, and select a value.

4 To modify an advanced link's constraints, do the following:

a Expand the link you want to modify. The Link Constraints folder appears.

b Right-click the Link Constraints folder, and select **Add Additional Link Constraints** from the shortcut menu.

The Modify Constraints dialog box opens. See Step 5 on page 166 for instructions to modify and delete constraints.

5 Click another value box in the Properties list to apply the change.

Displaying Links

When you view a report, you can display the linked elements by selecting **Links** from Report Builder's View menu. A line is drawn from source objects to any destination objects as shown in Figure 4 on page 161.

6

Modifying Data Selection

When you first created graphs and tables for a report using the graph and table wizards, you chose how those elements would select data from the database. You selected one or more statistics, a time period, and the nodes and interfaces; this information formed the criteria for how the data would be selected from the database. After you create a report, you can change how its elements select data from the database and devise more advanced ways to select data.

This chapter describes how to do the following:

- Modify the data selection (statistics, time period, nodes, and interface) for graphs and table elements.

- Create constraints and parameters, which are more advanced ways to select data from the database.

- Create rules, which let you monitor the data that a statistic displays by applying an image or background color to its data.

▶ Creating constraints and parameters are features that you may not need to use or may use infrequently.

Selecting Statistics

This section discusses how to do the following:

- Select, remove, order, and sort statistics.
- Create, modify, and delete custom statistics.

Selecting a Statistic

To select a statistic for an element:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨
    Data ⇨ Query ⇨ Statistics.

    The Statistics level displays the list of available statistics for the element.

2   Right-click the statistic you want to select, and then click **Select Statistic**
    on the shortcut menu. The selected statistic is added to the Selected
    Statistics level.

Removing a Statistic

To remove a statistic from a table or a graph:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨
    Data ⇨ Query ⇨ Selected Statistics.

    The Selected Statistics level displays a list of the selected statistics for the
    element.

2   Right-click the statistic you want to remove, and then click **Unselect
    Statistic** on the shortcut menu.

    The selected statistic will no longer appear when you expand the Selected
    Statistics level.

▶   You cannot delete a selected statistic; you can only remove it from the
    Selected Statistics level.

Ordering Statistics

You can change the order in which statistics appear in a table or graph. By default, Report Builder displays statistics in a table or graph in the order in which they appear in the Selected Statistics level.

To change the order of the statistics for a graph or table:

1   In the report's Components tree, expand Elements, ⇨ *Element Name* ⇨ Data ⇨ Query ⇨ Selected Statistics.

The Selected Statistics level displays the list of selected statistics for the element.

2   Right-click **Selected Statistics**, and then click **Order Statistics** on the shortcut menu. The Order Statistics dialog box opens.
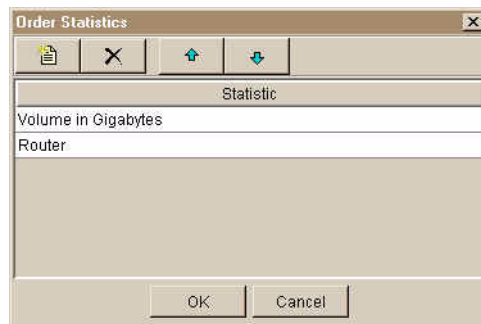
3   In the Order Statistics dialog box, do the following:

a   Select the statistic that you want to reorder.

b   Do *one* of the following:

— Click ⬆ to move the statistic up in the list.

— Click ⬇ to move the statistic down in the list.

c   To unselect a statistic, select the statistic, and click ✖.

d   To select a statistic, do the following:

— Click 📄. A blank box appears below the last statistic in the list.

— Click the box, and select the statistic you want add from the list.

4   Click **OK**.

Sorting Statistics

You can select the sort order of the data returned from the database.

To sort statistics for a table or a graph:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query.

2   Right-click **Sort Order**, and then choose **Set Sort** from the shortcut menu. The Set Sort dialog box opens.
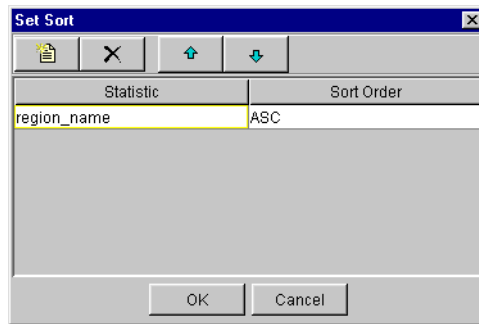
3   To add a statistic to the list, do the following:

    a   Click the [icon] button. A Statistic and Sort Order box appear.

    b   Click the box, and select the statistic you want add from the list of statistics.

       If you need to create a custom statistic, see Creating Custom Statistics on page 177.

4   To change the order in which the data is sorted, click the Sort Order box next to each statistic, and select one of the following from the list:

- Click ASC to sort the statistic in ascending order.

- Click DESC to sort the statistic in descending order.

5   To delete a value from the list, click the [×] button.

6 To rearrange the order of the statistics in the list, do *one* of the following:

- Click the ⬆ button to move a statistic up in the list.

- Click the ⬇ button to move a statistic down in the list.

7 Click **OK**.

Creating Custom Statistics

To create a custom statistic for a graph or a table:

1 In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query.

2 Right-click the Statistics level, and then choose **Add Custom Statistic** from the shortcut menu. The Add Custom Statistic dialog box opens.
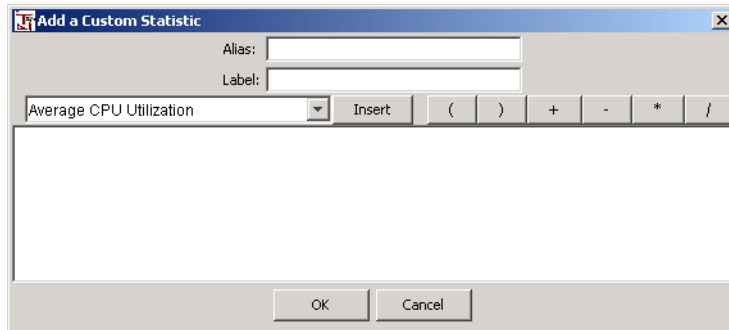
3 In the Alias box, enter the statistic's alias. If needed, this is how the statistic is referred to. For example, this is how the statistic will appear in the Statistic list in the Add a Constraint dialog box.

4 In the Label box, enter the statistic's label. A statistic's label is displayed when the statistic is shown in graph legends and table titles.

5 In the *Expression* box, enter the statistic's expression. This is the actual SQL expression (for example, AVGutilization_score*0.6).

To create the statistic's expression in the *Expression* box, do the following:

a Click the *Statistics* arrow, select a currently-defined statistic, and choose **Insert**.

b Click any operator.

    c   Enter text.

6   Click **OK**.

The statistic is added to the list of available statistics. To select this statistic for a graph or table, see .

➤   Unlike a regular statistic, you can delete a custom statistic. For more information about deleting a custom statistic, see .

Modifying Statistics

To modify a selected statistic for a graph or table:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query ⇨ Selected Statistics.

2   Click the statistic you want to modify.

The statistic's properties appear in the Properties list. There are a number of properties for a statistic. They are grouped into the following categories:

Category	**Applies to a statistic when...**
Text	It is displayed as text, such as when a statistic is displayed in a table. The properties that apply to text are as follows: alignment, color, date format, font name, font size, font style (bold or italic), and precision. If the statistic is a date, the **Text Date Format** value is used; however, if it is a real number, the **Text Precision** value is used.
Line	It is plotted in a graph. The properties that apply to a plotted line are as follows: color and width. The color value of a statistic can have a specific value or be cycled. When the color is cycled, a new color is used each time another instance of the statistic is encountered, eventually repeating the same set of colors. Symbol styles can also affect line styles.
Fill	It is displayed in a pie chart, stacked bar chart, bar chart, or an area chart. When statistics are graphed in these kinds of charts, fill style determines the color of the display area. The property that applies to fill is color.

For a detailed explanation of each statistic, see Appendix A, Element Properties.

3 Click the value box next to the property you want to modify.

For example, suppose you want to change a statistic's text color and its alias. A statistic's alias appears in graph legends and table headings. When you click the **Value** box for Text Color, the Select a Color dialog box opens from which you can select a color. When you click the **Value** box for Alias, you type the value for the alias.

4 To change the value in the property's value box, do *one* of the following:

 • Type the value.

 • Select a color from the Select a Color dialog box.

 • Select the value from the drop-down list that appears.

The statistic is updated with the new value when you click anywhere in another value box.

Deleting a Custom Statistic

To delete a custom statistic for a graph or a table:

1 In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query ⇨ Statistics.

2 Right-click the statistic you want to delete, and then choose **Delete Custom Statistic** from the shortcut menu.

If the statistic is being used, the following dialog box opens, indicating that you cannot delete the statistic:
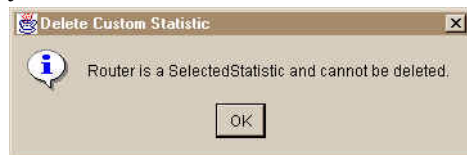
Click **OK** to close the Delete Custom Statistic dialog box. If you want to delete the statistic, ensure that you remove it from the Selected Statistics list (see Removing a Statistic on page 174).

Modifying a Custom Statistic's Expression

To modify a custom statistic's expression:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query ⇨ Statistics.

2   Click the custom statistic you want to modify. The statistic's properties appear in the Properties list.

3   Click the Value box for the SQL Expression. The SQL Expression dialog box opens.

4   Edit the statistic's expression, and then click **OK**.

Selecting Nodes and Interfaces

When you created graph and table elements for your report, you specified the nodes and interfaces from which the elements should select data. You can change the selected nodes and interfaces by using Select Nodes/Interfaces dialog box.

To change selected nodes and interfaces:

Task 1:   Start the Node wizard.

Do one of the following:

•   Right-click a graph or table element in the Report window, and click **Select Nodes/Interfaces** on the shortcut menu.

•   In the report's Component's list, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query, right-click **Nodes**, and click **Add Node** on the shortcut menu.

Task 2:   Choose whether you want to select nodes and interfaces individually or in groups.

The Select Node Selection Type window opens.
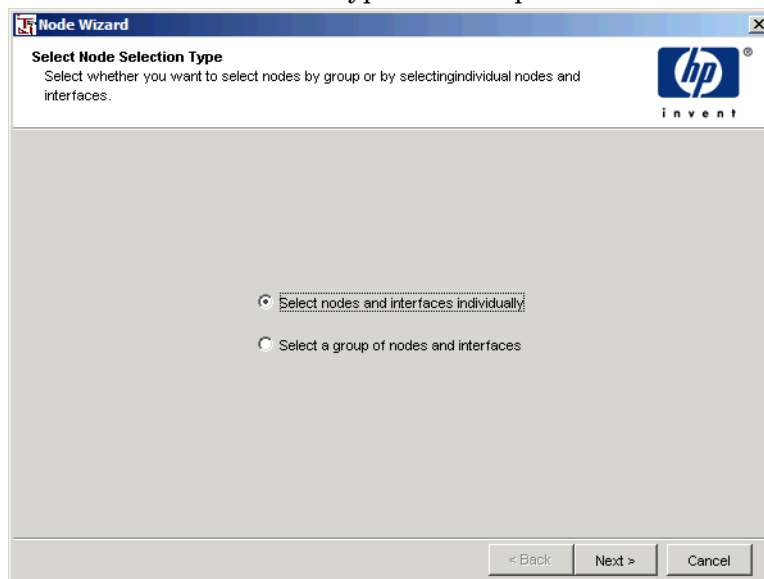
Figure 1   Select Node Selection Type Window

1   Select *one* of the following options:

- **Select nodes and interfaces individually**. The Select Nodes/Interfaces window opens. Go to Task 3 on page 182.

- **Select a group of nodes and interfaces**. The Select Group window opens. Go to Task 4 on page 183. Groups of nodes and interfaces are defined by the reporting solutions that you have installed.

2   Click **Next**.

Task 3: Select nodes and interfaces individually.

The Select Nodes/Interface window opens.
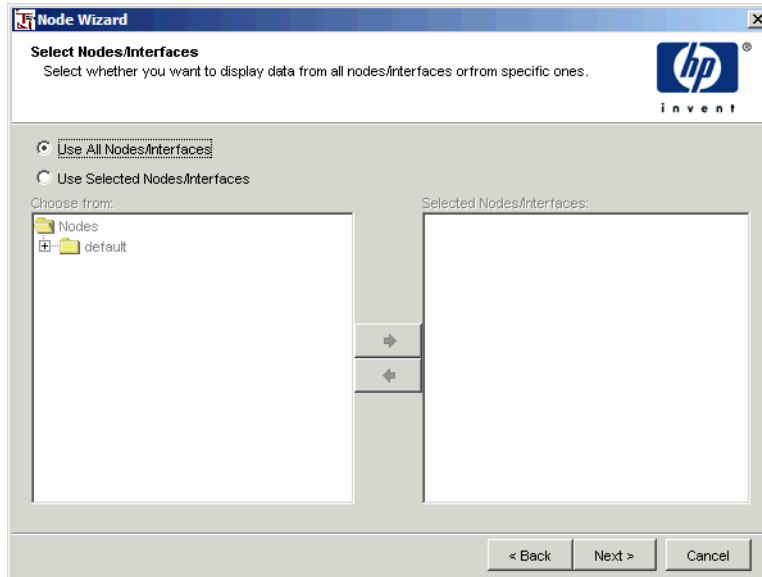
1 To select nodes and interfaces individually, do *one* of the following:

- To collect data from all nodes, select **Use All Nodes/Interfaces**, and then click **Next**. See Task 4 on page 183

- To collect data from only certain nodes, select **Use Selected Nodes/Interfaces**. In the Choose from box, each node is represented by a folder. See Step 2.

2 To collect data from only certain nodes, do the following:

a Expand a node's folder to display its interfaces.

b To select a node or an interface, do *one* of the following:

— Double-click a node or an interface in the Choose from box.

— Select a node or an interface in the Choose from box, and click ➡.

c To remove a node or an interface, do *one* of the following:

— Double-click a node or an interface in the Selected Nodes/Interfaces box.

— Select a node or an interface in the Selected Nodes/Interfaces box, and click ⬅ .

d Click **Next**. Go to Task 5

Task 4: Select a group of nodes and interfaces.

1 Select a group from the Groups box. The Managed Objects For Group box displays the members of the selected group.

2 Click **Next**.

Task 5: Review the summary.

1 If necessary, click **Back** to return to make a change. After you make any changes, click **Next** until you return to the summary.

2 Click **Finish**.

➤ You can defer node selection until a report is viewed. For more information about how to defer node selection, see Creating Reports with Deferred Selections on page 152.

Unselecting Nodes or Interfaces

To unselect nodes or interfaces from an element's Nodes list:

1 In the report's Components tree, Elements ⇨ *Element Name* ⇨ Data ⇨ Query ⇨ Nodes.

2 Do either of the following:

- Right-click the node you want to delete, and select **Delete Node** from the shortcut menu. Click **Yes** in the Delete Node dialog box.

- Right-click the group of nodes you want to delete, and select Delete Group from the shortcut menu. Click **Yes** in the Delete Node dialog box.

Selecting a Time Period

When you created graph and table elements for your report, you specified the time range during which each of the report's elements should collect data. You can change the time period for an element by using the Set Time Period dialog box.

Additionally, you can change the nodes from which each of the report's elements should select data. For more information about changing selected nodes, see Selecting Nodes and Interfaces on page 180.

The available types of time ranges are as follows:

- Relative – Sets a variable time period for the report. The relative time selected (for example, a value of **This week**) is converted to an absolute time when you view the report.

- Absolute – Sets a specific start and end time for the report to use.

To select a time period for a table or graph element:

Task 1: Open the Set Time Period dialog box.

1 Do one of the following to open the Set Time Period dialog box:

— Right-click a graph or table element in the Report window, and click **Set Time Period** on the shortcut menu.

— In the report's Component's list, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query, right-click **Time Period**, and click **Set Time Period** on the shortcut menu.

Figure 2 shows the Set Time Period dialog box.
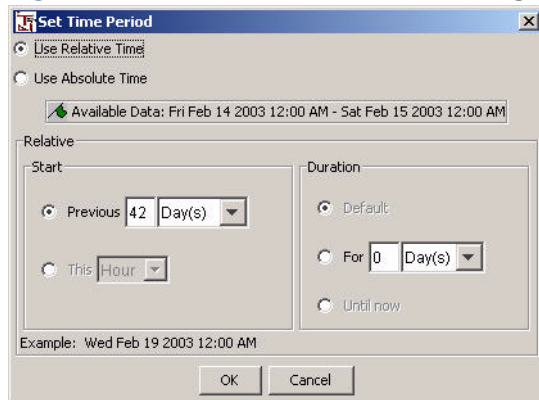
Figure 2   Set Time Period Dialog Box

2 Set a relative or an absolute time period for the data selection.

    a Click **Use Relative Time** or **Use Absolute Time**.

    b Do one of the following:

        — To set a relative time period, follow the procedure in Task 12 on page 74, and then click **OK** to close the Set Time Period dialog box.

        — To set an absolute time period, follow the procedure in Task 13 on page 75, and then click **OK** to close the Set Time Period dialog box.

Creating Constraints

This section discusses how to do the following:

- Create basic and custom constraints.
- Create AND and OR clauses.
- Modify and delete constraints.

A *constraint* specifies how the data for a graph or table is retrieved from the database. You can create a basic or a custom constraint. A *basic constraint* comprises a statistic, an operator, and a value. A *custom constraint* can contain any valid SQL expression, and there are no limitations placed on the structure of the constraint as with basic constraints.

Creating a Constraint

To create a constraint for a table or graph element:

1 In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query.

2 Right-click **Constraint List**, and click **Add Constraint** on the shortcut menu. The Add a Constraint dialog box opens.
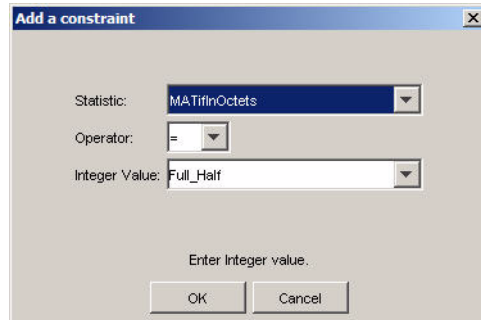
3 In the Add a Constraint dialog box, do the following:

    a Click the Statistic arrow, and select a statistic.

    b Click the Operator arrow, and select an operator.

       ⚠ Do not choose the equals or not equals operators for floating point statistics that have fractional values. Equality-based comparisons are not likely to work as expected due to rounding.

    c In the Value box, type a value, or you can select a parameter, if available (see Creating a Parameter on page 191.)

4 Click **OK**.

Creating a Custom Constraint

A custom constraint can contain any valid SQL expression; there are no limitations placed on the structure of the custom constraint.

▶ Report Builder does not verify the syntax of the statement; it only passes the statement to the database as part of the WHERE clause of a Select statement. If the syntax is incorrect, the Select will fail and the table or graph will not be populated until the syntax is corrected or the constraint is deleted.

To create a custom constraint for a table or a graph element:

1 In the report's Components tree, expand Elements ➪ *Element Name* ➪ Data ➪ Query.

2 Right-click **Constraint List**, and click **Add Custom Constraint** on the shortcut menu. The Add a Custom Constraint dialog box opens.
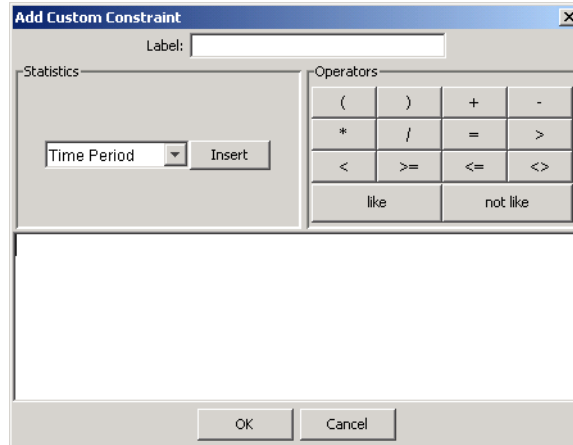
3 In the Label box, enter the constraint's label. A constraint's label is displayed in the Components tree.

4 To create the constraint's expression in the *Expression* box, do the following:

    a Click the *Statistics* arrow, select a currently-defined statistic, and click **Insert**.

    b Click any operator.

    c Enter text.

5 Click **OK**.

Adding an AND or OR Clause

The difference between an AND clause and an OR clause is how the constraint will be processed. The database will process the list of constraints from top to bottom, applying boolean logic to return a list of matching rows.

To add an AND or OR clause:

1 In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query.

2 Right-click **Constraint List**, and click **Add And** or **Add Or** on the shortcut menu.

An AND or OR clause is added to the list of constraints.

3 To add a constraint, right-click **AND** or **OR**, and click **Add Constraint** or **Add Custom Constraint** on the submenu.

Report Builder adds the constraint to the ADD or OR level in the Components tree.

➤ The list of constraints is passed to the database as part of an SQL query. The ADD or OR level dictates the order in which the constraints are issues to the database. Ensure that you carefully define this list because the order of the list can impact the performance of the SQL query.

Modifying Constraint Values

To modify a constraint's value:

1 Right-click a table or a graph element in the Report window, and click **Change Constraint Values** on the shortcut menu. The Change Constraint Values dialog box opens.

Statistic Name	Operator	Value
AND full_half	=	*Full_Half*
and case when (full_half = …	>	0
and ta_samples	>	5

OK   Cancel
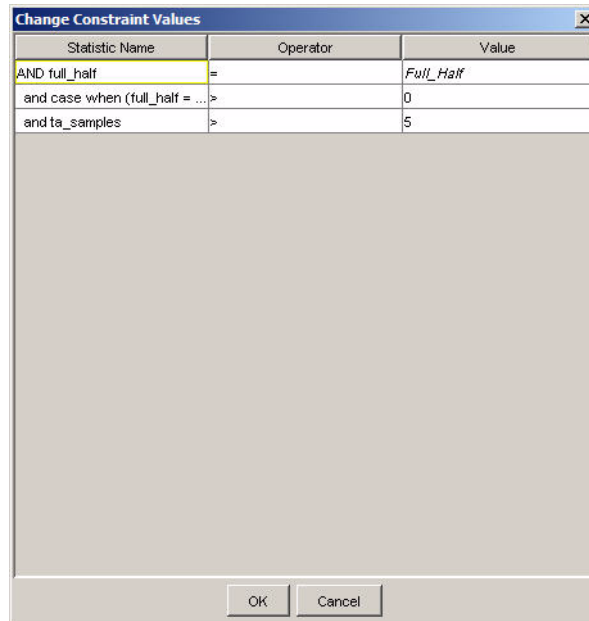
▶ When the value of a constraint is a parameter, the parameter name appears in italics in the Value box. You must edit the parameter using the Modify Parameter dialog box. To modify a parameter, see Modifying Parameter Values on page 197.

2 Double-click the **Value** box, and type a new value.

3 Click **OK**.

Deleting Constraints and Clauses

To delete a constraint or clause:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query ⇨ Constraint List ⇨ AND or OR.

2   Do one of the following:

   •   Right-click the clause you want to delete, and click **Delete Clause** on the shortcut menu.

   •   Right-click the constraint you want to delete, and click **Delete Constraint** on the shortcut menu.

Creating Parameters

You can create parameters. A *parameter* specifies a name for a value. This name is used in constraints, and the current value will be automatically substituted. For example, if you want to display statistics for a particular router in your network, you can create a parameter that represents the router whose statistics are to be displayed.

Additionally, you can override a parameter's current value by specifying a new value when you open the report using the command line (refer to the *Performance Insight Reference Guide*) or the Web Access Server (see Viewing a Report Using a URL on page 284).

A parameter has the following characteristics:

   •   An integer, string, Boolean, double, float, or date value

> You can specify a range for numeric or date values.

   •   Global to all elements in a report

   •   Can be used as a constant in constraints to control selection.

       For example, you can create a constraint that equals a parameter (dsi_target_name = target, where target is a parameter that equals a specific node name).

   •   Evaluates to a constant at runtime.

For example, suppose the Router parameter has the default value of Thunderbolt. When the report is generated, the value Thunderbolt is used anywhere Router appears.

- May have a default value.

- If you create a parameter that has no value (default or one you specify at the command line) and that parameter is used in a constraint, the constraint is ignored when the report is run.

  For more information about supplying parameter values on the command-line when using Report Builder, refer to the *Performance Insight Reference Guide*.

Creating a Parameter

To create a parameter:

1 In the report's Components tree, right-click the **Parameter** level, and click **Add Parameter** on the shortcut menu. The Add a Parameter dialog box opens.

2 In the Name box, enter a name for the parameter.

3 Click the Datatype arrow, and select a data type for the parameter.

   - If you select **integer** or **double**, go to Step 4.

   - If you select any other value, go to Step 5 on page 192.

4 Use Start Range to specify the highest acceptable numeric value, and use End Range to specify the lowest acceptable numeric value.

These fields are available only if the datatype is integer or double. They are not required; you can specify just one (that is, Start Range or End Range), or both, or neither.

5 In the Default Value box, you can do *one* of the following (optional):

- If the datatype is **boolean**, click the Default Value drop-down arrow, and select a value (**true** or **false**).

- If the datatype is **date**, click the browse button next to the Default Value box. The Edit Date Value dialog box opens.
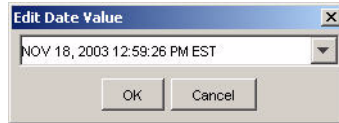
To select a date, click the drop-down arrow.

Click the *Month* and *Year* arrows and select the month and year you want, click a day in the calendar. In the *Time* box, type or select the part of the time you want to change (hours, minutes, seconds, or time of the day). Click **OK** to close the Edit Date Value dialog box.

- If the datatype is **string**, enter the text in the **Default Value** box.

- If the datatype is **Property**, the value will depend on the types of categories available to the table associated with the table or graph. For example, if the property type is device, the value will be the name of the selected device.

- If the datatype is **table**, the value will be the name of a table in the database. Select a table from the Datatype list.

6 In the Description box, type a description of the parameter.

7 Click **OK**. When you save the report, the parameter is saved with it.

When you view the report, you can change the default by selecting **Parameter Values** from the Report Builder's Edit menu. See for details.

Example: Creating a Parameter for Use in a Constraint

Suppose in a report you want to create a parameter called Router that will collect all particular statistics for a router called Thunderbolt. After you create the parameter, you want to use it in a constraint. For example, you could create a constraint to collect all particular statistics for the router named Thunderbolt and display them.

To create this parameter and constraint:

1 In the report's Components tree, right-click the **Parameter** level, and click **Add Parameter** on the shortcut menu. The Add a Parameter dialog box opens.

2 In the Name box, type Router.

3 Click the Datatype arrow, and select **string**.

4 In the Default Value box, type Thunderbolt.

5 In the Description box, type a description of the parameter. This is optional.

6 Click **OK**. When you save the report, the parameter is saved with it.

When you create the constraint, you want to make the statistic Target Name equal to the value of the parameter you created for the Thunderbolt router.

7 In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query.

8 Right-click **Constraint List**, and click **Add Constraint** on the shortcut menu. The Add a Constraint dialog box opens.

9   In the Add a Constraint dialog box, do the following:

   a   Click the Statistic arrow, and select **Target Name**.

   b   Click the Operator arrow, and select the equals sign (**=**).

   c   In the Value box, select **Router**.

10   Click **OK**.

Example: Creating a Parameter to Display a Custom Report in Object Manager

Suppose you have the Interface_Reporting solution and all its dependent packages installed, and you create a custom interface report that you wanted to appear as an object-related report when using the Management Console's Object Manager application. Refer to the *Performance Insight AdministrationGuide* for more information about the Object Manager application.

To do this, you will need to create a parameter in the report and associate it with the table used in the report element (table or graph).

To create a parameter to be able to display your report:

1   Create your report. See Chapter 3, Creating Reports for details.

   Suppose you create an element in the report (for example, a table) that will use the KIRDevPort table.

   After you finish your report, you want to create a parameter named Device, which will associate the parameter with the KIRDevPort table.

2   In the report's Components tree, right-click the **Parameter** level, and click **Add Parameter** on the shortcut menu. The Add a Parameter dialog box opens.

3   In the Name box, type Device for the name of the parameter.

4   Click the Datatype arrow, and select **Property**.

When the datatype is Property, the value will depend on the types of categories available to the table associated with the table or graph. For example, if the property type is device, the value will be the name of the selected device.

5   In the Description box, type a description of the parameter. This is optional.

6   Click **OK**.

7   Save the report to save the parameter with it.

8   Expand the Parameters folder in the Components tree. The property list displays the parameter's properties and their values.

9   Click the Table Name property's Value box.

10 Select **KIRDevPorts** from the list.

11 Click the Category property's Value box, and select **Device**.

12 Expand Elements ⇨ *Element Name* ⇨ Data ⇨ Query.

13 Right-click Query, select **Add Property Parameter**, and then select **Device** from the menu.

The list should show all of the property parameters that use the same property table as the element (table or graph) you created in the report.

If the **Add Property Parameter** option is dimmed, it means that there are no available property parameters. Make sure that the element's (table or graph) property table name is the same as the parameter's.

The parameter is automatically added to using the object model defined. The object model is created by the report pack.

14 Deploy your completed report to the systems folder. See Deploying a Report on page 228 for details.

To display the report using the Object Manager application, refer to the *Performance Insight AdministrationGuide*.

Displaying Parameters

To display a parameter and its properties:

1 Expand the report's Parameters level.

The report's parameters appear.

2 Click a parameter name to display its properties in the Properties list.
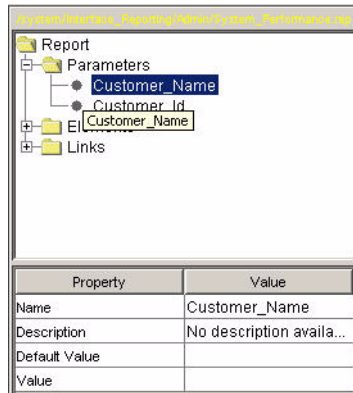
Modifying Parameter Values

To modify the value of a parameter:

1 From the Edit menu, click **Parameter Values**. The Modify Parameter Values dialog box opens.

▶ You cannot change a parameter's name.

2 Click the **Current Value** box, and enter a new value for the parameter.

3 Click **OK**.

Deleting Parameters

To delete a parameter:

1 In the report's Components tree, expand the Parameters level.

2 Right-click the parameter you want to delete, and click **Delete Parameter** on the shortcut menu.

Depending on the status of the parameter, *one* of the following will occur:

— If the parameter is being used by a constraint, the Delete Parameter message opens.
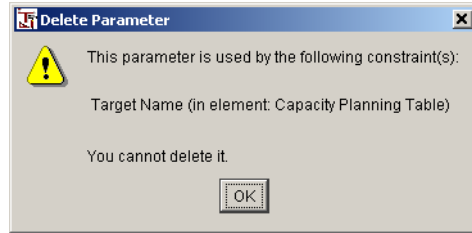
You cannot delete the parameter. Click **OK** to close the message box.

— If the parameter is not being used by a constraint, the Delete Parameter dialog box opens.

Click **Yes** to delete the parameter.

Creating Rules

By applying a rule to a selected statistic, you can monitor the data that statistics display. When the conditions of the statistic's rule are true, Report Builder will flag the statistic's data by displaying a particular color, an image, text, or a statistic. For example, you can create a rule for the Key ID statistic that will apply a red background to any Key ID data that is less 3.

Creating a Rule

To create a rule:

Task 1:   Start the Rule wizard.

    1   In the report's Components tree, expand Elements ➪ *Element Name* ➪ Data.

    2   Right-click **Rules**, and then click **Add Rule** on the shortcut menu.

Task 2:   Type a name and description for the rule.

Figure 3 shows the Rule Name and Description window.
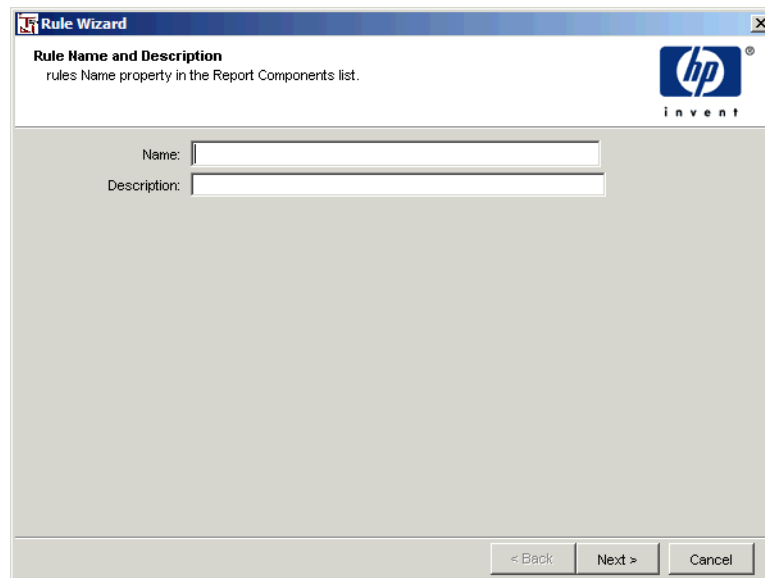
Figure 3   Rule Name and Description Window

Do *one* of the following:

- Click **Next**. Supplying a name and description is optional.

- Enter a name and a description for the rule, and then click **Next**.

Task 3:   Select the statistics to which you want to apply the rule.

Figure 4 shows the Apply Rule to Selected Statistics window.
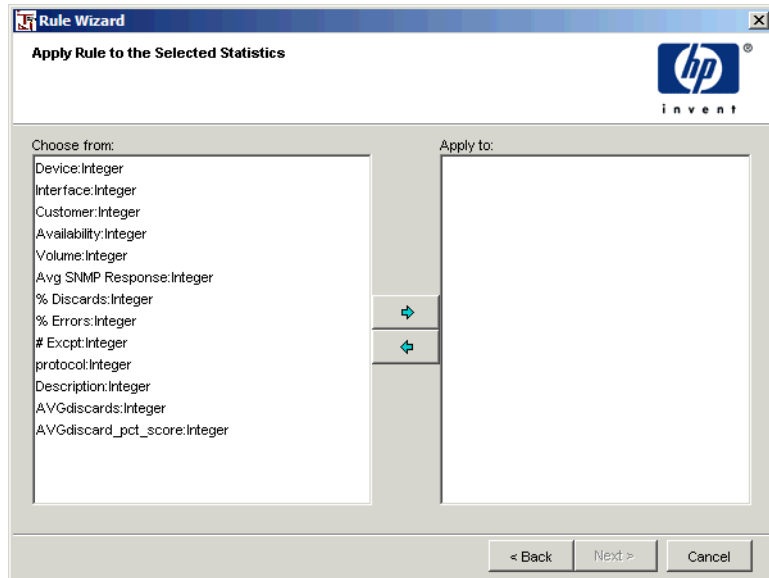
Figure 4   Apply Rule to the Selected Statistics Window

1   Do *one* of the following:

•   Double-click a statistic in the Choose from box.

•   Select a statistic in the Choose from box, and click ![right arrow].

2   To remove a statistic from the Select Statistics dialog box, do *one* of the following:

•   Double-click a statistic in the Selected statistics box.

•   Select a statistic in the Selected statistics box, and click ![left arrow].

3   Click **Next**.

Task 4:   Add clauses to the rule.

Figure 4 shows the Add Rule Clauses window.
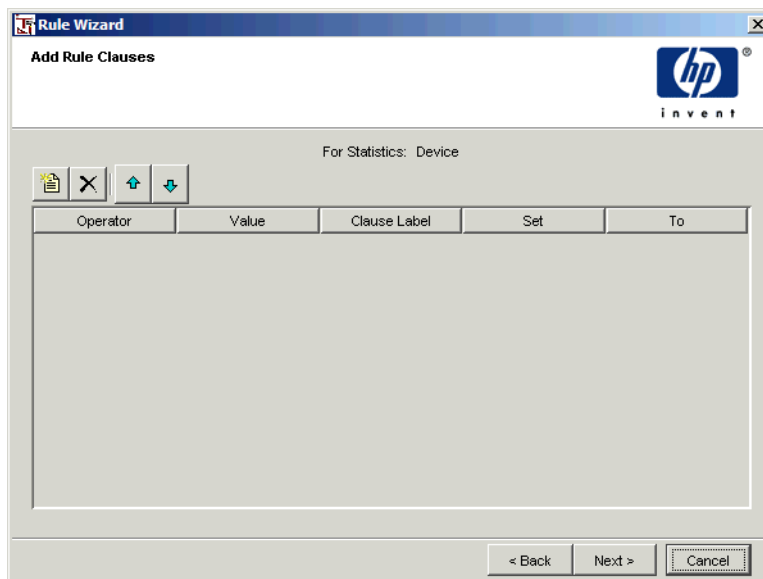
Figure 5   Add Rule Clauses Window

1   Click the 📄 button. A clause row is added.

2   Click the Operator box, select an operator, and then press the **TAB** key.

3   Type a value in the Value box, and then press the **TAB** key.

4   Type a label for the clause in the Clause Label box, and then press the **TAB** key.

> For example, if Key ID is the statistic, your clause might be less than 3 if you wanted the rule to flag all Key ID data with a value of less than 3.

5   Select one of the following options from the Set box to indicate what will occur when a rule is satisfied:

- **Background**. Displays a color behind the statistic's data. When a rule is satisfied, the statistic's data can be highlighted with red.

- **Image**. Displays an image instead of the statistic's data. When a rule is satisfied, an image of a check mark can display.

- **Text**. Displays user-specified text instead of the statistic's data. When a rule is satisfied, the text "Full" can display.

- **Statistic**. Displays the data for a different statistic instead of the current statistic's data. When a rule is satisfied (for example, Statistic A is greater than 1000), the value of Statistic B can display.

6 Click the To box, then do one of the following depending on the option you selected in the Set box:

- Background. Select a color from the Select a Color dialog box.

- Image. Locate an image using the Open dialog box.

- Text. Type the text you want to display in the To box.

- Statistic. Select an available statistic from the To box.

7 Repeat Step 1 through Step 6 to add additional clauses.

8 To delete a clause from the list, select the clause, and then click ☒.

9 To rearrange the order in which the clauses will be evaluated, select the clause, and then do *one* of the following:

- Click ⬆ to move the clause up in the list.

- Click ⬇ to move the clause down in the list.

10 Click **Next**.

Task 5: Review the rule summary and create the rule.

1 Review the Summary window.

2 If necessary, click **Back** to return to a previous window to make a change. After you make any change, click **Next** until you return to the Summary window.

3 Click **Finish** to create the link.

Changing a Rule Clause Using the Components Window

You change the clause label, operator, value, and associated color or image for a rule using the Properties list after you create the rule.

Alternatively, you can modify the clause label, operator, and value using the Add Rule Clause dialog box. See Modifying or Adding a Clause on page 205 for details.

To change a rule using the Components:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Rules ⇨ *rule_name*.

2   Click on the clause name.

The Properties list displays the values for the rule.

3   To change a value, click the box to the right of the property you want to modify, then do any of the following:

- Label and Value. Type a value in a text box.

- Operator. Select a value from the drop-down combo box.

- Result. Depending on the option you selected, the method will vary; select a new color, image, or statistic, or type new text.

The value is updated when you click in another Value box or move the pointer to the Report window.

Applying a Rule to a Different Statistic

When you created a rule, you applied it to a specific statistic or statistics. After the rule is created, you can change the statistic or statistics to which it will be applied.

To apply a rule to a different statistic or statistics:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Rules.

2   Right-click on a rule, and then click **Apply Rule to**. The Apply rule to the Selected Statistic dialog box opens.
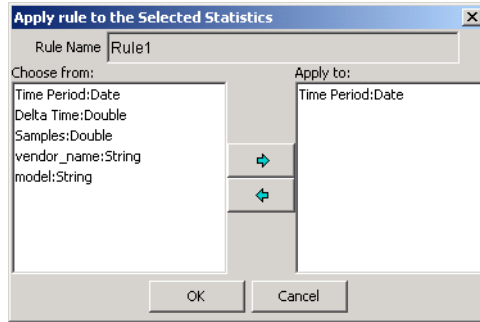
3   To modify the statistic or statistics to which the rule is applied, do the following:

    a   To add a statistic, do *one* of the following:

        — Double-click a statistic in the Choose from box.

        — Select a statistic in the Choose from box, and click ⮕ .

    b   To remove a statistic, do *one* of the following:

        — Double-click a statistic in the Selected statistics box.

        — Select a statistic in the Selected statistics box, and click ⬅ .

    c   Click **OK**.

Deleting a Rule

To delete a rule:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Rules.

2   Right-click on a rule, and then click **Delete Rule**.

Modifying or Adding a Clause

To modify or add a rule clause:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Rules.

2   Right-click on a rule, and then click **Add/Modify Rule Clauses**.The Add Rule Clause dialog box opens.
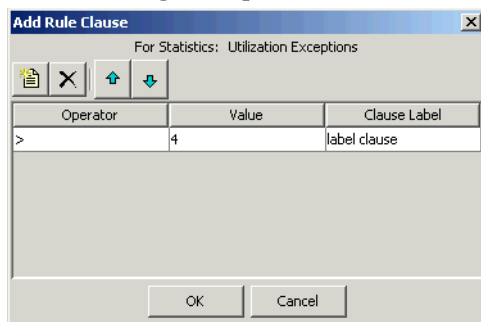
3   Do either of the following:

   •   Click the [icon] button to create a new clause. See Step 1 on page 201 for details.

   •   Modify the operator, value, or clause label for a clause.

4   Click **OK**.

Deleting a Rule Clause

To delete a rule clause:

1   In the report's Components tree, expand Elements ⇨ *Element Name* ⇨ Data ⇨ Rules ⇨ *rule_name*.

2   Right-click the clause that you want to delete, and then click **Delete Rule Clause** on the submenu.

7

Scheduling and Generating Reports

After you create a report, you can schedule it for generation. This chapter describes how to schedule and generate reports using the Web Access Server.

> ➤ You can also schedule and generate reports using the schedule and generate commands. Refer to the *Performance Insight Reference Guide* for more information.

Using the Web Access Server

> ➤ The procedures in this section assume that the Web Access Server is displayed. For more information about how to display the Web Access Server, see Displaying the Web Access Server on page 19.

This section describes how to use the Web Access Server to:

- Create schedules.
- Add events (reports) to schedules.
- Generate reports.
- View report generation results.
- Disable schedules and events.

• Delete schedules and events.

▶ The Administrator can view all the schedules, create entries in the system schedule, and create entries in the system schedule on the behalf of other users.

Graphic Display Requirements

You need a graphics display to generate reports.

UNIX Requirements

For report generation to occur on UNIX systems, you need to do the following:

• Log on to the system where the Web Access Server is installed.

• Set the display so it is opened for connections (xhost + localhost). For more information, see Setting the Display for Connections.

• Run Report Scheduler with its display set to this DISPLAY.

If you have locked the system by assigning a screen-saver password during the time that reports are being generated, then the screen lock must be configured to allow report generation.

If access to the X environment cannot be granted, the administrator can generate dataset reports (.srep) because the process for dataset reports does not require a graphics context.

Alternatively, you can create a virtual display using xvfb. This is a pseudo-display; it draws into memory rather than on the screen. You can edit the HP OpenView Performance Insight (OVPI) startup scripts to use this display. For more information about xvfb, see your UNIX system documentation.

Setting the Display for Connections

To set your UNIX display:

1   On the system where the Web Access Server is installed, log in as root.

2   Type the following command, and then press **ENTER**.

    xhost + localhost

3   Stop and start the Web Access Server. For more information about how to stop and start these services, refer to the *Performance Insight Administration Guide*.

4   Do not log off of the system.

You can switch the monitor off, let the screen saver run with or without password protection, or both.

Specifying a Drill-Down Depth Constraint

When you schedule a report, you will need to supply a drill-down depth constraint. A *drill-down depth* constraint controls the number of queries to the database when elements in a report are linked. For more information about how to link elements in a report, see Chapter 5, Linking Report Elements.

When elements in a report are linked, you can change the contents of multiple elements in a graph by changing a row selection or by selecting a column in a graph.

HTML and dataset reports (.srep) are static reports that do not interact with the database. To support link source and link targets, the report generation process fills in a number of link targets by retrieving the data.

For example, suppose two tables are linked in a report, and the source object has 100 rows. When you view the report, you can issue up to 100 database queries. You can specify the number of queries performed when you schedule the report's generation. (See Step on page 214 in the procedure discussed in Scheduling Report Generation on page 210.)

You can choose how much data you want to retrieve. You can retrieve data as follows:

•   All the data available by issuing all queries to the database

•   Return a specific number of queries to the database

When you retrieve data from all the link sources, you can create a comprehensive static report; however, this creates large dataset reports and lengthy HTML files. By default, OVPI's scheduling mechanism uses a value of 5 when you schedule a report. This lets the user see the first five drilldowns for each source in the report.

▶ A value of -1 will generate all possibilities; however, this may result in a very large file set and is not recommended.

## Scheduling Report Generation

To generate a report, you must create a schedule that includes information about how and when the Web Access Server should run the schedule. Then you must add the events (reports) you want to generate to the schedule. You can add one or more reports to any schedule.

To schedule a report:

Task 1:   Click Schedule on the links bar.

The Schedule page opens.
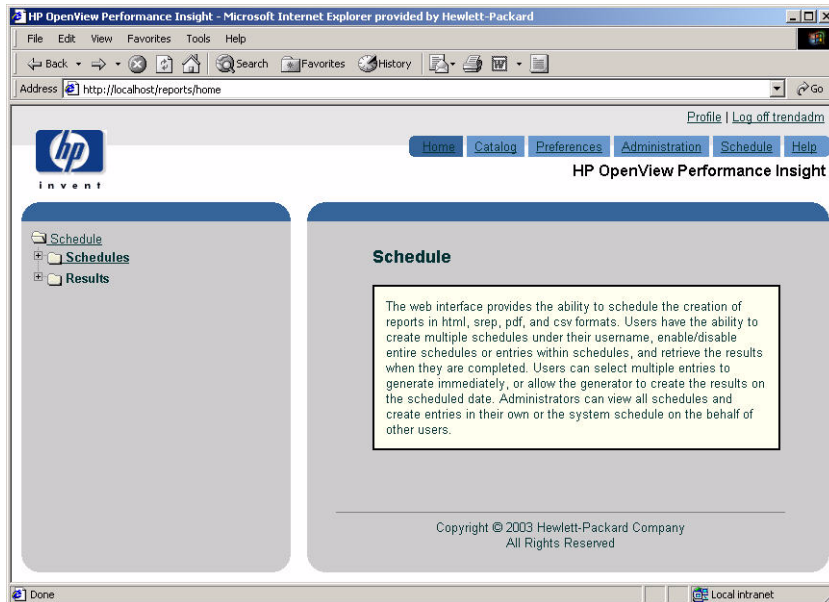
Task 2:   Expand the Schedules folder, and click New Schedule.

The Create a new schedule page opens.

1   In the Schedule Title box, enter a name for the schedule you want to create.

2   Select **Add to Generator Timer** if you want the Web Access Server to run the schedule automatically to generate the reports.

If you do not select this option, you can generate the reports in the schedule manually (see Generating Reports Manually on page 219) or by using trendtimer (see Generating Reports Using trendtimer on page 220).

3   Click the *Hours* arrow, and select the hour when the schedule will run. (Select **Every Hour** to run the schedule every hour of the day.)

4   Click the *Minutes* arrow, and select the number of minutes past the hour.

5   Click the *Time of Day* of arrow, and select **AM** or **PM**.

6   Click **Create**. The *schedule_name* page opens.
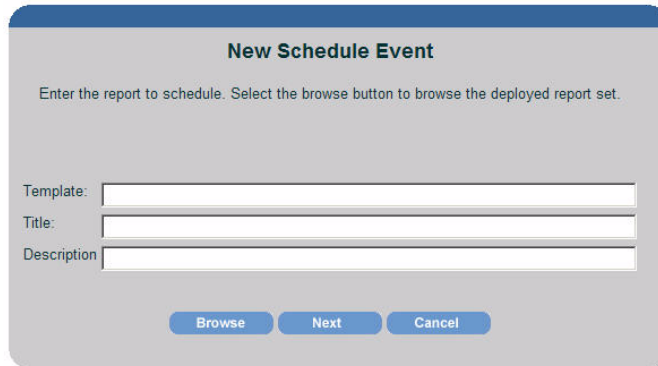
Task 3: **Add events (reports) to the schedule.**

1 Click **Add Event**. The New Schedule Event page opens.

You can specify the report you want to schedule by using either of the following methods:

- Type the schedule information. Go to Step 2.

- Click the **Browse** button, which will let you search for a report and automatically fill in schedule information after you have selected the report you want to schedule. Go to Step 3.

2 To type schedule information, do the following:

a In the Template box, enter the directory path for the report you want to schedule.

b In the Title box, enter a title for the report.

c In the Description box, enter a description of the scheduled report.

d Click **Next**.

3 To browse for schedule information, do the following:

a   Click **Browse** to display the Report Browser window, which lets you view the deployed reports that you can schedule.
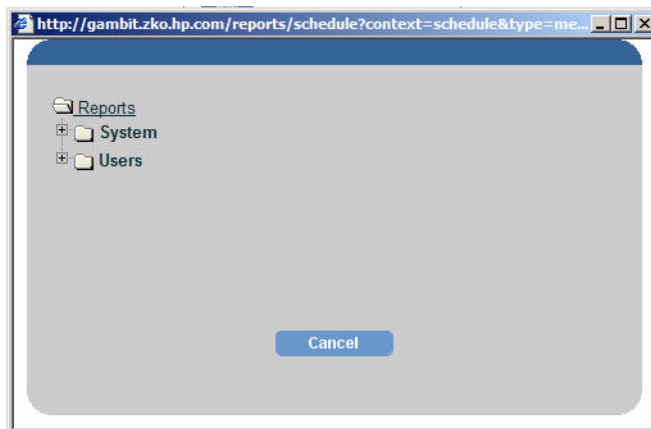
b   Expand the folders to locate the report you want to schedule.

c   Click the report when you locate it. The Report Browser window closes, and OVPI updates the New Schedule Event page with the information you supplied when you deployed the report. For more information about deploying reports, see Deploying and Undeploying Reports on page 274.

After you complete the New Schedule Event page, it may look similar to the following:

4   Click **Next**.

The Formats page displays the report information you entered in Step 2 on page 212, and requests additional information about the kind of report information that should be generated.

Formats - /system/Interface_Reporting/Interface/Top_Ten.rep

Title: `Interface Top Ten`

Description `Interface`

Template: /system/Interface_Reporting/Interface/Top_Ten.rep

Enabled: ⦿ activate ○ disable

Drill down depth: `5`

Format: ☐ .html ☐ .srep ☐ .csv (hybrid) ☐ .pdf ☐ .csv (simple)

Keep Report ⦿ forever ○ `1` days

Layout: Default ▾

Back   Next   Reset Page   Cancel

Task 4: Specify the formats for the report.

To specify what kind of report information should be generated, do the following:

1 If it is not already selected, click the **Activate** button, which ensures that the report is generated according to the schedule you specify.

2 In the Drill Down Depth box, type the number for the drilldown depth. The default value is 5.

The report will return only the number of queries specified for each source element. This reduces the resources required to generate and store the report. For example, suppose a source object (a table) contained 10 rows, and the drill-down depth is set to 5; you will only be able to drilldown on the first five rows in the table. For more information about drill-down constraints, see Specifying a Drill-Down Depth Constraint on page 209.

Every graph and table element in a report has an Allowable Drilldowns property. When you schedule a report, the value that you set for the Drill Down Depth option overrides the value set for the Allowable Drilldowns

property for all elements. (To see the Allowable Drilldowns property for an element, click the element in the navigation frame of Report Builder, and locate the property in the associated properties list.)

3 Select the appropriate boxes for the report formats you want to generate. The available formats are as follows:

- .html – You can view HTML reports on your local system using the Web Access Server.

- .srep – A dataset report is a repository of queried data. Once it is generated, it does not access the database; therefore, it is a fast and efficient way to view data.

- .csv (hybrid) – A comma separated value file in which tables are displayed in CSV format and charts and graphs are displayed as images.

- .pdf – A Portable Document Format (PDF) file lets you view the report using Adobe Acrobat Reader.

  ➤ If you want to use TrueType fonts in a PDF file, see Appendix B, Using TrueType Fonts in PDF Files for more information about how to configure OVPI for TrueType fonts.

- **.**csv (simple) – A comma separated value file in which all elements are displayed in CSV format.

4 In the Keep report for *n* days box, type the number of days that you want to keep the report. The default is -1; this means that OVPI will keep the report indefinitely. You can keep a report for any number of days.

5 Click **Next** to continue. (Alternatively, you can click **Reset Page** to remove the information you entered and reenter it.)

The Triggers page opens.

Triggers - /system/Interface_Reporting/Interface/Top_Ten.rep

Triggers:

Select Days of the Month to Generate this Report

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7
☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14
☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21
☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28
☐ 29 ☐ 30 ☐ 31 ☐ Last

or

☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

or

Generate Report Quarterly ☐

[Back]   [Next]   [Reset Page]   [Cancel]

Task 5:   Schedule when the report will run.

1 Do *one* of the following:

- To generate the report on a specific day of the month, click the appropriate box for the day or days of the month.

- To generate the report on a specific day of the week, click the box for the day or days of the week.

- To generate the report quarterly, click **Generate Report Quarterly**.

Even if the daily and monthly settings overlap, reports will only run once a day.

2 Click **Next** or **Finish** to continue.

3 Do one of the following:

- If you selected PDF for the format of the generated report in Task 4 on page 214 of this procedure, then the Email Generated PDF page opens as shown in Figure 1 on page 217. If you want to email the generated PDF, go to Task 6.

- If you do not want to email the PDF, click **Next** in the Email Generated PDF page, and then go to Task 6 on page 217.

- If you did not pick PDF as the report format, go to .

Task 6: **Select the recipients who will receive the generated PDF report.**

Figure 1 shows the Email Generated PDF page.

Figure 1   Email Generated PDF Page

1   To select the users who you want to receive the report, select a user in the Available Users/Groups box, and click **Add**. The user is added to the Recipient list. Repeat this for each user.

   If you mistakenly add a user to the Recipient list, select the user in the Recipients list, and click **Remove**.

2   In the Subject box, type the subject text for the email message.

3   In the Message box, type the message you want to send in the email message to the recipients.

4   Click **Next**.

Task 7:   Specify the parameters for the report.

If the report you are scheduling contains parameters, the Parameters page opens as shown in Figure 2. If the Parameters page does not open, see Task 8.

Figure 2 shows the Parameters page.

Figure 2   Parameters Page

1   Type the values for any parameters listed.

2   Click **Finish** to schedule the report or reports for generation.

Task 8:   Change the schedule, if necessary.

After you create an event for the schedule, the Schedule Title page may look similar to Figure 3.

Figure 3   Schedule Title Page

1   Click the title of an event or the **Edit Event** button to display the Formats page. See Step on page 214.

— Click the **View Details** button 🔳 to display a window that contains detailed information about the event. A window similar to the following appears:
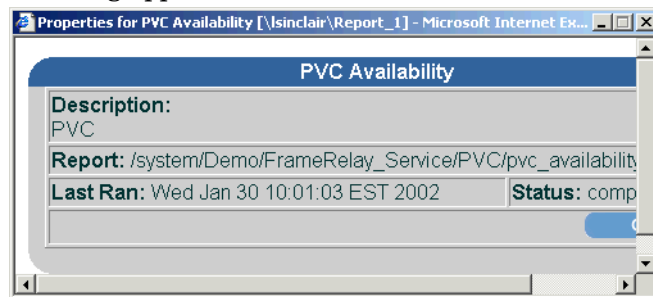
2 Do one of the following:

— Click **Finish** to schedule the report for generation.

After you create a schedule, it will run and generate its events (reports) at the time that you specified, and then you can view the generated results (see Viewing Report Generation Results on page 221).

You can schedule report generation using cron or the trendtimer daemon. For more information about using trendtimer, see Generating Reports Using trendtimer on page 220.

Generating Reports Manually

You can generate reports manually in the following circumstances:

- You want to generate reports independently of the generation time specified by their schedule.

- You did not select automatic generation for a schedule; that is, you did not select the **Add to Generator Timer** box on the Create a new schedule page when you created a schedule.

To generate reports manually:

1 Click **Schedule** on the links bar. The Schedule page appears.

2 Expand the Schedules folder.

3 Click the schedule that contains the report you want to generate. The Schedule Title page appears.

4 Do *one* of the following:

— Select the **Select** box next to the report you want to generate.

— Click **Select All** to select all the reports.

5 Click **Run**.

As the reports are scheduled for generation and generated, the Status column on the Schedule Title page changes as follows: Queuing, Queued, Started, and Completed.

Depending on the size of a report and the amount of data available, you may or may not see the percentage of the report generated between the Started and Completed phase of generation. If you are generating a dataset report (.srep), you will not see any percentages.

After the reports are generated, expand the Results folder to view the generated reports.

Generating Reports Using trendtimer

To generate reports using trendtimer:

1 Do *one* of the following:

- Edit the default trendtimer.sched file, which has the following path:

— *Windows*:

installation_directory\lib

— *UNIX*:

installation_directory/lib

In this instance, *installation_directory* is the directory into which you installed OVPI.

- Edit the alternative schedule file that you created.

2 Add a line which specifies the interval at which the Generate tool should run.

For example, suppose you want to run a schedule every Monday at 7AM. Then, you would add the following line at the end of the trendtimer.sched file:

```
MO+7:00 - - generate -user generation -pass generation -host
wizzywig -port 80 -schedule jkatter\schedule01 -log
\tmp\generate.log
```

> You can add multiple generation lines to this file.

3 Save the file. The change takes effect when trendtimer runs next.

For more information about how to create your own schedule file and specify intervals, refer to the *Performance Insight Reference Guide*.

Viewing Report Generation Results

You can view the results of the report generation after the generation is completed.

To view the results of report generation:

1 Click **Schedule** on the links bar. The Schedule page appears.

2 Expand the Results folder.

3 Expand the schedule. A folder appears representing each format that was generated for the report.

4 Click the format folder to view the results of the report generation. The Result Listing page appears, displaying report's generation date, the report's title, and a link to the generated report.

> If you generate the reports manually (see Generating Reports Manually on page 219) by clicking the **Run** button, you will need to refresh the navigation pane to see the generated report or reports. To do this, click the Schedule folder (*not* the Schedules folder) in the navigation pane and then expand the Results folder.

For example, the Result Listing page may appear similar to the following when you view the results of report generation.

Result Listing

Username   Isinclair
Schedule   Report_1
Format   pdf

Date	Report Title	Description	Link
Wed Jan 30 11:56:04 EST 2002	PVC_Availability	PVC	
Wed Jan 30 11:00:25 EST 2002	PVC_Availability	PVC	
Wed Jan 30 10:01:03 EST 2002	PVC_Availability	PVC	
Wed Jan 30 09:00:19 EST 2002	PVC_Availability	PVC	
Wed Jan 30 08:00:35 EST 2002	PVC_Availability	PVC	

Disabling Report Generation

You can prevent report generation by disabling an entire schedule or by disabling only a few events (reports) in a schedule. When you disable report or schedule generation, the disabled reports or schedule are not deleted; they are only prevented from being generated at the time specified by the schedule.

This is useful when you want to prevent the generation of specific reports without deleting the reports from a schedule or deleting an entire schedule. Thus, when you want to generate the reports or the schedule again, all you have to do is enable them and not recreate them.

To disable report generation:

1   Click **Schedule** on the links bar. The Schedule page appears.

2   Click the Schedules folder. The Schedule Listing page appears.

Schedule Listing

Select	Username	Schedule File	Description	Status	# of Entries	Examination Time
☐	lsinclair	Lee Sinclair		enabled	1	0 minute(s) past the hour
☐	lsinclair	LS Schedule		disabled	0	0 minute(s) past the hour

`Select All`   `Disable`   `Enable`   `Delete`

3   To disable a schedule:

  a   Do *one* of the following:

  –   Select the **Select** box next to the schedule you want to disable.

  –   Click **Select All** to select all the schedules.

  b   Click **Disable**.

4   To disable an event (a report) in a schedule:

  a   Click on the schedule in the Navigation frame that contains the report or reports you want to disable.

  b   Click the report's title. The Format page appears.

  c   Change the report's enabled status by clicking **disable**.

  d   Click **Next**. If you do not want to make any further changes, click **Finish**.

Conversely, to enable a schedule or report, repeat Step 1 through Step 3 and click **Enable** in Step 3 and click **enable** in Step 4.

Deleting Schedules and Events

You can delete a schedule or an event (a report) from a schedule.

Deleting a Schedule

To delete a schedule:

1   Click **Schedule** on the links bar. The Schedule page appears.

2   Click the Schedules folder. The Schedule Listing page appears.

3   Do *one* of the following:

   •   Select the **Select** box next to the schedule you want to delete.

   •   Click **Select All** to select all the schedules.

   ▶   You cannot delete the system schedule.

4   Click **Delete**.

   A confirmation dialog box appears, asking if you want to delete the schedule or schedules.

   Microsoft Internet Explorer

   ? Are you sure you want to delete the selected item(s)?

   OK   Cancel

5   Click **OK**.

Deleting an Event from a Schedule

To delete an event (a report) from a schedule:

1   Click **Schedule** on the links bar. The Schedule page appears.

2   Click the Schedules folder. The Schedule Listing page appears.

3   Click the schedule in the Navigation frame that contains the event or events you want to delete.

4   Do *one* of the following:

- Select the **Select** box next to the event you want to delete.

- Click **Select All** to select all the events.

> When you delete an event from a schedule, the previously
> generated results are *not* deleted.

5   Click **Delete Event**.

A confirmation dialog box appears, asking if you want to delete the event.

6   Click **OK**.

8

Deploying Reports

To view a report or form using the Web Access Server, the report first must be deployed there. Deployment publishes reports and forms to the Web Access Server.

You can use any one of the following methods to deploy reports:

- Deployment Wizard. This method is discussed in this chapter.

- Web Access Server. For more information, see Deploying and Undeploying Reports on page 274.

- The deploytool command. Refer to the *Performance Insight Reference Guide* for more information.

You can view reports that you deploy using Report Viewer or the Web Access Server. For more information about using Report Viewer and the Web Access Server, see Chapter 10, Using Report Viewer and Chapter 11, Using the Web Access Server, respectively.

Using the Deployment Wizard

The Deployment Wizard is a utility that guides you through each step necessary to deploy reports to or undeploy reports from the Web Access Server. You can start the wizard from Report Builder or from the OVPI program group.

Deploying a Report

To deploy a report:

Task 1: Start the Deployment Wizard.

Do *one* of the following:

- From Report Builder's File menu, click **Deploy**. The Login dialog box opens. Enter your report username and password, and then click **OK**. (For more information about your user account or about creating user accounts, see your Administrator or the *Performance Insight Administration Guide*.)

- From the Windows desktop, click Start, point to Programs, HP OpenView, Performance Insight, and then click **Deployment Wizard** on the menu.

Task 2:   Select the deploy option.

Figure 1 shows the Select Deployment Action window.
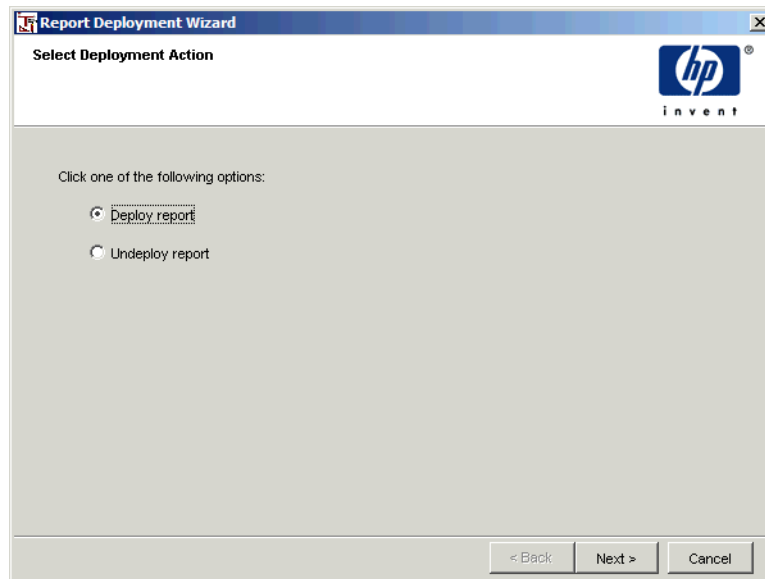
Figure 1   Select Deployment Action Window

Select **Deploy report** and click **Next**.

Task 3: **Specify the information needed to deploy the report to the Web Access Server.**

Figure 2 shows the Select Web Access Server window.
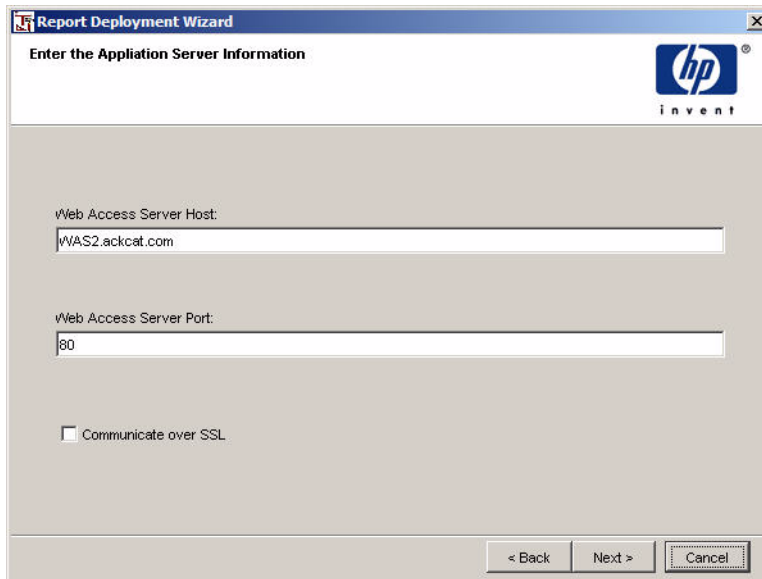
Figure 2   Select Web Access Server Window

By default, this window displays the name and port number of the current Web Access Server. The *Web Access Server* is the server that contains the HP OpenView Performance Insight (OVPI) Web site and domain.

Do the following:

1   In the Web Access Server Host box, leave the default value supplied *or* type the name of the Web Access Server where you want to deploy the report.

2   In the Web Access Server Port box, leave the default value supplied *or* type the port number of the Web Access Server specified in the Web Access Server Host box.

3   Do *one* of the following:

   •   Select the **Communicate over SSL** check box to enable SSL.

   •   Click to clear the **Communicate over SSL** check box to disable SSL.

The Communicate over SSL option enables Secure Socket Layer (SSL) communication between the Web Access Server and any supported Web browser. When this option is not used, the communication between the two is over HTTP.

4   Click **Next** to continue.

5   Do one of the following:

  •   Go to Task 4 if the Log on window opens; this window opens if one of the following conditions is true:

    —   You started the Deployment Wizard from the HP OpenView program group.

    —   You are not logged on to the Web Access Server you specified in Task 3 on page 230.

  •   Go to Task 5 on page 232 if the Select Report window opens.

Task 4:   Log on to the Web Access Server.

If you are not currently logged on to the Web Access Server you specified, the Login window opens.

Task 5:   Select the report you want to deploy.

Figure 3 shows the Select Report window.
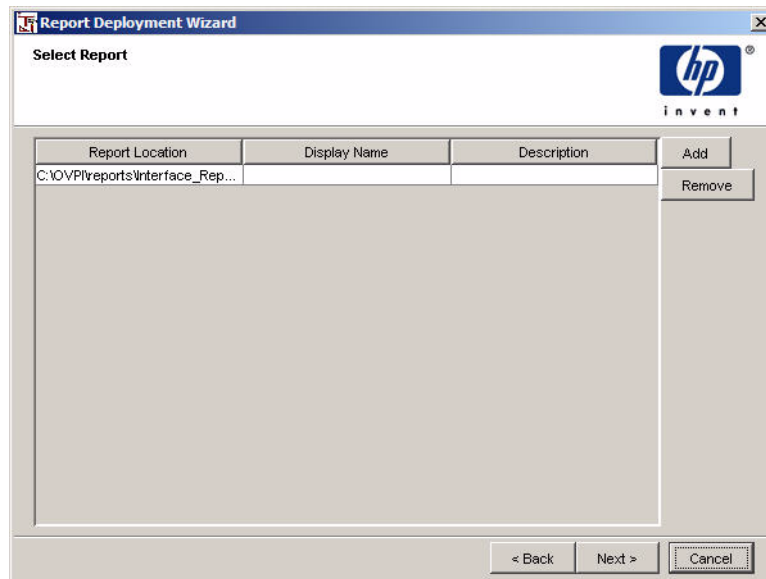
Figure 3   Select Report Window

1   Click **Add**.

The Open dialog box opens; navigate to the folder that contains your reports.

2   Do any of the following in the Open dialog box, then click **Open**:

- To select a single report, click the report file name.

- To select consecutive reports, click the first report, press and hold down the **SHIFT** key, and then click the last report.

- To select reports that are not consecutive, press and hold down the **CTRL** key, and then click each report.

3   If you need to remove a report that you added, select it, and click **Remove**.

4   Click **Next**.

Task 6:   Select a folder in which to deploy a report or reports.

Figure 4 shows the Select Location window.
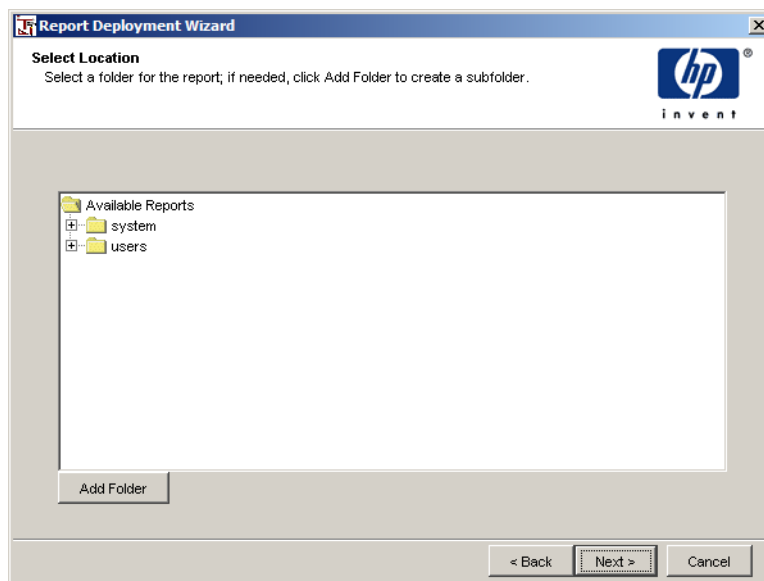
Figure 4   Select Location Window

Do one of the following:

- Expand the tree, and select the folder where you want to store the report(s), and click **Next**.

- Expand the tree, and select the folder where you want to create a new folder, then click **Add Folder**.

  A New Folder entry appears in the tree. Do the following:

  a   Click the New Folder entry and type the name of the new subfolder.

  b   Click **Next**.

Task 7:   Deploy the reports.

Figure 5 shows the Summary window.
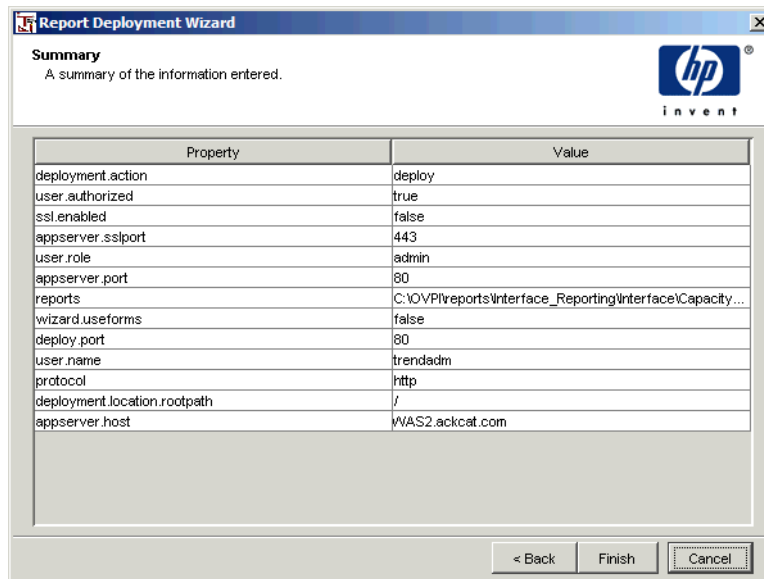
Figure 5   Summary Window

1   Click **Finish**.

If the reports is deployed successfully, a confirmation message displays.

2   Click **OK**.

➤   If you deploy a report when your Web browser is open, you must click your browser's **Refresh** button to see the report you deployed.

Undeploying a Report

To undeploy reports from the system folder, you must log on to Report Builder or the Deployment Wizard using an account that has Administrator privileges.

To undeploy a report:

Task 1:   Start the Deployment Wizard.

Do *one* of the following:

- From Report Builder's File menu, click **Deploy**. The Login dialog box opens. Enter your report username and password, and then click **OK**. (For more information about your user account or about creating user accounts, see your Administrator or the *Performance Insight Administration Guide*.)

- From the Windows desktop, click Start, point to Programs, HP OpenView, Performance Insight, and then click **Deployment Wizard** on the menu.

Task 2:   Select the deploy option.

The Select Deployment Action window opens. See Figure 1 on page 229.

Select **Undeploy report** and click **Next**.

**Task 3:   Specify the information needed to deploy the report to the Web Access Server.**

The Select Web Access Server window opens. See Figure 2 on page 230.

By default, the window displays the name and port number of the current Web Access Server. The *Web Access Server* is the server that contains the OVPI web site and domain.

Do the following:

1   In the Web Access Server Host box, leave the default value supplied *or* type the name of the Web Access Server where you want to deploy the report.

2   In the Web Access Server Port box, leave the default value supplied *or* type the port number of the Web Access Server specified in the Web Access Server Host box.

3   Do *one* of the following:

- Select the **Communicate over SSL** check box to enable SSL.

- Click to clear the **Communicate over SSL** check box to disable SSL.

The Communicate over SSL option enables Secure Socket Layer (SSL) communication between the Web Access Server and any supported Web browser. When this option is not used, the communication between the two is over HTTP.

4   Click **Next** to continue.

➤   If you started the Deployment Wizard from the HP OpenView program group, the Login page opens. Enter your report username and password, and click **OK**.

Task 4:   Select the report you want to undeploy.

The Select Location window opens. See Figure 4 on page 233.

1   Navigate to the folder that contains the report or reports you want to undeploy.

2   Select a report or reports by doing any of the following:

- To select a single report, click the report file name.

- To select consecutive reports, click the first report, press and hold down the **SHIFT** key, and then click the last report.

- To select reports that are not consecutive, press and hold down the **CTRL** key, and then click each report.

3   Click **Next**.

Task 5:   Undeploy the reports.

The Summary window opens. See Figure 5 on page 234.

1   Click **Finish**.

If the report is undeployed successfully, a confirmation message displays.

2   Click **OK**.

➤   If you deploy a report when your Web browser is open, you must click your browser's **Refresh** button to see the report you deployed.

9

Creating Forms

Forms are a special kind of report, which let you modify the data contained in the database. Forms are provided with some of the reports from the Reporting and Network Solutions report packs. For example, the Common Properties Report Pack supplies forms that let you create new customers, locations, and nodes or modify the same information for specific reports. Figure 1 shows the Create New Customer form.

Figure 1   Create New Customer Form

A form is an easy way to modify or create new data in the database. Specifically, a form lets you change the data for a single database table. For more information about how to use the forms supplied with a report pack, refer to the user guide for the report pack.

In addition to using the forms supplied with report packs, you can create forms. After you create a form and deploy it, you can use it by opening using the Management Console. Refer to the *Performance Insight Administration Guide* for details.

Forms Overview

A form updates a single database table. You create a form similarly to how you create a report using the form wizard. In addition to containing regular report elements such as labels and images, a form contains a table element that defines the database table that the form will modify and specific form elements (input field and input combination box) that let you modify the columns of the database table. See Chapter 3, Creating Reports for more information about how to add other elements to a form.

Form Elements

You add form elements to edit the columns of the database table. You can associate each form element with a single statistic (column) of the database table. Form elements are as follows:

- Input field. An input field can accept arbitrary values like text, numbers, or a range of numbers. Examples of table columns that can be updated using this element are as follows: descriptions, labels, and speeds.

- Input combination box. An input combination box is assigned a list of values or you specify that it query the database to build a list of values.

Creating a Form

The procedures in this section assume, for example purposes, that you are creating a form that will let you update a customer in the database for the Common Properties Table report pack.

To create a form:

Task 1:   Start the Form Wizard.

Do *one* of the following:

- From the File menu, click **New** and then click **Form** on the submenu.

- Click the **New** button 📋 on the general toolbar. Click **Form** on the Create New dialog box, and then click **OK**.

Task 2:   Select the data table that the form will update.

The Select a data source for the form window opens.

To select the table that the form will update:

1   Expand either the Property Tables or Generic folder.

2   Select a table.

3   Click **Next**.

For example, to update a customer in the database, expand the Property Tables folder, and select the Customer_Property_Table.

Task 3:   Select the table statistics that the form will update.

The Select Statistics window opens.

1   Do *one* of the following:

- Double-click a statistic in the Choose from box.

- Select a statistic in the Choose from box, and click ➡️ .

2 To remove a statistic from the Select Statistics dialog box, do *one* of the following:

- Double-click a statistic in the Selected statistics box.

- Select a statistic in the Selected statistics box, and click ⬅.

3 Click **Next**.

For example, to update a customer in the database, select the following statistics: cust_id, cust_name, and Description.

Do *one* of the following depending on the folder from which you selected a table:

- Property Tables folder. Go to Task 5 on page 240 to complete the Summary window.

- Generic folder. Go to Task 4 to complete the Select Statistics to Form a Unique Key window.

Task 4: Select the statistic that will be used in the database query to uniquely identify the row in the table.

Select the statistics that will be used in the database query to uniquely identify the row in the table; follow the instructions in Task 3.

Tables in the Property Tables folder automatically select the key ID column.

Task 5: Review the form summary and create the form.

1 Review the summary of the information that the form will contain.

2 If necessary, click **Back** to return to make a change. After you make any changes, click **Next** until you return to the summary.

3 Click **Finish**.

After you create the form, the following occurs:

- A window titled `untitledn.frep` appears.
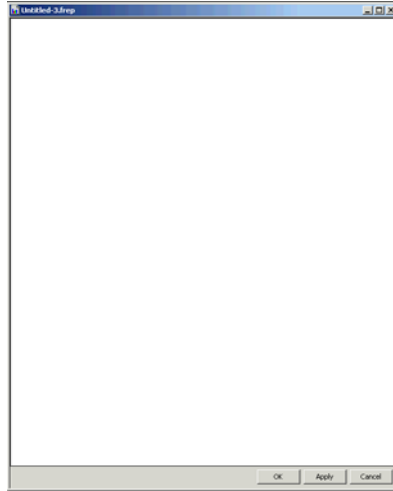
- A `Form Table` folder appears below the `Elements` folder in the Components window. This folder contains all the information that you entered using the Form wizard.
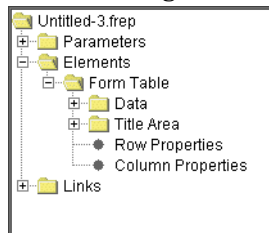
Displaying the Database Table

After you create a form, you will not be able to see the database table. By default, it is set not to display.

To display the database table in the form:

1   Expand Elements in the form's components list, and then click **Form Table**.

2   In the Properties list, click on the value box next to Visible, and select **True** from the list.

The table appears. If using the example given in the procedure in Creating a Form on page 239, the table would appear in the form as follows:

After you create the form, you can add the following form elements: input fields and input combination boxes. These elements will let you update the table's columns or data. You can also use any of the standard report elements on the form to provide additional information or improve its appearance.

Specifying the Form Type

You can create a form that will either update the data in a table or create new data in a table. You specify the type for your form after you create the form.

To specify the form type:

1   Click on the form's file name (for example, Untitled-3.frep) in the
Components list, for example:
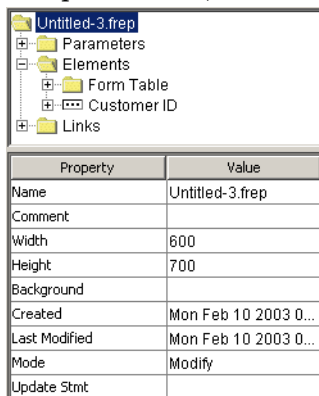
2   Click the Value box next to Mode, and then select one of the following
options:

- **Modify**. The form will modify the data for the table.

- **Create**. The form will create new data for the table.

3   Click another Value box in the Components list *or* click in the Form
window to make the change take effect.

Creating an Update or Modify Statement

After you create your form by clicking **OK** or **Apply** in the form window, Report
Builder automatically generates a SQL statement that is used to access the
information in the database table. When the Update Stmt or Create Stmt
properties are blank, the statement is automatically generated. Alternatively,
you can create this statement yourself before you click **OK** or **Apply** in the form
window.

HP recommends that you create this statement yourself only if you are an
experienced SQL user; otherwise, use the statement generated by Report
Builder after you click **OK** or **Apply** in the form window.

To create a SQL statement:

1   Click on the form's file name (for example, `Untitled-3.frep`) in the Components list.

2   Click the Value box next to *one* of the following properties:

   • Update Stmt. This property appears when the form's Mode property is set to Modify. The Edit Update Statement dialog box opens.

   • Create Stmt. This property appears when the form's Mode property is set to Create. The Edit Create Statement dialog box opens.

3   Use the following variables to create your update or create statement in the dialog box:

   • #{column_name} - This substitutes the value of the column named column_name from the Form Table element. This column must be a selected statistics for the table.

   • !{column_name} - This substitutes the value from the Form Input element (input field or input combination box) that is assigned to the column named column_name.

   For example, following is a statement for a form that creates a customer:
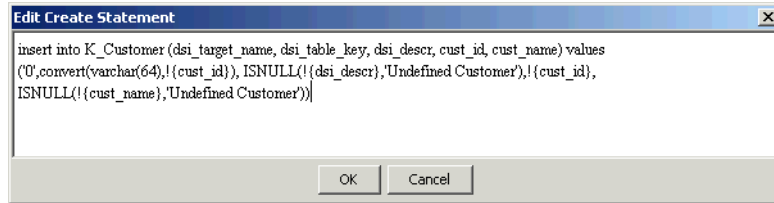
4   When you finish creating your statement, click **OK**.

Adding an Input Field

An *input field* is a box in which you can type text (alphabetic or numeric) that will be used to update the value of a statistic. You might use an input field to update a statistic that has many possible values, such as a customer name.

To add an input field to a form:

1   Do *one* of the following:

    • On the Report Builder toolbar, click ⬚ .

    • From the Insert menu, select **Input Field**.

    • Right-click the form's Elements level, and click **Insert Input Field**.

2   Position the pointer (a crosshair) in the Form window where you want the upper-left corner of the element, and then drag the pointer until you reach its desired size.

    The Enter Element Name and Description window opens.

3   Do *one* of the following:

    • Click **Next**. Supplying a name and description is optional.

    • Enter a name and a description for the input field, and then click **Next**.

    The Select a Statistic for Input window opens.

4   In the Statistic list, click the statistic (column) from the database table that you want to assign to the input field, and then click **Next**.

    The list of available statistics are the ones that you selected in Task 3 on page 239.

    If using the example given in the procedure in Creating a Form on page 239, you would select cust_id from the Statistic list. You would also repeat this procedure to create input field boxes for the cust_name and Description statistics.

5   Do the following:

    a   Review the summary of the information that the input field will contain.

    b   If necessary, click **Back** to return to make a change. After you make any changes, click **Next** until you return to the summary.

    c   Click **Finish**.

An input field is placed in the form window. If using the example given in the procedure in Creating a Form on page 239, the input field would appear in the form as follows:

Adding an Input Combination Box

An *input combination box* is a box that displays a list of values. It can display a list of values that it obtains as a result of querying the database or a list of values that you manually entered when you create the box. You might use an input combination box for a statistic when there are a limited set of values for a statistic like the location of a device.

To add an input combination box to a form:

1   Do *one* of the following:

   •   On the Report Builder toolbar, click 🔳.

   •   On the Insert menu, select **Input Combo Box**.

   •   Right-click the form's Elements level, and select **Insert Input Combo Box** from the shortcut menu.

2   Position the pointer (a crosshair) in the Form window where you want the upper-left corner of the element, and then drag the pointer until you reach its desired size.

The Enter Element Name and Description window opens.

3   Do *one* of the following:

- Click **Next**. Supplying a name and description is optional.

- Enter a name and a description for the input field, and then click **Next**.

The Select a Statistic for Input window opens.

4   In the Statistic list, click the statistic (column) from the database table that you want to assign to the input combination box, and then click **Next**.

The list of available statistics are the ones that you selected in Task 3 on page 239.

The Select the Data Source for the ComboBox Entries window opens.

5   To select how the values displayed in the input combination box list are created, select *one* of the following options:

- **Query**. Queries the database for the list of values that it will display when you click the drop-down arrow next to the combination box.

- **Manual**. Lets you enter the values that the list will display when you click the drop-down arrow next to the combination box.

If you chose **Manual**, go Step 6. If you chose **Query**, go to Step 7.

6   To enter the values that the box will display in its list:

a   Click the 📄 button. A row is added.

b   Click the box in the Data Value column, type a value, and then press the TAB key. Repeat Step a and Step b to enter additional values.

c   To delete a value from the list, select the value, and then click ☒.

d   To rearrange the order in which the values will appear in the list, select the value, and then do *one* of the following:

   —   Click ⬆ to move the value up in the list.

   —   Click ⬇ to move the value down in the list.

e   Click **Next**, and go to Step 9.

7 Select the table that the query will use to build the list of values that will be available in the input combo by doing the following:

    a Expand either the `Property Tables` or `Generic` folder.

    b Select a data table.

    c Click **Next**.

8 Select the statistic whose value will be used in the form and the statistic that will be displayed in the input combination box by doing the following:

    a Click the Statistic arrow to select the statistic from the database table that you want to assign to the input combination box.

    b Click in the Statistic arrow to select statistic from which the box will get its values.

9 Do the following:

    a Review the summary of the information that the input combination box will contain.

    b If necessary, click **Back** to return to make a change. After you make any changes, click **Next** until you return to the summary.

    c Click **Finish**.

Adding Other Elements to Forms

After you create a form and its form elements, you can add regular report elements. For example, you will probably want to reposition the table and form elements and add other elements, such as a logo, graphic objects, and labels. Figure 1 on page 237 shows a form with an image, a graphic object (line), and labels.

For more information about adding other elements and moving elements, see Adding Elements on page 53 and Moving Elements on page 98. To save the form, see Saving Reports on page 117.

Deploying Forms

After you create a form, you must deploy it to the Management Server. Once the form is deployed, you can start Object Manager, which is available from the Management Console application, which lets you access the forms to update managed objects. Refer to the *Performance Insight Administration Guide* for details.

You can deploy a form using any of the following methods:

- Package Manager. Refer to the *Performance Insight Reference Guide* for details about the form and formdir directives for the install.pkg file.

- The **formdeploytool** command. Refer to the *Performance Insight Reference Guide* for details.

- Form Deployment wizard.

Using the Form Deployment Wizard

You can use the Form Deployment wizard to deploy or undeploy a form.

Starting the Form Deployment Wizard

To start the form deployment wizard:

Do *one* of the following:

- UNIX

    a Open a new shell window.

    b Navigate to the following directory:

    *installation_directory***/bin**

    In this instance, *installation_directory* is the directory into which you installed OVPI.

    c Type the following command:

    ./formdeploywizard

- Windows

  a Navigate to the following directory:

  *installation_directory***\bin**

  where *installation_directory* is the directory into which you installed OVPI.

  b Double-click the following:

  ```
  formdeploywizard.exe
  ```

The Select Deployment Action window opens.

Deploying a Form

To deploy a form:

1 Start the Form Deployment wizard. See Starting the Form Deployment Wizard on page 249 for details.

The Select Deployment Action window opens.

2 Select **Deploy form**.

The Select Web Access Server window opens.

By default, this window displays the name and port number of the Web Access Server. The *Web Access Server* contains the HP OpenView Performance Insight (OVPI) Web site and domain.

3 Do the following:

a In the Web Access Server Host box, leave the default value supplied *or* type the name of the Web Access Server where you want to deploy the form.

b In the Web Access Server Port box, leave the default value supplied *or* type the port number of the Web Access Server specified in the Web Access Server Host box.

The Communicate over SSL option enables Secure Socket Layer (SSL) communication between the Web Access Server and any supported Web browser. When this option is not used, the communication between the two is over HTTP. Refer to *Performance Insight Administration Guide* for more information about SSL.

c Do *one* of the following:

— Select the **Communicate over SSL** check box to enable SSL.

— Click to clear the **Communicate over SSL** check box to disable SSL.

d Click **Next** to continue.

The Login *Server* window opens.

4 Type your username, your password, and then click **Next**.

The Select Admin Server window opens.

5 Select the administration server on which you want to deploy the form from the list of available servers, and click **Next**.

The Select Form window opens.

6 In the Select Report window, do the following:

a Click **Add**.

The Open dialog box opens.

b Navigate to the folder that contains your forms.

c Do any of the following:

— To select a single form, select the form, and then click **Open** *or* double-click the form.

— To select consecutive forms, click the first form, press and hold down the **SHIFT** key, and then click the last form.

— To select forms that are not consecutive, press and hold down the **CTRL** key, and then click each form.

If you need to remove a form, select it in the Select Form window, and then click **Remove**.

d Click **Next**.

The Select Location window opens.

7 Expand the Admin folder, and select the folder in which you want to deploy the form, and then click **Next**.

To create a new subfolder below the Admin folder, click **Add Folder**.

The Summary window opens.

8 Click **Finish**.

If the form is deployed successfully, a confirmation message displays.

9   Click **OK** to close the confirmation message.

Undeploying a Form

To undeploy a form:

1   Start the Form Deployment wizard. See Starting the Form Deployment Wizard on page 249 for details.

The Select Deployment Action window opens.

2   Select **Deploy form**.

The Select Web Access Server window opens.

By default, this window displays the name and port number of the current Web Access Server. The *Web Access Server* contains the HP OpenView Performance Insight (OVPI) Web site and domain.

3   Do the following:

a   In the Web Access Server Host box, leave the default value supplied *or* enter the name of the Web Access Server where you want to deploy the form.

b   In the Web Access Server Port box, leave the default value supplied *or* enter the port number of the Web Access Server specified in the Web Access Server Host box.

The Communicate over SSL option enables Secure Socket Layer (SSL) communication between the Web Access Server and any supported Web browser. When this option is not used, the communication between the two is over HTTP. Refer to *Performance Insight Administration Guide* for more information about SSL.

c   Do *one* of the following:

—   Select the **Communicate over SSL** check box to enable SSL.

—   Click to clear the **Communicate over SSL** check box to disable SSL.

d   Click **Next** to continue.

The Select Location window opens.

4 Do the following:

a Expand the `Admin` folder, and locate the folder in which the form is deployed.

b Select the form, and then click **Next**.

The Summary window opens.

5 Click **Finish**.

If the form is undeployed successfully, a confirmation message displays.

6 Click **OK** to close the confirmation message.

10

Using Report Viewer

This chapter describes how to use Report Viewer to do the following:

- Open and view reports
- Modify reports
- Save reports
- Print reports

▶ The procedures in this chapter assume that Report Viewer is started. For more information about how to start Report Viewer, see Starting Report Builder or Report Viewer on page 17.

Alternatively, you can also use the Web Access Server to view reports that you or the Administrator have deployed to the Web Access Server. For more information about the Web Access Server, see Chapter 11, Using the Web Access Server.

The Report Viewer Interface

After you start Report Viewer, the Report Viewer window appears. When you open a report, it appears in a Report window, as shown in the following figure:

Multiple Document Interface

Report Viewer has an MDI (Multiple Document Interface) desktop. The MDI desktop has one window that will contain the other windows that you open; thus, using MDI, Report Viewer lets you open, modify, and preview multiple reports at the same time. Additionally, the reports you open can have different formats (for example, .rep or .srep). The MDI desktop uses *dockable* and

document windows. For more information about dockable and document windows, see Docking Windows on page 27 and Undocking Windows on page 28.

Title Bar

The title bar is the horizontal bar at the top of the Report Viewer window. It displays information about the current window.

Menu Bar

The Report Viewer has the following menus: File, Edit, View, Window, and Help.

File Menu

Table 1 lists the options on the File menu.

Table 1   Report Viewer File Menu Options

Menu Option	Description
Open	Displays the Open dialog box, which lets you open a report.
Browse	Displays the Browse window, which lets you open reports that have been deployed to the users and system folders on the Web Access Server (see Undeploying a Report on page 235 and Deploying and Undeploying Reports on page 274).
Close	Closes the active Report window.
Close All	Closes all of the Report windows.
Export As	Displays the Export dialog box, which lets you export a report to CSV (Comma Separated Value) or PDF (Portable Document Format).

Table 1   Report Viewer File Menu Options (cont'd)

Menu Option	Description
Save As	Displays the Save As dialog box, which lets you save your report to any of the available formats (see Saving Reports on page 117).
Print	Displays the Print dialog box, which lets select a printer, the portion of the report to print, and the number of copies to print (see Printing Reports on page 118).
Exit	Exits Report Viewer.

Edit Menu

Table 2 lists the option on the Edit menu.

Table 2   Report Viewer Edit Menu Option

Menu Option	Description
Refresh All	Refreshes all the elements in the current Report window.
Options	Displays the Options dialog box, which you can use to change information about the Web Access Server, specify your Help Web browser, and set logging and debugging options (see Specifying Options on page 109).
Parameter Values	Displays the Modify Parameter Values dialog box, if the current report has parameters defined, which lets you change any of the report's parameters (see Creating Parameters on page 190).

View Menu

Table 3 lists the options on the **View** menu.

Table 3   Report Viewer View Menu Options

Menu Option	Description
Toolbars	Lets you show or hide the active toolbars.
Status Bar	Lets you show or hide the status bar.
View Log Output	Lets you view the log file for Report Viewer (`viewer.log`).

Window Menu

The Window menu lets you control Report Viewer windows. Table 4 lists the options on the Window menu.

Ensure that all the windows that you want to tile or cascade are open. You cannot display closed or minimized windows.

Table 4   Report Viewer Window Menu Options

Menu Option	Description
Tile	Arranges the open Report windows so that they fill the entire Report Builder window without overlapping.
Tile Vertically	Arranges all of the open Report windows side-by-side, so that they fill the entire window without overlapping.

Table 4   Report Viewer Window Menu Options (cont'd)

Menu Option	Description
Tile Horizontally	Arranges the open Report windows top to bottom so that they fill the entire window without overlapping.
Cascade	Arranges all of the open Report windows in an overlapping fashion so that each title bar is visible.
Open Windows List	Lists all the open Report windows during the current session.

Help Menu

Table 5 lists the options on the Help menu.

Table 5   Report Viewer Help Menu Options

| Menu Option	Description
Help Topics	Displays a list of topics available within the Help system.
About Report Viewer	Displays copyright and version information about Report Viewer.

Status Bar

The status bar displays messages about the current operation. For example, when a report is loaded, the following message appears in the status text area:

```
Report loaded
```

Toolbar

The Report Viewer toolbar contains buttons for the most frequently used tasks.

The following figure shows the Report Viewer toolbar:
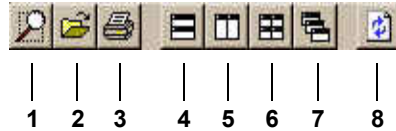
1. Browse   6. Tile
2. Open   7. Cascade
3. Print   8. Refresh
4. Tile Horizontally
5. Tile Vertically

Report Window

After you start Report Viewer and open a report, the Report window will appear. (For more information about opening a report, see Viewing Reports on page 262).

When the Report window is active, you can modify the report it displays. The current list of Report windows appears in the Window menu in the order in which they are opened. When you close the Report window, you close the report file.

Viewing Reports

Using Report Viewer, you can do the following:

- View reports that are located on your system and on the Web Access Server.

- Change how the data is displayed.

- Save and print reports.

Opening a Report

You can open the following types of reports:

- Dataset (.srep)

- Report Definition (.rep)

You can open a report by using any one of the following methods:

- Open dialog box – Lets you open reports that are located on your system (see Opening Reports on Your System on page 50).

- Browser window – Lets you open report that have been deployed to the Web Access Server (see Opening Reports on the Web Access Server on page 51).

- Drag-and-drop – Lets you drag a report from your file management application (for example, Windows Explorer) and drop it into the Report Viewer window (see Opening Reports Using Drag-and-Drop on page 52).

- viewer command – Lets you open reports on your system or those that have been deployed to the Web Access Server using a command-line interface. Refer to the *Performance Insight Reference Guide* for details.

Opening a Report with a Deferred Selection

When you open a report that has a deferred selection, Report Viewer will prompt you for information before it will open the report.

Most reports do not require you to make deferred selections.

A report with a deferred selection will prompt you to specify nodes and interfaces, a time range, or both. A node contains multiple interfaces. A time range is the time period for which the report should display data.

After you supply the information, the report is run based on that information. Additionally, you could run the report numerous times using different nodes and interfaces or time selections. For information about how to create a report with a deferred selection, see Creating Reports with Deferred Selections on page 152.

Selecting Nodes and Interfaces

When you open a report that has a deferred selection for nodes and interfaces, the Node Wizard opens displaying the Select Node Selection Type window. For more information about how to select nodes/interfaces, see Selecting Nodes and Interfaces on page 180.

Selecting a Time Period

When you open a report that has a deferred selection for its time period, the Set Time Period dialog box opens. See Figure 2 on page 185.

The following types of time periods are available for reports:

- Relative – Sets a variable time period for the report. The relative time selected (for example, **This week**) is converted to an absolute time when you view the report.

- Absolute – Sets a specific start and end time for the report to use.

For more information about how to select a time period, see Selecting a Time Period on page 184.

Drilling Down for Data

When you view a report, many elements in the report will be linked to other elements. For example, a table may be linked to a graph. (For more information about link types and how to create links, see Chapter 5, Linking Report Elements.)

In the case of a link from a table to a graph, the table may display summary statistics while the graph it is linked to displays details about a particular item (for example, a device) from the table. The table is the source object, and the graph is the destination object. The *source object* displays the summary statistics. The *destination object* displays the detailed information.

The detailed information is referred to as a drilldown. For example, Figure 1 on page 265 shows a table linked to several graphs. As you select devices in the table, the graphs will update with data for the selected device. Figure 1 shows that device 15.2.144.1 is selected in the table, and the graphs, which are linked to the table, display detailed data about Grade of Service (hourly, daily, and monthly, Hours with/without exception, utilization, discards, and errors for device 15.2.144.1.
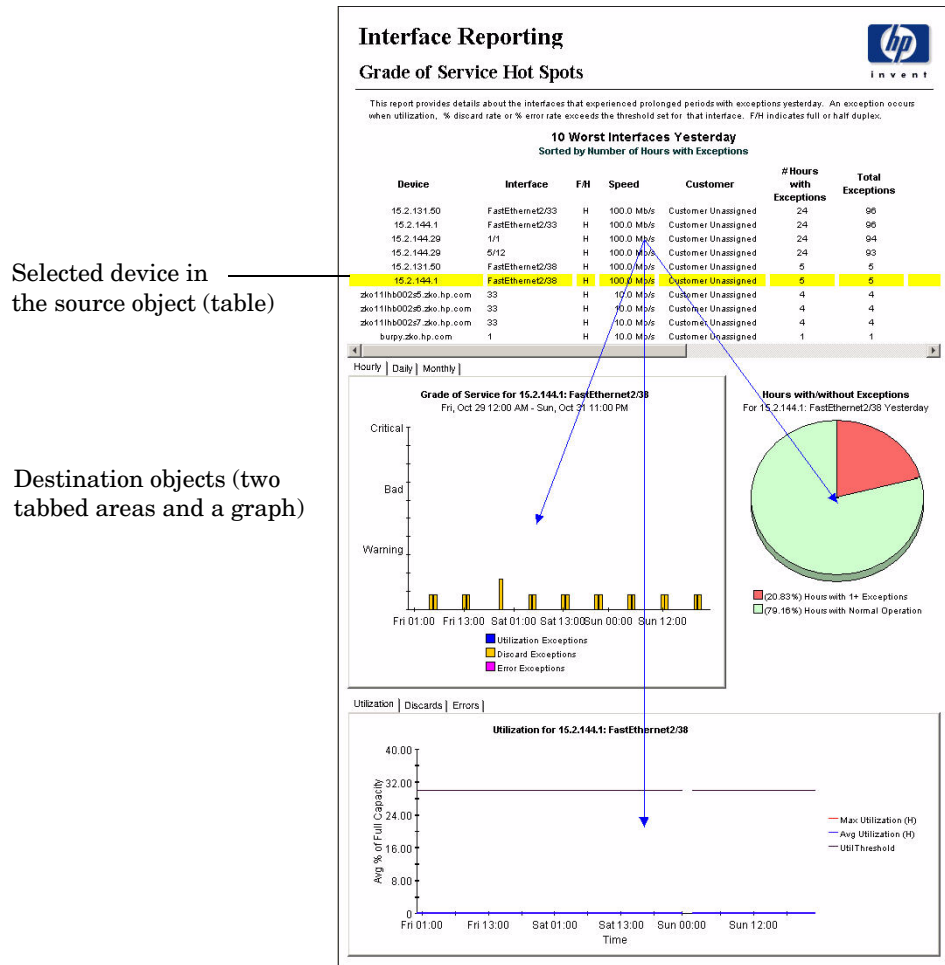
Selected device in the source object (table)

Destination objects (two tabbed areas and a graph)

Figure 1   Drilldown Example

Links in dataset reports (.srep) function similarly to the links in reports (.rep); however, the data for all links may not be available.

When the Administrator schedules a report to generate dataset format (.srep), she can limit the number of link datasets that are generated by specifying a drilldown depth. If you need to maintain large quantities of dataset files, this reduces their size. Since the data is sorted, the most important *n* rows of the table will be the rows with links.

For example, suppose a report contains a table that has 10 rows linked to a tabbed area. The Administrator could configure the generation of the dataset report so that the link data used to populate the graphs in the tab area is stored for only the first five rows. For more information about specifying drilldown depth, see .

To drill down for data:

• Click on a table row in a report. The destination object or objects will be updated with information from the source object.

Refreshing Elements in a Report

To refresh all the elements in the active Report window, do *one* of the following:

• On the Report Viewer toolbar, click [icon].

• On the Edit menu, click **Refresh All**.

Opening Report Links

In addition to element links that are used to drilldown for data within a report, reports can also contain links to other reports, applications, and Uniform Resource Locators (URL). A *report link* takes specific information from an element (graph, table, image, or label) in a report (the source report), and uses the information as the input to a report parameter (in the case of a report to report link) or to an argument (in the case of a report to application or URL link).

When you trigger the link in the source report, the destination of the link (report, application, or URL) is displayed with the specified information from the source report.
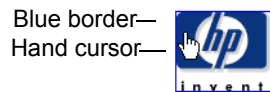
▶ Report links are created in reports using the Management Console's Catalog Manager application. To use Catalog Manager, you must have an account with Administrator privileges. Refer to the *Performance Insight Administration Guide* for more information about using Catalog Manager to create links.

A report can be the destination for multiple report links. For example, you might view a report that displays customers; it contains a report link that displays a device report, showing only the devices for a specific customer. In addition, you might view another report that displays locations; it contains a report link that displays the same device report, showing only the devices for a specific location. In this instance, both the customer and location reports link to the same destination report, which shows devices.

Likewise, one report can contain multiple links; for example, one report can be linked to any number of reports, URLs, and applications.

If a report you are viewing contains a link, the cursor will change from an arrow to a hand when it is placed over the link. Additionally, depending on the type of element used for the link, the following occurs:

- Elements that are the destination of a report link are surrounded by a blue border.

Blue border—
Hand cursor—

- Text in a label or in a table column is underlined.

This behavior is illustrated in the following example:

Device Summary
Mon, May 12 12:00 AM

Device	Busy Hour CPU Util	Busy Hour Buffer Util	Busy Hour Memory Util
Cisco_02	85.00	98.23	94.67
Cisco_03	94.75	97.97	87.56
Cisco_04	82.50	97.95	82.70
Cisco_01	84.50	97.41	86.97

Blue border—

Hand cursor—

Underlined text

To open a report link:

- Double-click it. The destination of the link (report, URL, or application) will open.

If an element is linked to multiple items, the Select a Link dialog box will open. Select the link you want to trigger, and click **OK**.

Modifying Reports

You can modify graph and report elements using Report Viewer's shortcut menus.

To modify an element, right-click on the element. The shortcut menu differs depending on the type of element you select.

Table 6 lists the options on the graph and table shortcut menus.

Table 6   Report Viewer Shortcut Menu Options

Menu Option	Lets you...	Applies to...	See...
Set Time Period	Set the time period.	Graph, Table	Selecting a Time Period on page 184
Change Constraint Values	Change constraint values.	Graph, Table	Modifying Constraint Values on page 189
Select Nodes/ Interfaces	Select nodes and interfaces.	Graph, Table	Selecting Nodes and Interfaces on page 180
Displayed Data	Specify the statistics that will display in a graph when you view it.	Graph	Displaying Selected Statistics on page 144
Grid	Display grid lines or turn them off.	Graph	Displaying Grid Lines on page 133
Legend	Reposition a graph's legend.	Graph	Repositioning Legends on page 134
Style	Change a graph's style.	Graph	Changing Graph Style on page 137
Change Max Rows	Control the amount of data returned from the database.	Graph, Table	Changing the Maximum Number of Rows Returned on page 137

Table 6   Report Viewer Shortcut Menu Options (cont'd)

Menu Option	Lets you...	Applies to...	See...
Display Data Table and **Display Overlay Data Table**	Display data for every point on a graph.	Graph	Displaying Data Tables on page 138
Export Element as CSV **Export Graph Overlay as CSV**	Export an element (graph or table) or graph overlay data to comma separated value (CSV) format.	Graph, Table	Exporting Elements or Data to CSV Format on page 120
View in new Frame	Display a report element in a new window.	Graph, Table	Viewing a Table in a New Frame on page 150
Print Graph Print Table	Prints the selected table or graph.	Graph, Table	Printing Graphs and Tables on page 120

Modifying Parameters

If you are viewing a report with parameters, you can modify those parameters. A *parameter* specifies a name for a value. This name can be used in constraints, where the current value of the parameter will be automatically substituted.

To modify parameter values, click **Parameter Values** on the Edit menu bar. The Modify Parameter Values dialog box appears. For more information about modifying parameters, see Modifying Parameter Values on page 197.

Saving Reports

You can save a report you modify; however, you can only save the report to a new file name (**Save As** option).

To save a report, click **Save As** on the File menu. The Save As dialog box opens. For more information about saving a report, see Saving Reports on page 117.

Printing Reports

To print a report, do either of the following:

• On the toolbar, click .

• On the File menu, click **Print**.

The Print dialog box appears. For more information about printing reports, see Closing Reports on page 119.

11

Using the Web Access Server

The Web Access Server lets you deploy reports and URLs, schedule reports for generation, and view deployed items from any networked system that has Netscape Navigator or Microsoft Internet Explorer. (For a list of the supported Web browsers, see Prerequisites on page 16.)

➤ The procedures in this chapter assume that the Web Access Server is displayed. For more information about how to display the Web Access Server, see Displaying the Web Access Server on page 19.

This chapter discusses how to:

- Deploy reports and Uniform Resource Locators (URL).

- View and modify reports.

- Set your preferences for viewing reports.

➤ If the Web Access Server remains inactive for more than 30 minutes, the Enter Network Password dialog box will appear, requiring you to log on again.

The Web Access Server Interface

Figure 1 shows the components of the Web Access Server.
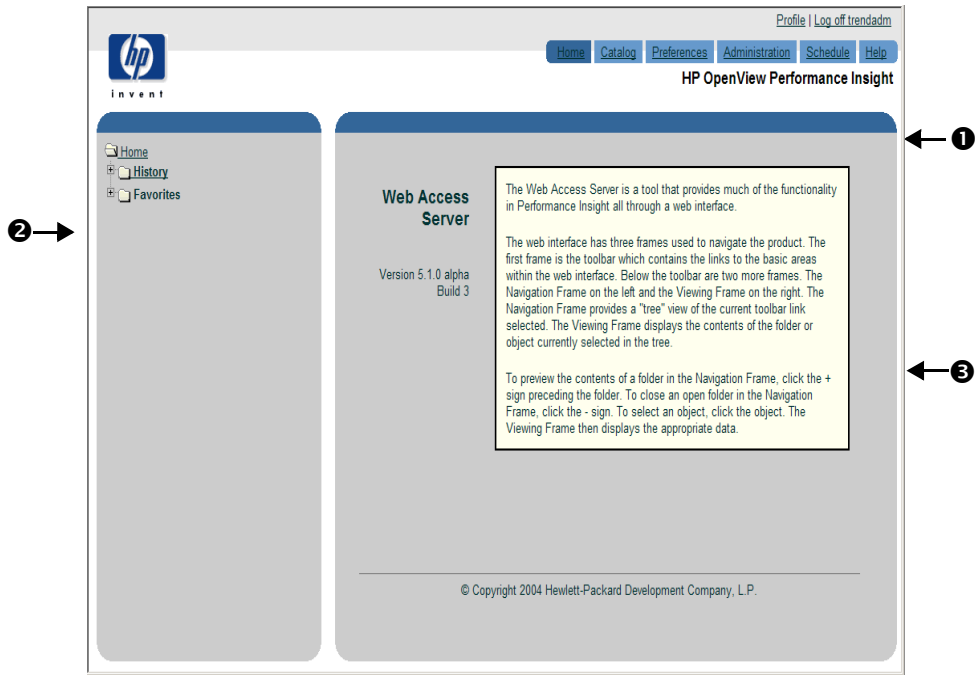
Figure 1   Web Access Server Interface

The Web Access Server has the following components:

- **Links bar** (1)

  Contains the links to Web Access Server's functions.

- **Navigation frame** (2)

  Lets you access the folders associated with each link using a standard tree structure.

  > If the navigation frame does not display, refer to the Troubleshooting appendix in the *Performance Insight Administration Guide*.

- **Results frame** (3)

Displays the contents of the folder or the report currently selected in the navigation frame.

You open the folders in the navigation frame's tree as follows:

- To preview the contents of a folder, click the plus sign (+).

  The folder's contents (additional folders, elements, or both) are shown in the navigation frame; click on a folder or an element to see its contents in the results frame.

- To close an open folder, click the minus sign (-).

Web Access Server Links Bar

The links bar comprises the following links:

- **Home** – Lets you view the reports that you viewed most recently (History), and the reports you view the most (Favorites).

- **Catalog** – Lets you deploy reports to the Web Access Server, and view the list of reports that have been deployed in the system and users folders.

- **Preferences** – Lets you change the appearance of the Web Access Server and history and viewing settings for deployed items.

- **Schedule** – Lets you schedule report generation. For more information about how to create schedules and generate them, see Chapter 7, Scheduling and Generating Reports.

- **Help** – Displays the online Help.

- **Log off** *username* – Logs you off from the Web Access Server.

▶ If your user account has Administrator privileges, the links bar will also contain an Administration link. For more information about using the Administration link, refer to the *Performance Insight Administration Guide*.

Deploying and Undeploying Reports

Before you can view a report using the Web Access Server, you must deploy it there. You can deploy a report using the Web Access Server.

Alternatively, you can also use the Deployment Wizard or Deployment Tool (command-line interface) to deploy reports to the Web Access Server. You can start the Deployment Wizard from the HP OpenView program group or from Report Builder. For more information, see Chapter 8, Deploying Reports.

When you want to remove a report from the Web Access Server, you can undeploy it. (For information about undeploying a report, see Undeploying a Report on page 277.)

Deploying a Report

To deploy a report:

1   Click **Catalog** on the links bar. The Catalog page appears.

2   Click **Deploy New Report** in the navigation frame.

The Report Deployment page appears.

3   Do *one* of the following:

   —   In the Report box, type the name of the report you want to deploy.

— Click the **Browse** button to display the Choose file dialog box, which lets you select a report from another location on your system or on your network. After you select a report, click **Open**.

4 In the Save To box, enter the location on the Web Access Server where the report should be saved.

If you do not enter a path, the report is saved to your folder in the users folder. For example, if you are logged on to the Web Access Server on a Windows system using the user account, izgeorges, the path of your reports will be:

installation_directory\reports\deploy\users\izgeorges

In this instance, *installation_directory* is the directory into which you installed HP OpenView Performance Insight (OVPI).

Suppose you want save your reports to a particular folder in your user folder. If you had a folder called general reports in your user folder, izgeorges, you would enter the following in the Save To box:

\users\izgeorges\general reports

> ► You must have Administrator privileges to deploy reports to the system folder; however, any user can deploy reports to their folder in the users folder. For more information about deploying reports to the system folder, refer to the *Performance Insight Administration Guide*.

5 In the Display Name box, enter a name for the report. This name appears in the list of deployed items on the Catalog page.

6 In the Description box, enter a description of the report. A description is optional and does not appear when you view the list of deployed reports.

For example, the Report Deployment page may appear similar to the following after you enter report information:

7 Click **Deploy**. If the Web Access Server deploys the report successfully, a message similar to the following appears:

```
You have successfully deployed "Location_TopTen.rep".
```

8 Expand the Users folder, and then expand your folder to view the deployed report.

▶ If the Administrator deploys any reports while you are logged on to the Web Access Server, you must click the Catalog folder in the navigation frame or click the **Catalog** link in the links bar to update your list of deployed reports.

For example, the deployed report will appear in your user folder as follows:
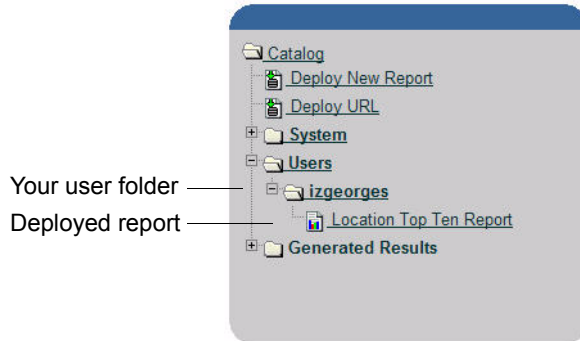
Undeploying a Report

When you undeploy a report, it is deleted from the Web Access Server; thus, you can no longer view it using the application.

To undeploy reports:

1 Click **Catalog** on the links bar. The Catalog page appears.

2 Expand the users folder in the navigation frame.

3 Click your user folder. The Deployed Items list displays the deployed reports in your user folder.
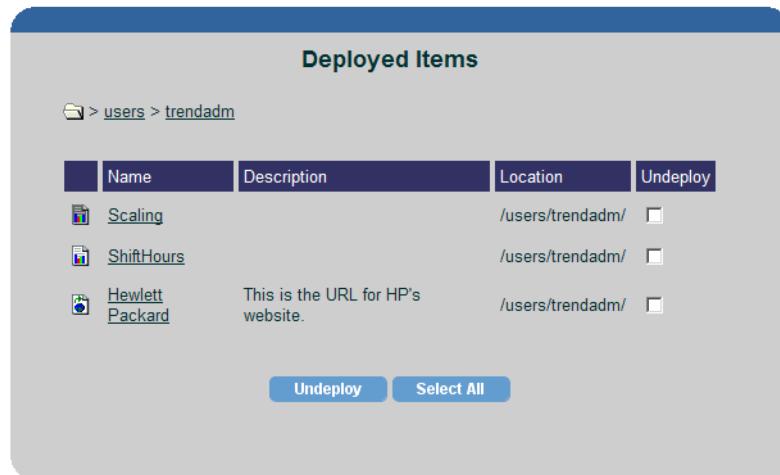
4 Do *one* of the following:

- Select the **Undeploy** check box next to the report or reports that you want to undeploy.

- Click **Select All** to undeploy all the reports in your folder.

5 Click **Undeploy**.

Deploying and Undeploying URLs

You can deploy a URL to the Web Access Server's catalog in order to quickly access a website that you use frequently. For example, if your company has more than one Web Access Server system, you may want to deploy a URL for a particular report that you view frequently on one of those systems.

When you select a URL, the specified website displays in your current browser window or in a new browser window, depending how you have configured the Web Access Server. (See Specifying Viewing Settings on page 306 for more information about changing how reports and URLs display.)

Deploying a URL

To deploy a report:

1   Click **Catalog** on the links bar. The Catalog page opens.

2   Click **Deploy URL** in the navigation frame.

The URL Deployment page opens.

3   In the URL box, type the URL you want to deploy.

For example, if you wanted to create a URL to access a report (Customer_Summary.rep) located in the wong user folder on another Web Access Server system (WAS2), the value for URL box may look similar to the following:

http://WAS2.ackcat.com/reports/webview?rn=%2Fusers%2Fwong%Customer_Summary.rep

For more information about viewing a report using a URL, see .

4   Select **users** or **system** from the Save To list.

5   To specify a folder in the users or system folder, do either of the following:

•   Type the folder in the Save To box.

•   Click the **Browse** button, which opens the Browser window, and locate and select a folder. After you select a folder, the Browser window will close automatically.

If you do not enter a path, the URL is saved to your folder in the users folder. For example, if you are logged on to the Web Access Server on a Windows system using the user account, ncanfield, the URL is saved in the following location:

installation_directory\reports\deploy\users\ncanfield

In this instance, *installation_directory* is the directory into which you installed HP OpenView Performance Insight (OVPI).

Suppose you want save a URL to a particular folder in your user folder. If you had a folder called URLs in your user folder, ncanfield, you would enter the following in the Save To box:

\users\ncanfield\URLs

6   In the Display Name box, enter a name for the URL. This is the name shown for the URL when you open the folder containing the URL.

7   In the Description box, type a description of the report. A description is optional; the description does not appear anywhere.

8   Select the Open in New Browser option if you want the URL to display in a new browser window.

For example, the URL Deployment page may appear similar to the following after you enter information for a particular URL:

9   Click **Deploy**. If the Web Access Server deploys the URL successfully, a message similar to the following appears:

```
You have successfully deployed "www.hp.com"
```

10   Expand the Users folder, and then expand your folder to view the deployed URL.

▶   If the Administrator deploys any URLs while you are logged on to the Web Access Server, you must click the Catalog folder in the navigation frame or click the **Catalog** link in the links bar to update your catalog.

Undeploying a URL

When you undeploy a URL, it is deleted from the Web Access Server; thus, you can no longer view it.

To undeploy a URL:

1   Click **Catalog** on the links bar. The Catalog page appears.

2   Expand the users folder in the navigation frame.

3   Click your user folder. The Deployed Items page shows the deployed
    reports and URLs in your folder.
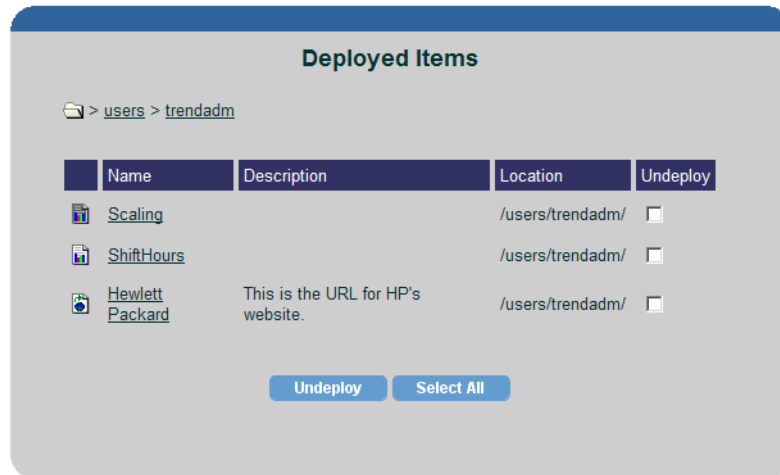
4   Select the **Undeploy** check box next to the URL or URLs that you want to
    undeploy.

5   Click **Undeploy**.

Viewing Deployed Items

Before you can view reports using the Web Access Server or launch URLs
from the Web Access Server, you must deploy them. For more information
about deploying reports and URLs, see Deploying and Undeploying Reports
on page 274 and Deploying a URL on page 278.

Using the Web Access Server, you can view any report or URL that has been
deployed to the system or users folders.

When the list of deployed items is displayed in the Web Access Server's catalog, an icon will indicate the type of item it is. Table 1 lists the icons for the deployed items.

Table 1   Web Access Server — Deployed Item Icons

Item	Icon
.srep (dataset)	
.rep (report definition)	
URL	

For a description of the report types, see Report Types on page 16.

Opening a Report or URL

When you view a report or URL, it appears in the results frame of the Web Access Server. (Alternately, you can specify that the Web Access Server display each report or URL you view in a new Web browser window. For more information about setting this preference, see Specifying Viewing Settings on page 306.)

▶ To ensure that your reports are formatted correctly when you view them with the Web Access Server, set your browser options to refresh each time you visit the page. See Setting Browser Options on page 309.

▶ If the users or system folders are empty, you or the Administrator must deploy items (reports, URLs, or both) to the Web Access Server. For more information about deploying reports and URLS, see Deploying and Undeploying Reports on page 274 and Deploying and Undeploying URLs on page 278. Only the Administrator can deploy reports and URLs to the system folder. Refer to the *Performance Insight Administration Guide* for details.
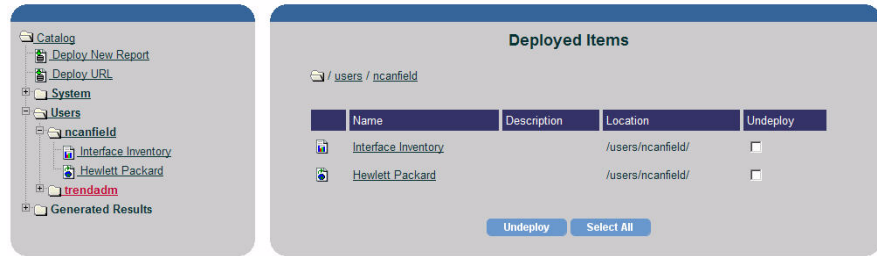
To view deployed items:

1   Click **Catalog**. The Catalog page appears.

2   To view items in the `users` folder:

   a   Expand the `users` folder.

   b   Click your user folder. The Deployed Items page displays the deployed reports and URLs in your folder. (The same list appears below your user folder in the navigation frame.)

   For example, the navigation and results frames may look similar to the following:

   c   Click the item you want to view in the navigation frame or on the Deployed Items page.

   The item will appear in the results frame.

3   To view items in the `system` folder:

   a   Expand the `system` folder, and then click the `system` folder.

   The Deployed Items page displays the deployed reports grouped by report pack and URLs in the `system` folder.

   If the Administrator deployed any report packs to the Web Access Server, a folder for each report pack that was deployed appears in the `system` folder. The dataset reports for the report packs are located in

the `Demo` folder. For example, the navigation and results frames may look similar to the following if report packs were deployed to the system folder:
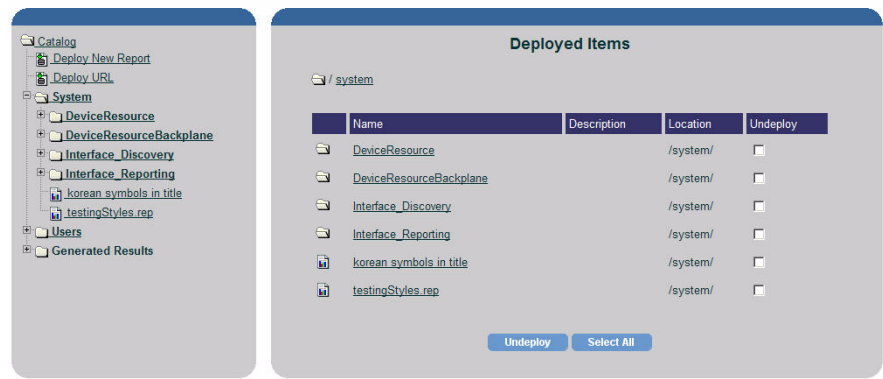
> The Administrator can deploy reports to the `users` folder as well.

b Expand any folder in the navigation frame to display its contents, or click on any folder to display its contents in the Deployed Items page.

c Click the item you want to view in the navigation frame or on the Deployed Items page. The item will appear in the results frame.

> Some reports may require that you select nodes/interfaces, a time period, or both before you can view them (see Deferred Selections on page 286). Additionally, some reports may contain drilldowns (see Drilldowns on page 290).

Viewing a Report Using a URL

You can view a report by entering a URL in your Web browser. The URL must have the following format:

http://*hostname*/reports/webview?rn=/*report_path*/ *report_name*.rep&p_*parameter*=*value*&p_*parameter*=*value*&ov_user =*username*&cmd=csv

The syntax for the URL above is as follows:

hostname	The name of the Web Access Server followed by the servlet path which is always `/reports/webview`.
	If the port number of the Web Access Server is not 80, you must supply the port number after the hostname, for example:
	`http://hostname:8001/reports/webview`
`?`	Indicates the start of a list of options for the URL.
`rn=`/*report_path*/ *report_name.rep*	The path of the report relative to the location on the Web Access Server where deployed reports reside. You only need to specify the report's path beginning with the folder (**system** or **users**) in which the report is located relative to the deployed reports path. Deployed reports reside in the same default directory on both UNIX and Windows systems; for example, the default directory for Windows is as follows, where *installation_directoy* is the directory into which you installed OVPI:
	installation_directoy`\reports\deploy`
p_parameter	The name of a parameter. This is optional.
`ov_user`	Your username
	The `ov_user` option is only needed if the Administrator has set URL authentication. If URL authentication is set, your username is required whenever you enter a URL. For more information about authentication, refer to the *Performance Insight Administration Guide*.
`cmd=csv`	Creates a basic CSV file for just the data you are currently viewing. This format will not display drilldowns, labels, or graphic objects; however, it will show tables, graphs, and tabbed elements. This is optional.

Ensure that you adhere to the following rules when entering your URL:

- Precede each parameter name with "p_".

- Separate parameters with the ampersand (&) character.

The following example will display the `port_availability.rep` report, which is located on the system, chaos, for the device numbered 38.201.173.97.

`http://chaos/reports/webview?rn=/system/FrameRelay_Service/`
`Port/port_availability.rep&p_Device=38.201.173.97`

Resetting Parameters

When you view a report and supply parameters, the Web browser saves the specified parameter settings for that session. Thus, if you went to view the same report using different parameters, the report would be displayed with both the saved and new parameters. Use the following argument to reset the parameters in a browser session:

`resetparams=true`

For example, you would type the following URL if you wanted to view the port_availability.rep report on the system chaos for the device numbered 38.201.173.97:

`http://chaos/reports/webview?rn=/system/FrameRelay_Service/Port/`
`port_availability.rep&p_Device=38.201.173.97`

Suppose you wanted to view the report again for the device numbered 38.201.173.99 in the same browser session. You would type the following URL:

`http://chaos/reports/webview?rn=/system/FrameRelay_Service/Port/`
`port_availability.rep&resetparams=true&p_Device=38.201.173.99`

Deferred Selections

Occasionally, a report will require you to select certain information (such as nodes and interfaces, time periods, or both) before you can view the report.

▶ Most reports do not require you to select nodes, interfaces, and time periods.

For example, a router performance report is an example of a report that may require you to enter the following information before you can view the report:

• The router or routers to report on

• The time period to report on (if the time selection were deferred)
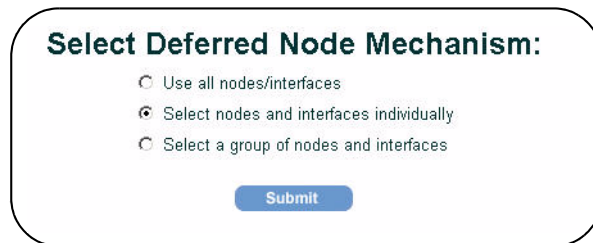
After you supply the information, the report is run based on that information. Additionally, you could run the report numerous times using different routers and time selections.

A report with a deferred selection will ask you to specify one or both of the following:

- Nodes and interfaces. A node can contain multiple interfaces. For example, a node may be a Cisco router which has an Ethernet interface and a Token Ring interface. You can select a node and all its interfaces or you can select only certain interfaces.

- Time period. A *time period* is the time range for the report. You can select an absolute period (specific dates) or a relative time period (a period of time relative to the time you view the report).

Selecting Nodes and Interfaces

If a report has a deferred node/interface selection, the Select Deferred Node Mechanism page opens.

To select nodes and interfaces:

1 Select *one* of the following options:

- **Use all nodes/interfaces**. Lets you select all nodes and their interfaces.

- **Select nodes and interfaces individually**. Lets you select individual nodes and interfaces. The Select Nodes/Interfaces page opens. To select a node or interface, select the box that appears next to it.

- **Select a group of nodes and interfaces**. Lets you select a group of nodes and interfaces. The Select Group page opens. Select the group of nodes and interfaces you want.

2 Click **Submit**.

Selecting a Time Period

If a report has a deferred time period, the Select Time Period page will appear.

The following time ranges are available for reports:

- Relative – Sets a variable time period. The relative time selected (for example, This week) is converted to absolute times when you view the report. For details, see Selecting a Relative Time Period on page 289.

- Absolute – Sets a specific start and end time. For details, see Selecting an Absolute Time Period on page 290.

Since there will not be data for every time range in the database, the Select Time Period page displays only those time ranges that contain data.

Selecting a Relative Time Period

To select a relative time period:

1 Click **Relative**.

2 Do *one* of the following:

- To select a current time period, click **This** *time period*. Click the *time period* arrow and select an option. For example, if the time period is **This week**, the report displays data for the current week.

- To select a previous time period, click **Last** *n time period*.

3   Type a number of hours, click the time period arrow, and then select an option. For example, if the time period is **Last 1 week(s)**, the report displays data for the last full week (Sunday to Sunday) prior to the current date.

4   Select the **Until Now** check box to display data for selected time period up until the current time. For example, suppose it was Thursday, and you selected a time period of 1week; your report will display data for the prior week (Sunday to Sunday) through Thursday.

Selecting an Absolute Time Period

To select an absolute time period:

1   Click **Absolute**.

The start and end times represent the range of available data in the database.

2   Enter the start time for the time period in the Start Time box.

3   Enter the end time for the time period in the End Time box.

4   Click **Submit**.

Drilldowns

When you view a report, some tables and graphs in the report may be linked. (For more information about link types and creating links, see Chapter 5, Linking Report Elements.) For example, a link can allow a table to display summary statistics while the graph it is linked to displays detailed information about a particular item from the table. The detailed information is referred to as a drilldown.

To drill down for data in a table, click on a drill icon next to a table row, for example:

The linked graphs are updated with information from the table.

➤ When drill-down data is not available for specific row in a dataset report, the drill icon will appear as follows:

To drill down for data in a graph, click on a node in the graph, for example:
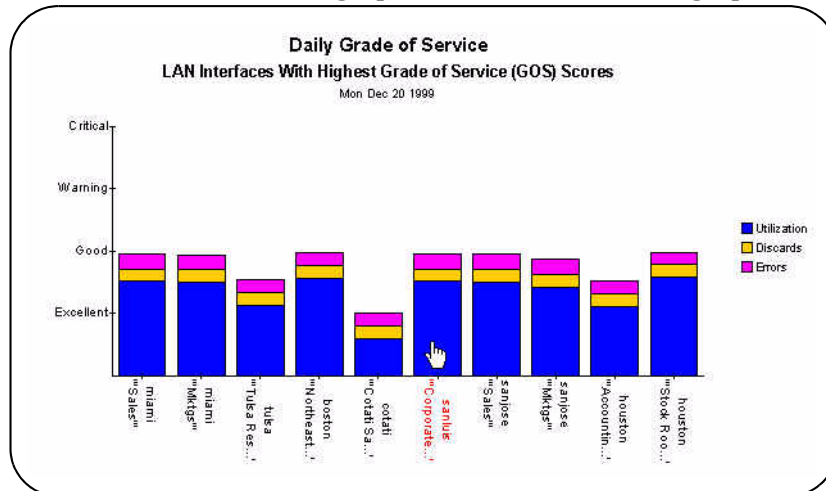
This action highlights the node name, and then updates all of the graph's linked elements with data for the selected node.

Opening Report Links

In addition to element links that are used to drilldown for data within a report, reports can also contain links to other reports, applications, and Uniform Resource Locators (URL).

▶ You cannot open report to application links using the Web Access Server. Instead, you must use Report Builder or Report Viewer to open these kinds of links. Additionally, the application must reside on the system from which you run Report Builder or Report Viewer to successfully invoke the application linked to the report.
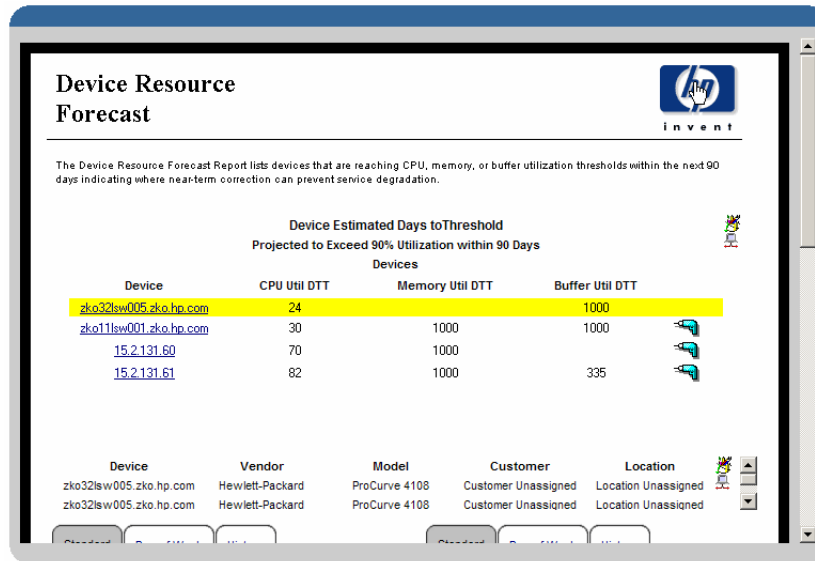
A *report link* takes specific information from an element (graph, table, image, or label) in a report (the source report), and uses the information as the input to a report parameter (in the case of a report to report link) or to an argument (in the case of a report to application or URL link).

▶ Report links are created in reports using the Management Console's Catalog Manager application. To use Catalog Manager, you must have an account with Administrator privileges. Refer to the *Performance Insight Administration Guide* for more information about using Catalog Manager to create links.

When viewing a report using the Web Access Server, any links are treated just like a URL; it will display using the same method that your browser used to display URLs.

For example, if your browser underlines URLs, any links in the report will be underlined. Additionally, the cursor will change from an arrow to a hand when it is placed over a link.

The following figure shows an example of how links may appear in a report:

A report can be the destination for multiple report links. For example, you might view a report that displays customers; it contains a report link that displays a device report, showing only the devices for a specific customer. In addition, you might view another report that displays locations; it contains a report link that displays the same device report, showing only the devices for a specific location. In this instance, both the customer and location reports link to the same destination report, which shows devices.

Likewise, one report can contain multiple links; for example, one report can be linked to any number of reports, URLs, and applications.

To open a link in a report:

- Click the link in the report. One of the following will occur:

    — A report or URL will display in the browser window.

    — The Report Link Selection window opens if the item has more than one link associated with it. Click the link you want to open.

By default, the destination of the link (report or URL) displays in the current browser window. You can specify that it display in a new browser window; see Specifying Viewing Settings on page 306 for details.

Viewing Items in the History or Favorites Folders

By default, the Web Access Server stores the items (reports and URLs) that you view in its `History` folder. You can also add items that you view frequently to the Web Access Server's `Favorites` folder.

To view reports in the Report History or Favorites folders:

1 Click **Home** on the links bar.

In the navigation frame, the following folders appear:

- `History` – Contains the last *n* most-recently opened items during the current session, where *n* is a value you can set. By default, this value is 10. For more information about changing the number of items included in the `History` folder, see Specifying the History Folder Settings on page 303.

- `Favorites` – Lists the names of the items you have selected as your favorites in the `Favorite Items` folder. For more information about adding items to the `Favorite Items` folder, see Adding Items to the Favorites Items Folder on page 301.

2 To view the items in either folder, do the following:

a Expand the folder to display its contents. (If you expanded the `Favorites` folder, expand the `Favorite Items` folder to view the favorite items.)

b Click the item you want to view in the navigation frame. The item will appear in the results frame or a new browser window, depending on how you have set this preference for deployed items. For more information about setting preferences, see Setting Preferences on page 298.

Viewing Elements in Separate Frames

You can display report elements (graphs and tables) in a frame that is separate from the Web Access Server's results frame. Additionally, you can control how large the element will be when it appears in the frame.

To view a report element in a separate frame:

1 Make sure that the Allow Element Editing option on the View Settings page is selected.

See Specifying Viewing Settings on page 306 for details.

2   Click the **Frame** button 🔍 next to the element.

Modifying Reports

When the **Edit** button 🎨 appears next to an element, you can change any of the following attributes for that element:

- Maximum rows. Lets you constrain the amount of data returned and displayed by the Web Access Server. The default value is 50 rows of data. You can change this if you would like a report that displays more or less data. Typically, if you set a large value for maximum rows, the Web Access Server displays a graph or a table that will span a larger time range; however, when you set a large value for maximum rows, the report will require more processing, which may result in a longer delay while the Web Access Server transfers and renders the data.

- Constraints. Lets you change the report's constraints. A *constraint* specifies how the data for a graph or table is retrieved from the database. For more information about constraints, see Modifying Constraint Values on page 189.

- Time period. Lets you specify a time period for the report. You can select an absolute period (specific dates) or a relative time period (a period of time relative to the time you view the report). For more information about specifying a time range, see Selecting a Time Period on page 289.

- Graph style. Lets you change the style of the graph. Available styles are as follows: area, stacking area, bar, stacking bar, pie, plot, and scatter plot.
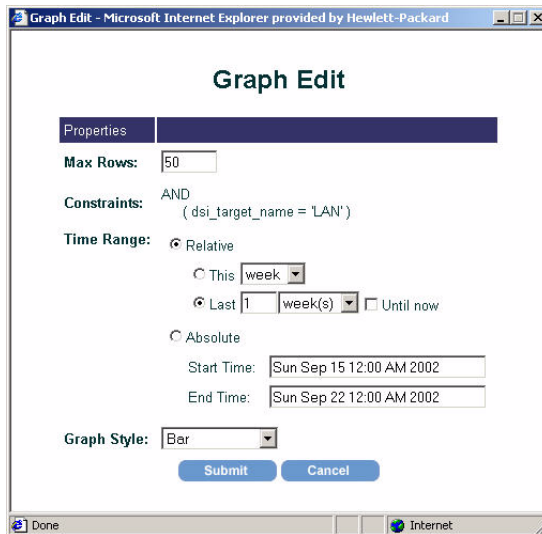
Editing Graphs and Tables

You can change certain attributes of a graph or a table when you view a report.

▶   You must specify element editing as a report preference in order to modify tables and graphs in a report. For more information about setting this preference, see Specifying Viewing Settings on page 306.

To edit a graph or table:

1 Click the **Edit** button [icon] next to the element in the report you want to edit. The Table Edit or Graph Edit page appears. The Graph Edit window opens.

▶ The only difference between the Table Edit and Graph Edit pages is that the Graph Edit page allows you to change a graph's style.
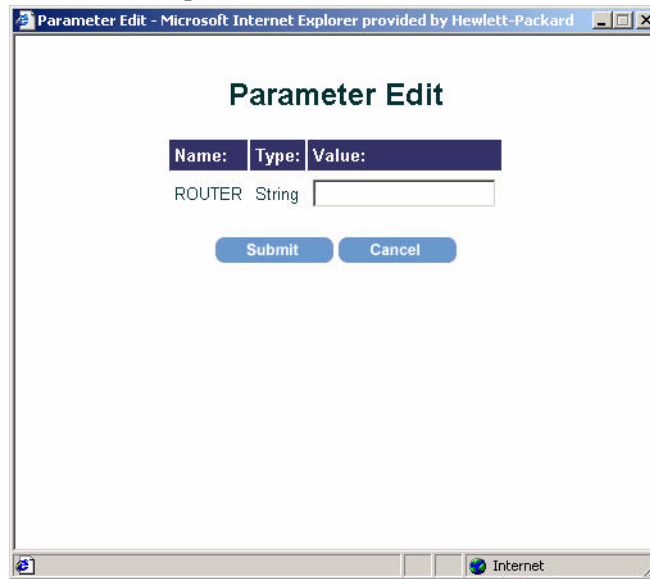
2 Do any of the following:

a In the Max Rows box, type the number of rows of data to display.

b Do *one* of the following to specify a time range:

— Click **Relative**.

— Click **Absolute**.

See for details.

c *Graphs only*: Click the Graph Style arrow, and select a graph style.

3 Click **Submit** when you have made your changes. The report is updated with your changes.

Modifying Parameter Values

When the **Parameter** button ![icon] appears at the bottom of a report, it means that the report contains a parameter or parameters that you can edit.

To change the value of a parameter:

1   Click the **Parameter** button ![icon] at the bottom of the report. The Parameter Edit window opens.

▶   You cannot change a parameter's name or type.

2   In the any of the parameter boxes, enter a new value.

3   Click **Submit** to apply your change.

Setting Preferences

Using the Preferences link, you can:

- Change the information in your user profile (name, department, telephone number, email address, and password)

- Change the appearance of the Web Access Server.

- Add reports to the Favorites folder.

- Specify the number of items that will be saved in the History folder.

- Specify several report-viewing settings.

- Specify how often a displayed schedule is refreshed on the screen.

Changing Your User Profile

You can change the information in your user profile (name, department, telephone number, email address, and password) by using the Profile or Preferences link in the links bar.

To change the information in your user profile:

1 Do *one* of the following:

- Click **Profile** in the links bar.

- Click **Preferences** on the links bar, expand User Profile in the navigation frame, and then click **User Profile**.

The User Profile for *username* page opens.

2   Modify the fields you want to change, and then click **Apply**.

Changing the Appearance of the Web Access Server

You can change the appearance of the Web Access Server using the Preferences link. You can change the font, font size, and font color for the links bar, navigation frame, and results frame.

To change the appearance of theWeb Access Server:

1   Click **Preferences** on the links bar. The Preferences page opens.

2   Expand Site Appearance in the navigation frame.

3 Click **Settings**. The Site Appearance Settings page appears.

The Highlighted Font Color option lets you select the color of the links on the links bar and the items in the navigation frame when the pointer is placed over them; the Regular Font Color is the color of the links or items when the pointer is not on them.

4 Do any of the following:

   a To change a font or font size, click the Font or Font Size arrow to display a list of values, and then select a new value.

   b To change font color, do *one* of the following:

   — In the Font Color box, enter an HTML standard color name (aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, yellow, or white) or a hexadecimal color value.

   — Click **Select Color**. The Color Selector window appears, which lets you select a color from a palette or enter a specific color value. Click **OK** after you select a color to apply your change and close the Color Selector window.

5 After you make the changes you want, click **Apply** on the Site Appearance Settings page.

6 Click your browser's **Refresh** button.

Adding Items to the Favorites Items Folder

You can add items (reports and URLs) to the Favorite Items folder in order to access the items you view most frequently.

Adding Items Using the Home Link

To add an item to the `Favorite Items` folder using the Home link:

1   Click **Home** on the links bar.

2   Expand `Favorites` in the Navigation frame.

3   Click **Add Favorite**. The Add Favorite page opens.

Add Favorite

Name	Value		Summary
			Use the "Browse" button to locate an item to add to the favorite list
Deployed Item			

Browse   Apply

> ► If you have selected a report that contains parameters, the Parameter Edit page opens. You can modify these parameters. See Modifying Parameter Values on page 297 for details.

4   Click **Browse**. The Browser window opens.

5   Locate the report or URL you want to add to the folder, and click it. The Browser window closes.

6   Click **Apply** on the Add Favorite page.

Adding a Report Using the Favorites Button

You can add the report you are viewing to the Favorites folder by clicking the **Favorites** button at the bottom of the report.

Specifying the History Folder Settings

The History folder appears in the navigation frame when you click **Home** on the links bar. It contains the last *n* most-recently opened deployed items during the current session. The default is 10. Using the Preferences link, you can change the number of items that will be saved and how they will be sorted in the folder.

To change the setting for the `History` folder:

1   Click **Preferences** on the links bar. The Preferences page appears.

2   Expand `Deployed Items` in the navigation frame.

3   Click **History**. The History Settings page opens.

Attribute	Value
Size	10
Sort By	⊙ Name ○ Date

History Settings

Apply

4   In the Size box, enter the number of items that Web Access Server should keep in the History folder. (The maximum number allowed is 99.)

5   Do *one* of the following:

   •   Click **Name** to sort items by name in the History folder.

   •   Click **Date** to sort items by date in the History folder.

6   Click **Apply**.

Downloading Reports and Elements to Other Formats

You can download a report page to CSV, `.srep` (dataset report), and PDF formats; you can download a report element (graph or table) to CSV (comma separated value) format.

> ▶ If you want to use TrueType fonts in a PDF file, see Appendix B, Using TrueType Fonts in PDF Files for more information about how to configure OVPI for TrueType fonts.

To download a report or report element:

1 Display the report you want to download.

2 Click the **Download** button [icon].

For a report page, this button is located at the bottom of the report. For a report element (graph or table), this button is located to the right of the element.

Depending on what you are download, one of the following dialog boxes opens:

- Report page. The Download Options dialog box opens.

  To download the page:

  — Select the format you want (CSV, SREP, or PDF).

  — Select the drilldown depth for the report. See Step on page 214 for details about drilldown depth.

  — Click **OK**.

- Report element. The File Download dialog box opens.

  To down load the element:

  — Click **Save this file to disk**. The Save As dialog box opens. Select a location for the file, and then click **Save**.

  — Click **Open this file from its current location**. The file opens in an appropriate text-viewing application (for example, Microsoft Excel on Windows).
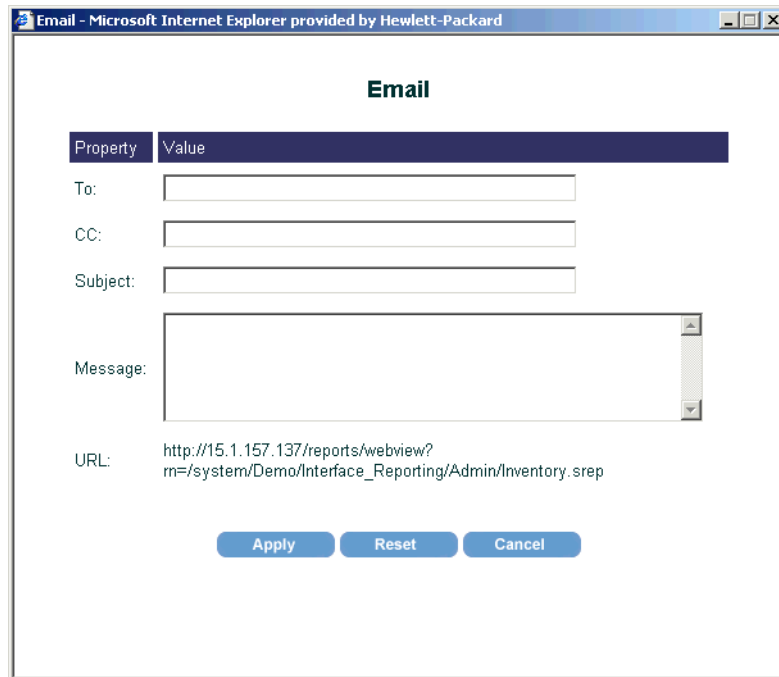
Sending a Report URL in Email

You send a report's URL in email to another user. You must have an SMTP mail server to be able to use this feature.

To send a report's URL in email:

1 Display a report.

**2** Click the **Email** button [icon].

The Email dialog box opens.

3 Do the following:

a In the To and CC boxes, enter any recipients for the e-mail message.

b In the Subject box, enter the subject for the message.

c In the Message text box, type your message.

The report URL that will be sent is displayed below the Message text box.

4   Click **Apply** to send the message.

When the message is received, it will appear similar to the following:
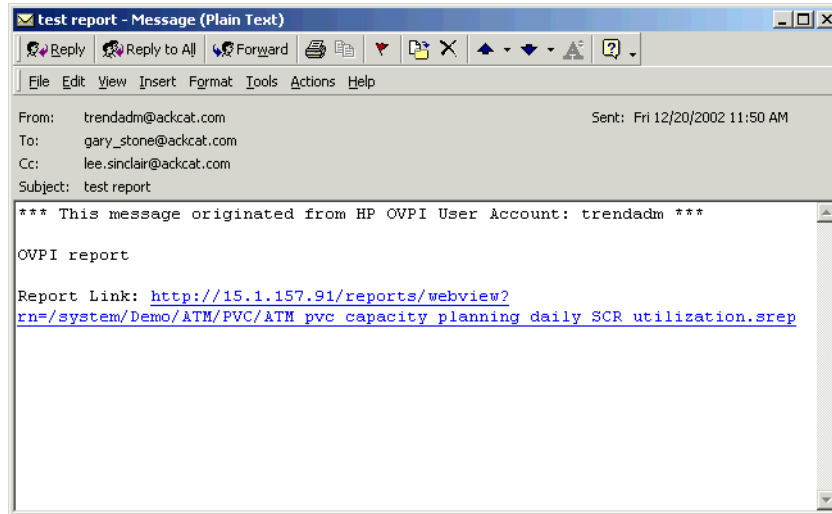
Specifying Viewing Settings

You can change many features of the Web Access Server that control how you view reports and URLs, modify reports, and limit the report data that is displayed.

To specify viewing settings:

1   Click **Preferences** on the links bar. The Preferences page appears.

2   Expand `Deployed Items` in the navigation frame.

3   Click **View**.

The View Settings page opens.

View Settings

Attribute
☑ Allow Add to Favorites within Report
☐ Allow Downloads
☐ Allow Parameter Editing
☐ Open in New Browser
☐ Allow Element Editing
☐ Allow Viewing Element in New Frame
☑ Place Drilldown Icon on the Right
☑ Center Reports
☐ Enable Report Polling
☐ Allow Report Emailing
☐ Selection Color Overrides Rule Color

Attribute	Value
Maximum Deferred Node Rows Per Page	30
Graph Element Zoom Factor (Applies only to viewing element in new frame)	1
Table Element Zoom Factor (Applies only to viewing element in new frame)	1
Report Page Background Color	#cccccc [Select Color]
Report Border Size	4 Pixels
Report Border Color	#000000 [Select Color]
Report Polling Interval	15.0 Minutes

[Apply]

4 Do any of the following:

    a Select **Allow Add to Favorites within Report** to display the **Favorites** button when you view a report. This is enabled by default. See Adding a Report Using the Favorites Button on page 302 for more information.

    b Select **Allow Downloads** to display the **Download** button when a report is viewed. See Downloading Reports and Elements to Other Formats on page 304 for more information.

    c Select the **Open in new Browser** box to display any report or URL that you open in a new browser windows.

d Select the **Allow Element Editing** box to be able to change certain attributes of a table or graph when you view a report. This is enabled by default.See Modifying Reports on page 295 for more information.

e Select the **Allow Viewing Element in New Frame** box to display a report's graphs and tables in new frames.

f Select **Place Drilldown Icon on the Right** to place the drill-down icon to the right of a table. This is enabled by default.

g Select **Center Reports** to center the report in the results frame. This is enabled by default.

h Select **Enable Report Polling** to access the latest data for a report. Enter the time interval for this period in the Report Polling Interval box.

i Select **Enable Report Emailing** to allow users to send report URLs to other users in email messages.

j Type the maximum number of deferred nodes that you want to appear in the Select Nodes/Interfaces page in the Maximum Deferred Node Rows Per Page box. For more information about deferred node selection, see Deferred Selections on page 286.

k Type the zoom factor for graphs and table elements when they are displayed in a new frame in the Graph Element Zoom Factor and Table Element Zoom Factor boxes, respectively.

For example, a zoom factor of 1 displays the element at the same size as it appears in the results frame of the Web Access Server; a zoom factor of 3 displays the element at three times that size.

l In the Report Border Size box, enter the size (pixels) for report borders.

m In the Report Border Color box, do *one* of the following:

— Enter an HTML standard color name (aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, yellow, or white) or a hexadecimal color value.

— Click **Select Color**.The Color Selector window appears, which lets you select a color from a palette or enter a specific color value. Click **OK** after you select a color to apply your change and close the Color Selector window.

5   In the Report Polling Interval box, enter the interval (minutes) at which a report should access the latest data from the database.

> ▶   This is a floating-point value; therefore, you can enter half-minute intervals (0.5). The default value is 15 minutes.

6   Click **Apply**.

Specifying a Schedule Refresh Time

To specify how often a displayed schedule is refreshed on the screen:

1   Click **Preferences** on the links bar. The Preferences page appears.

2   Expand Scheduler in the navigation frame.

3   Click **Settings**. The Scheduler Settings page opens.

<table>
<tr><td colspan="2" align="center">**Scheduler Settings**</td></tr>
<tr><td>Attribute</td><td>Value</td></tr>
<tr><td>Scheduler Page Refresh</td><td>30   Seconds</td></tr>
<tr><td colspan="2" align="center">Apply</td></tr>
</table>

4   Enter the interval (number of seconds) at which the schedule should refresh on the screen in the Seconds box. This value must be numeric, and the maximum number of seconds is 999.

5   Click **Apply**.

Setting Browser Options

To ensure that your reports are formatted correctly when you view them with the Web Access Server, your browser must refresh the display each time you access the report.

If you use Microsoft Internet Explorer, perform the following steps:

1 From your Internet Explorer browser, select **Internet Options** from the Tools menu.

2 In the Temporary Internet Files section of the General page, click **Settings**.

3 Select **Every visit to the page** and click **OK**.

4 Click **OK** again.

If you use Netscape Navigator, perform the following steps:

1 From your Netscape Navigator browser, select **Preferences** from the Edit menu.

2 Expand the Advanced item in the Category list.

3 Click **Cache**.

4 In the cache options, select **Every time I view the page**.

5 Click **OK**.

Logging Off of the Web Access Server

To log off of the Web Access Server, click **Log off *username***, which is located above the links bar.

▶ You must close all of your open browser windows to completely log off of the Web Access Server.

Element Properties

The appendix lists all of the report properties that are available when you use Report Builder. Each entry describes the function of the property, to what elements it applies, its available value or values, and any special information about its use.

Alias

Description: The alternate name for a table column.

Location: Graph or Table ⇨ Data ⇨ Query ⇨ Statistics, Graph or Table ⇨ Data ⇨ Query ⇨ Selected Statistics, Graph ⇨ Overlay Data ⇨ Query ⇨ Selected Statistics ⇨ Overlay Statistic

Values: This is a user-specified text value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Allow Column Resize

Description: Lets you resize the columns of a table in the Report window.

Location: Table ⇨ Column Properties

Values: True, False

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: See Resizing Table Columns on page 149.

Allowable Drilldowns

Description: The number of queries to the database allowed when elements in a report are linked.

Location: Table, Graph

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: See Specifying a Drill-Down Depth Constraint on page 209.

Anchor

Description: Changes the location of the legend area in the graph. (See also **Visible**.)

Location: Graph ⇨ Legend Area

Values: None, North, South, East, West, NorthEast, NorthWest, SouthEast, SouthWest

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: See Repositioning Legends on page 134 for details.

Annotation Font

Description: Lets you change the font of the annotation text that appears on the x-axis and y-axis of a graph.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis, Graph ⇨ Properties ⇨ Overlay Properties ⇨ Y Axis Overlay

Values: There are numerous font types available.

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: None

Annotation Font Bold

Description: Lets you change the weight of the annotation text that appears on the axis of a graph.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis, Graph ⇨ Properties ⇨ Overlay Properties ⇨ Y Axis Overlay

Values: True, False

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: None

Annotation Font Italic

Description: Lets you change the emphasis of the annotation text that appears on the axis of a graph.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis, Graph ⇨ Properties ⇨ Overlay Properties ⇨ Y Axis Overlay

Values: True, False

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: None

Annotation Font Size

Description: Lets you change the font size of the annotation text that appears on the axis of a graph.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis, Graph ⇨ Properties ⇨ Overlay Properties ⇨ Y Axis Overlay

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Annotation Rotation

Description: Lets you rotates a graph's annotation on the x-axis.

Location: Graph ⇨ Properties ⇨ X Axis

Values: No Rotation, Rotate 270, Rotate 180, Rotate 90

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: None

Background

Description: Lets you set the background color of the element.

Location: Report, Table, Graph, Form, Graph ⇨ Legend Area, Graph ⇨ Chart Area, Table ⇨ Row Properties, Table ⇨ Column Properties

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: See Using the Components Window on page 124.

Bold

Description: Lets you apply boldface to a text element.

Location: Graph or Table a tab_name, Graph a Title Area a Title Line x, Graph a Legend Area, Table a Row Properties, Table a Column Properties

Values: True, False

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: None

Border Style

Description: Lets you select the border style of an element.

Location: Table *or* Graph ⇨ Title Area, Table ⇨ Row Properties, Table ⇨ Column Properties, Table ⇨ Row Properties, Table ⇨ Cell Properties, Graph ⇨ Legend Area, Graph ⇨ Chart Area, Graph ⇨ Properties ⇨ Y Axis ⇨ GOS Labels

Values: None, Plain, Etched In, Etched Out, Frame In, Frame Out, Shadow In, Shadow Out

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: See Using the Components Window on page 124.

Border Thickness

Description: Lets you select the thickness of the shadow around the element.

Location: Table *or* Graph ⇨ Title Area, Table ⇨ Row Properties, Table ⇨ Column Properties, Table ⇨ Cell Properties, Graph ⇨ Legend Area, Graph ⇨ Chart Area, Graph ⇨ Properties ⇨ Y Axis ⇨ GOS Labels

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: See Using the Components Window on page 124.

Cell Border Style

Description: Lets you select a table cell's border style.

Location: Table ⇨ Title Area ⇨ Cell Properties

Values: None, Plain, Etched In, Etched Out, Frame In, Frame Out, Shadow In, Shadow Out

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: None

Cell Border Thickness

Description: Lets you select the width of a cell's border style.

Location: Table ⇨ Title Area ⇨ Cell Properties

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Column Name

Description: Lets you view the name of a statistic's column in the database.

Location: Graph or Table ⇨ Data ⇨ Query ⇨ Statistics ⇨ *statistic_name*, Graph or Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*, Graph ⇨ Overlay Data ⇨ Query ⇨ Selected Statistic ⇨ Overlay Statistic

Values: You cannot edit this value.

Usage: None

Documentation Reference: None

Column Width

Description: Lets you control the width of a column assigned to a selected statistic.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*

Values: This is a user-specified numeric value.

Usage: Click the Value box next to the property, and type a value.

Documentation Reference: None

Columns

Description: Lets you adjust the size of the columns in the legend area of a graph.

Location: Graph ⇨ Legend Area

Values: This is a user-specified numeric value.

Usage: A value of -1 specifies that the graph automatically adjust the columns as it sees fit. To change the value, click in the Value box, and type a value.

Documentation Reference: None

Comment

Description: Lets you supply a description for a report or form.

Location: Report, Form

Values: This is a user-specified text value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Created

Description: Lets you view the date and time at which the report or form was created.

Location: Report, Form

Values: This is a system-supplied timestamp.

Usage: You cannot edit this value.

Documentation Reference: None

Default to No Constraints Option

Description: Lets you specify that the Enable No Constraints option will always be selected instead of the first row of data when opening a report.

Location: Combo Box

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: See Adding a Combination Box on page 59 for details.

Deferred

Description: Lets you specify if the time period for the element will be selected by the user when the report is opened.

Location: Graph ⇨ Data ⇨ Query ⇨ Time Period

Values: True, False

Usage: Click the Value box next to the property, and the select a value from the list.

Documentation Reference: See Creating Reports with Deferred Selections on page 152.

Deferred Node

Description: Lets you specify if the nodes and interfaces for the element will be selected by the user when the report is opened.

Location: Graph ⇨ Data ⇨ Query

Values: True, False

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: See Creating Reports with Deferred Selections on page 152.

Depth

Description: Lets you increase a graph's depth, which makes the graph's x-axis wider.

Location: Graph ⇨ Chart Area

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: See Changing Rotation, Elevation and Depth on page 141 for details.

Description

Description: Lets you specify a description for the element.

Location: Combo Box, Table, Graph, Tab, Links ⇨ *link_name*

Values: This is a user-specified text value.

Usage: You can enter a description when you use the wizard that creates the element. A description is optional.

Documentation Reference: None

Destination

Description: Lets you view the destination statistic for a link's constraint.

Location: Links ⇨ *link_name* ⇨ *link_constraint*

Values: You cannot edit the value for this property.

Usage: You specify the statistic when you use the Link wizard.

Documentation Reference: See Step 5 on page 166 in the Linking Elements section for details.

Destination Data Index

Description: Indicates whether the link is to the main graph or the overlay.

Location: Links ⇨ *link_name*

Values: You cannot edit the value for this property.

Usage: You specify the value when you use the Link wizard.

Documentation Reference: See Linking Elements on page 161 for details.

Destination Element

Description: Lets you view the number of the element that is the destination object of a link.

Location: Links ⇨ *link_name*

Values: You cannot edit the value for this property.

Usage: You specify the destination element when you use the Link wizard.

Documentation Reference: See Chapter 5, Linking Report Elements for details.

Distinct

Description: Indicates whether the generated SQL query is a SELECT DISTINCT

Location: Graph *or* Table ⇨ Data ⇨ Query

Values: True, False

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: None

Enable No Constraints Option

Description: Lets you display a label (for example, "All Devices", which will appear as the first option in a combination box. This option will choose data from the destination element without applying any constraints.

Location: Combo Box

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: See Adding a Combination Box on page 59 for details.

Elevation

Description: Lets you increase a graph's elevation, which creates the effect of looking down on the graph.

Location: Graph ⇨ Chart Area

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and enter a value.

Documentation Reference: See Changing Rotation, Elevation and Depth on page 141 for details.

End Time

Description: Lets you specify the end of the time range for a query.

Location: Graph *or* Table ⇨ Data ⇨ Query ⇨ Time Period

Values: This is a user-specified numeric value.

Usage: Click the property's Value box to display the Edit Date Value dialog box, and then edit the value displayed or click the arrow button to display the *Calendar* dialog box.

Documentation Reference: See Task 11 on page 73.

File Name

Description: Lets you specify the file name of an image.

Location: Image

Values: This is a user-specified text value.

Usage: Click the property's Value box, and type a file name.

Documentation Reference: See Adding Images on page 54 for details.

Fill Color

Description: Lets you select the color that will fill the representation of the statistic in a graph or table.

Location: Graph or Table ⇨ Data ⇨ Query ⇨ Selected Statistics

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: See Changing Element Properties on page 123 for details.

Fill Pattern

Description: Lets you select the pattern that will fill the representation of the statistic in a graph or table.

Location: Graph or Table ⇨ Data ⇨ Query ⇨ Selected Statistics

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: See Changing Element Properties on page 123 for details.

Font Name

Description: Lets you select a font style.

Location: Tab, Table ⇨ Title Area ⇨ Title Line *x,* Graph ⇨ Legend Area, Table ⇨ Row Properties, Table ⇨ Column Properties

Values: There are numerous font types available.

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: None

Font Size

Description: Lets you select a font size.

Location: Tab, Table ⇨ Title Area ⇨ Title Line *x,* Graph ⇨ Legend Area, Table ⇨ Row Properties, Table ⇨ Column Properties

Values: This is a user-specified text value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Foreground

Description: Lets you select the foreground color of an element.

Location: Combo Box, Table, Tab, Graph, Graph ⇨ Legend Area, Table ⇨ Title Area ⇨ Title Line *x,* Graph ⇨ Chart Area, Table ⇨ Row Properties, Table ⇨ Column Properties

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: See Using the Components Window on page 124

Format

Description: Lets you specifies any variables that you want to use in a graph's legend text.

Location: Graph ⇨ Legend Area

Values: C, D, E, M, N, S, T

Usage: Click the property's Value box, and enter a variable, text, or a combination of both. For example, if you enter "Exception Counts for M", the legend text would appear as "Exception Counts for 99.3.229.80".

Documentation Reference: See Using Variables in Titles and Legends on page 140.

GoS Weight

Description: Lets you set the value for the statistic, which is needed to calculate its weighted average if the statistic belongs to a Grade of Service (GOS) graph.

Location: Graph ⇨ Data ⇨ Query ⇨ Selected Statistics

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and enter a value.

Documentation Reference: See Creating a GOS Graph on page 80 for details.

Graph By

Description: Lets you view whether the graph's data is graphed by time or by node.

Location: Graph ⇨ Properties

Values: You cannot edit the value.

Usage: You specify this value when using the Graph wizard.

Documentation Reference: None

Graph Style

Description: Lets you specify the style of a graph.

Location: Graph ⇨ Properties

Values: Plot, Scatter Plot, Hi-Lo, Hi-Lo-Open-Close, Candle, Area, Bar, Stacking Bar, Pie, Stacking Area

Usage: Click the property's Value box, and select a value from the list.

Documentation Reference: See Task 4 on page 66 in the Adding a Graph section for details.

Grids

Description: Lets you adds grid lines to a graph.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: This is a user-specified numeric value.

Usage: None

Documentation Reference: See Displaying Grid Lines on page 133.

Header Alignment

Description: Lets you position the heading name of a selected statistic in a table column.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics

Values: Top Left, Top Center, Top Right, Middle Left, Middle Center, Middle Right, Bottom Left, Bottom Center, Bottom Right

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Height

Description: The height of the image.

Location: Label, Image, Circle, Rectangle, Report, Combo Box, Table, Tab, Form, Graph

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and enter a value.

Documentation Reference: None

Hole Mark

Description: Lets you select a visual cue for missing data in a graph.

Location: Graph ⇨ Properties

Values: None, Bar, and Symbol

Usage: Click the property's Value box, and select a value.

Documentation Reference: See Displaying Missing Graph Data on page 146.

Hole Mark Color

Description: Lets you select the color of a Hole Mark.

Location: Graph ⇨ Properties

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: See Using the Components Window on page 124 and Displaying Missing Graph Data on page 146.

Hole Mark in Legend

Description: Lets you select whether the missing data is shown in the graph's legend.

Location: Graph ⇨ Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: See Displaying Missing Graph Data on page 146.

Hole Mark Legend Label

Description: Lets you select the text that represents the missing data in the legend when Hole Mark in Legend is set to true.

Location: Graph ⇨ Properties

Values: This is a user-specified text.

Usage: Click the property's Value box, and type a value.

Documentation Reference: See Displaying Missing Graph Data on page 146.

Hole Mark Shape

Description: Lets you select the shape of a symbol when symbol is selected as the Hole Mark.

Location: Graph ⇨ Properties

Values: None, Dot, Box, Triangle, Diamond, Star, Vertical Line, Horizontal Line, Cross, Circle, Square

Usage: Click the property's Value box, and select a value.

Documentation Reference: See Displaying Missing Graph Data on page 146.

Hole Mark Size

Description: Lets you select the size of a symbol when symbol is selected as the Hole Style.

Location: Graph ⇨ Properties

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and enter a value.

Documentation Reference: See Displaying Missing Graph Data on page 146.

Hole Style

Description: Lets you select how missing data is represented.

Location: Graph ⇨ Properties

Values: Not Plotted, Interpolation, Last Value, Zero

Usage: Click the property's Value box, and select a value.

Documentation Reference: See Displaying Missing Graph Data on page 146.

Italic

Description: Lets you apply italic text.

Location: Tab, Title Line *x,* Legend Area, Row Properties, Column Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Join Operator

Description: Indicates whether the child nodes of the current node are to be ANDed or ORed.

Location: Query, Constraint List

Values: AND, OR

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Label

Description: Lets you create a description for an element.

Location: Graph ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*, Graph ⇨ Data ⇨ Query ⇨ Statistic ⇨ *statistic_name*, Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis, Graph ⇨ Data ⇨ Query ⇨ Constraint List ⇨ *constraint_name*

Values: This is a user-specified text value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Label Background

Description: Lets you specify a background color for the x- or y-axis label.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: This is a user-specified value.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Label Font

Description: Lets you specify the font for the x- or y-axis label.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: This is a user-specified value.

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Label Font Bold

Description: Lets you specify whether the font for the x- or y-axis label is bold.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Label Font Size

Description: Lets you specify the font size (points) for the x- or y-axis label.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Label Font Italic

Description: Lets you specify whether the font for the x- or y-axis label is italic.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Label Foreground

Description: Lets you specify the foreground text color for the x- or y-axis label.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Label Placement

Description: Lets you specify whether the x- or y-axis label should be placed in relation to the graph.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: None, North, South, West, East, NorthEast, NorthWest, SouthEast, SouthWest

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Label Rotation

Description: Lets you specify how the x or y-axis label should be rotated.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: No Rotation, Rotate 90, Rotate 180, Rotate 270

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Last Modified

Description: Lets you view the date and time at which the report or form was last modified.

Location: Report, Form

Values: This is a system-supplied timestamp.

Usage: None

Documentation Reference: None

Left Hand Side

Description: Lets you specify the statistic that appears to the left of the operator in a constraint statement.

Location: Graph ⇨ Query ⇨ Constraint List ⇨ *constraint_name*

Values: You can select from a list of available constraints.

Usage: Click the property's Value box, and select a statistic from the list.

Documentation Reference: See Creating Constraints on page 185.

Legend Orientation

Description: Lets you specify the location of the legend in relation to the graph's location.

Location: Graph ⇨ Legend Area

Values: None, North, South, East, West, NorthEast, NorthWest, SouthEast, SouthWest

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Length

Description: Lets you change the length of time for the type of time period used.

Location: Graph or Table ⇨ Data ⇨ Query ⇨ Time Period

Values: This is a user-specified numeric value.

Usage: Click the Value box next to the property, and type a value.

Documentation Reference: See Selecting a Time Period on page 184.

Line Color

Description: Lets you specify the line color used to represent the statistic in a plot graph.

Location: Graph ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Line Pattern

Description: Lets you specify the line pattern used to represent a line in a plot graph.

Location: Graph ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*

Values: None, Solid, Long Dash, Short Dash, Long Short Dash, Dash Dot

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Line Width

Description: Lets you select the width of a line in a plot graph.

Location: Graph ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Link Type

Description: Lets you specify if the link is one of the predefined link types or a custom link.

Location: Links ⇨ *link_name*

Values: Key ID, Target Name, Custom

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Linked Row

Description: Lets you specify which row in the link source is used to select data on the target node.

Location: Links ⇨ *link_name*

Values: This is a system-supplied value.

Usage: None

Documentation Reference: None

Logarithmic

Description: Converts annotation values to logarithmic values.

Location: Graph ⇨ Properties ⇨ Y Axis

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Margin Height

Description: Lets you specify the empty space, in pixels, between the rows of a table.

Location: Table ⇨ Cell Properties

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Margin Width

Description: Lets you specify the empty space, in pixels, between the columns of a table.

Location: Table ⇨ Cell Properties

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Maximum Rows

Description: Lets you specify the maximum number of rows to be returned from the query.

Location: Table *or* Graph ⇨ Data ⇨ Query

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Maximum Value

Description: Sets the maximum value of the y-axis.

Location: Graph ⇨ Properties ⇨ Y Axis

Values: autoselect or numeric

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Minimum Value

Description: Sets the minimum value of the y-axis.

Location: Graph ⇨ Properties ⇨ Y Axis

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Mode

Description: Lets you specify whether the form will create or modify entries in the database.

Location: Form

Values: Create, Modify

Usage: Click the property's Value box, and then select a value from the list.

Documentation Reference: See Creating a Form on page 239 for details.

Multiline Column Labels

Description: Lets you specify if long column labels should wrap to multiple lines.

Location: Table⇨ Column Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Name

Description: Lets you change the name of an element.

Location: Report, Form, Combo Box, Table, Tab, Graph, Links ⇨ *link_name*

Values: This is a user-specified text value.

Usage: You can enter a name when you use the wizard that creates the element. A name is optional.

Documentation Reference: None

No Constraints Label

Description: Lets you specify a label (for example, "All Devices", which will appear as the first option in a combination box. This option will choose data from the destination element without applying any constraints.

Location: Combo Box

Values: True, False

Usage: Click the property's Value box, and type a label.

Documentation Reference: See Adding a Combination Box on page 59 for details.

Number of Fixed Columns

Description: Lets you specify the number of columns that are fixed.

Location: Table⇨ Column Properties

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Operator

Description: Lets you specify or view an operator for a constraint expression.

Location: Graph ⇨ Query ⇨ Constraint List ⇨ *constraint_name,* Links ⇨ *link_name* ⇨ *link_constraint*

Values: =, >=, >, <=, <, !=, NONE, LIKE, NOT LIKE

Usage: Click the property's Value box, and select a statistic from the list.

Documentation Reference: See Creating Constraints on page 185 and Step 5 on page 166 in the Linking Elements section for details.

Paragraph Alignment

Description: Lets you specify how the text of the paragraph should be aligned.

Location: Label

Values: Left, Center, Right, Justified

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Placement

Description: Lets you control the placement of the x- or y-axis.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: Bottom, Top (x-axis); Left, Right (y-axis)

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Point Color

Description: Lets you specify the symbol for a statistic in a scatter plot graph.

Location: Graph⇨ Data ⇨ Query ⇨ Selected Statistic ⇨ *statistic_name*

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Point Shape

Description: Lets you specify the shape of the symbol for a statistic in a scatter plot graph.

Location: Graph⇨ Data ⇨ Query ⇨ Selected Statistic ⇨ *statistic_name*

Values: None, Dot, Box, Triangle, Diamond, Star, Vertical Line, Horizontal Line

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Point Size

Description: Lets you specify the size of the point for a statistic in a scatter plot graph.

Location: Graph⇨ Data ⇨ Query ⇨ Selected Statistic ⇨ *statistic_name*

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Precision

Description: Lets you specify how many places will display after the decimal point.

Location: Graph ⇨ Properties ⇨ Y Axis

Values: This is a user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Property Table Name

Description: Lets you view the property table name of the table that was used to create the element.

Location: Graph ⇨ Query, Table ⇨ Query

Values: You cannot edit the value.

Usage: None

Documentation Reference: None

Right Hand Side

Description: Lets you specify the value that appears to the right of the operator in a constraint statement.

Location: Graph ⇨ Query ⇨ Constraint List ⇨ *constraint_name*

Values: This is a user-specified text or numeric value.

Usage: Click the property's Value box, and type a value.

Documentation Reference: See Creating Constraints on page 185.

Rotation

Description: Lets you increase a graph's rotation, which creates the effect as if you moved to the right of the graph.

Location:

Values: This is a user-specified numeric value.

Usage: Click the property's Value box, and enter a value.

Documentation Reference: See Changing Rotation, Elevation and Depth on page 141 for details.

Row Color 1

Description: Lets you specify the color for the first row of the table and every alternating row after it. For example, this affects the first row, the third row, the fifth row, and so on.

Location: Table ⇨ Row Properties

Values: There are numerous colors available from the Select a Color dialog box. If you do not set a color, the default color is the background color of the table.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Row Color 2

Description: Lets you specify the color for the second row of the table and every alternating row after it. For example, this affects the second row, the fourth row, the sixth row, and so on.

Location: Table ⇨ Row Properties

Values: There are numerous colors available from the Select a Color dialog box. If you do not set a color, the default color is the background color of the table.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Rows

Description: Lets you adjust the size of the rows in the legend area of a graph.

Location: Graph ⇨ Legend Area

Values: This is a user-specified numeric value. A value of -1 specifies that the graph automatically adjust the rows as it sees fit.

Usage: Click the property's Value box, and enter a value.

Documentation Reference: None

Scaling Factor

Description: Lets you scale large numbers.

Location: Graph ⇨ Properties ⇨ Y Axis

Values: None, Kilo, Mega, Tera

Usage: Click the property's Value box, and select a value. For example, to scale 1,000,000 to 1000K, select **Kilo**.

Documentation Reference: None

Selected Cell Background

Description: Lets you select the background color for cells on the selected row of a table.

Location: Table ⇨ Cell Properties

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Selected Cell Foreground

Description: Lets you select the foreground (text) color for cells in the selected row of a table.

Location: Table ⇨ Cell Properties

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Show Cell Bottom Border

Description: Lets you specify whether the bottom border of the table cell should display.

Location: Table ⇨ Cell Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Show Cell Left Border

Description: Lets you specify whether the left border of the table cell should display.

Location: Table ⇨ Cell Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Show Cell Right Border

Description: Lets you specify whether the right border of the table cell should display.

Location: Table ⇨ Cell Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Show Cell Top Border

Description: Lets you specify whether the top border of the table cell should display.

Location: Table ⇨ Cell Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Show Column Labels

Description: Lets you specify whether a table's column headings should display.

Location: Table ⇨ Column Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Show Row Labels

Description: Lets you specify whether a table's row numbers should display.

Location: Table ⇨ Row Properties

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Source

Description: Lets you view the source statistic for a link's constraint.

Location: Links ⇨ *link_name* ⇨ *link_constraint*

Values: You can select from the database's available list of statistics.

Usage: You specify the statistic when you use the Link wizard.

Documentation Reference: See Step 5 on page 166 in the Linking Elements section for details.

Source Element

Description: Lets you view the number of the element that is the source element for the link.

Location: Links ⇨ *link_name*

Values: You can select from the database's available list of statistics.

Usage: You specify the source element when you use the Link wizard.

Documentation Reference: See Step 5 on page 166 in the Linking Elements section for details.

SQL Expression

Description: Lets you specify an SQL expression for a custom constraint.

Location: Links ⇨ *link_name* ⇨ *link_constraint*

Values: This is a user-specified value.

Usage: To edit this value, click on the property's Value box, and edit the expression in the Custom Constraint SQL Expression dialog box.

Documentation Reference: See Creating a Custom Constraint on page 187 for details.

Start Time

Description: Lets you specify the start of the time range for a query.

Location: Graph *or* Table ⇨ Data ⇨ Query ⇨ Time Period

Values: This is a user-specified numeric value.

Usage: Click the property's Value box to display the Edit Date Value dialog box, and then edit the value displayed or click the arrow button to display the *Calendar* dialog box.

Documentation Reference: See Task 13 on page 75.

Tab Label

Description: Lets you specify whether the label will display on a tab.

Location: Tab ⇨ Graph *or* Table

Values: A user-specified string

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Table Name

Description: Lets you view the name of table used to create the element.

Location: Graph ⇨ Query, Table ⇨ Query

Values: You cannot edit this value.

Usage: None

Documentation Reference: None

Table Type

Description: Lets you view the type of the table used to create the element.

Location: Graph ⇨ Query, Table ⇨ Query

Values: You cannot edit the value.

Usage: None

Documentation Reference: None

Text

Description: Lets you specify the text for a label.

Location: Label

Values: A user-specified string

Usage: Click the property's Value box to display the Label Text dialog box, and type a value.

Documentation Reference: None

Text Alignment

Description: Lets you position the text below a selected statistic's heading in a table column.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*

Values: Top Left, Top Center, Top Right, Middle Left, Middle Center, Middle Right, Bottom Left, Bottom Center, Bottom Right

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Text Bold

Description: Lets you specify whether or not the statistic name in a table should be bold.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Text Color

Description: Lets you specify the foreground color for a statistic's name in a table.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *statistic_name*

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Text Date Format

Description: Lets you specify the format of a date for a selected statistic.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *Statistic Name*

Values: A Java DateFormat format string

Usage: Click the property's Value box to display the Edit the Date Format dialog box, and enter a value or select a value from the list.

Documentation Reference: See Changing the Date or Time Format of a Statistic on page 151 for the available date formats.

Text Font Name

Description: Lets you specify the font for a statistic's name in a table

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *Statistic Name*

Values: There are numerous font types available.

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Text Font Size

Description: Lets you specify the font size for a statistic's name in a table.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *Statistic Name*

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Text Italic

Description: Lets you specify italic text for a statistic's name in a table.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *Statistic Name*

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Text Precision

Description: Lets you specify the number of fractional digits to display.

Location: Table ⇨ Data ⇨ Query ⇨ Selected Statistics ⇨ *Statistic Name*

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Ticks

Description: Lets you specify the number of tick marks that you want to display on the x- or y-axis.

Location: Graph ⇨ Properties ⇨ X Axis, Graph ⇨ Properties ⇨ Y Axis

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Time Format

Description: Lets you specify a time format for the x-axis.

Location: Graph ⇨ Properties ⇨ X Axis

Values: A Java DateFormat format string

Usage: Click the property's Value box and type a time format.

Documentation Reference: See Changing the Date or Time Format of a Statistic on page 151 for the available time formats.

Time Period

Description: Lets you change the type of time period used.

Location: Graph ⇨ Data ⇨ Query ⇨ Time Period

Values: This Hour, Today, This Week, This Month, This Year, Hour(s), Day(s), Week(s), Month(s), Year(s)

Usage: Click the Value box next to the property, and select a value from the list.

Documentation Reference: See Selecting a Time Period on page 184.

Time Range Type

Description: Lets you view the type of time period (relative or absolute) applied to the element's data selection.

Location: Graph ⇨ Data ⇨ Query ⇨ Time Period

Values: True, False

Usage: You can only view the current value. To change the value, right-click on the element in the report, and select Set Time Period from the shortcut menu.

Documentation Reference: See Selecting a Time Period on page 184.

Title Background

Description: Lets you specify the background color for the title area in a graph or table.

Location: Table *or* Graph ⇨ Title Area

Values: There are numerous colors available from the Select a Color dialog box.

Usage: Click the property's Value box to display the Select a Color dialog box.

Documentation Reference: None

Title Text

Description: Lets you specify the text for one line of the title area.

Location: Table *or* Graph ⇨ Title Area ⇨ Title Line *x*

Values: A user-specified string

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Underline

Description: Lets you specify whether the text of the label should be underlined.

Location: Label

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Until Now

Description: Lets you specify if the time period will display data for selected time period up until the current time.

Location: Graph ⇨ Data ⇨ Query ⇨ Time Period

Values: True, False

Usage: Click the Value box next to the property, and select a value from the list.

Documentation Reference: See Selecting a Time Period on page 184.

Update Statement

Description: Lets you specify the SQL statement used to update a form.

Location: Form

Values: This is a user-specified text value.

Usage: Click the property's Value box to display the Edit Update Statement dialog box.

Documentation Reference: None

Use Autoscaling

Description: Scales an annotation.

Location: Graph ⇨ Properties ⇨ Y Axis

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Use Title

Description: Lets you specify whether the text of the title line will display.

Location: Table *or* Graph ⇨ Title Line *x*

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Use main time period in overlay

Description: Lets you specify if the overlay graph will use the main graph's time period.

Location: Graph ⇨ Overlay Properties

Values: True, False

Usage: None

Documentation Reference: See Changing Overlay Properties Using the Components Window on page 132.

Use new Y axis in overlay

Description: Lets you specify if the overlay graph will use a new y-axis.

Location: Graph ⇨ Overlay Properties

Values: True, False

Usage: None

Documentation Reference: See Changing Overlay Properties Using the Components Window on page 132.

Use source time period in overlay

Description: Lets you specify if the overlay graph (the destination object) will use the source object's time period.

Location: Graph ⇨ Overlay Properties

Values: True, False

Usage: None

Documentation Reference: See Changing Overlay Properties Using the Components Window on page 132. For more information about source and destination objects, see Chapter 5, Linking Report Elements.

Use Overlay

Description: Lets you specify if the graph has a second graph overlaid on top of it.

Location: Graph

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Use Source Time Period

Description: Lets you specify if the graph or table takes its effective time period from the source of the link to graph or the table.

Location: Table, Graph, Link *n*

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Visible

Description: Lets you display or hide the legend area of a graph. See also Anchor.

Location: Selected Statistics, Chart Area, Legend Area

Values: True, False

Usage: Click the property's Value box, and select a value.

Documentation Reference: None

Width

Description: Lets you specify the width of the element.

Location: Label, Image, Circle, Rectangle, Report, Combo Box, Table, Tab, Form, Graph

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

X

Description: Together with Y, this lets you specify the location of the upper left corner of any element.

Location: Label, Image, Circle, Rectangle, Combo Box, Table, Graph, Tab

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

X1

Description: Together with Y1, this lets you specify the starting point of a line.

Location: Line

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

X2

Description: Together with Y2, this lets you specify the ending point of a line.

Location: Line

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Y

Description: Together with X, this lets you specify the location of the upper left corner of any element.

Location: Label, Image, Circle, Rectangle, Combo Box, Table, Tab

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Y1

Description: Together with X1, this lets you specify the starting point of a line.

Location: Line

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

Y2

Description: Together with X2, this lets you specify the ending point of a line.

Location: Line

Values: A user-specified numeric value

Usage: Click the property's Value box, and type a value.

Documentation Reference: None

B

Using TrueType Fonts in PDF Files

When using Report Builder, Report Viewer, or the Web Access Server, you are able to export reports and generate reports to PDF files. If you want to use TrueType fonts in these PDF files, you must configure OVPI to do so before you can generate the PDF file. For example, you want to use TrueType fonts when using languages, like Chinese and Japanese, that use non-ASCII characters.

To use configure OVPI to use TrueType fonts in a PDF file:

1   Edit the `fonts.cfg` file, which is located in the `data` folder of the directory into which you installed OVPI.

2   Change the value of the following line to match the TrueType font directory on your system.

    `truetype.font.dirs=c:\\windows\\fonts`

    On Windows, this is typically `c:\windows\fonts`.

    ▶   The value of this entry on Windows system will require two backslashes before the directory name to ensure that the first backslash is read as the backslash character.

3   Save the `fonts.cfg` file.

4   Edit the fonts.prp file, which is located in the data folder of directory into which you installed OVPI. This file contains the mappings between the Java font names and the TrueType font names.

5   Create an entry in the file for each TrueType font that you have installed and want to use in your PDF files.

Create the entry using the following format:

Java_font_name=TrueType_font_name

For example, to use the SimHei and SimHei-Bold fonts, you would add the following entries:

```
SimHei=SimHei
SimHei-Bold=SimHei
```

➤   In many cases, the Java and TrueType font names will be the same.

6   Save the fonts.prp file.

7   To use the font in reports, you must explicitly assign the font to the report elements.

This applies to title fonts, statistic fonts, and so on. By default, the elements you create in your reports will use the serif and sansserif fonts.

For example, to use SimHei as the font for the first title line of a table, expand the table's folder in Builder's components tree, expand the Title Area folder, and then select Title Line 1. Click the Font Name value box, and select SimHei from the list of font names.

8   Deploy the modified report to the Web Access Server using the Deployment Wizard. See for more information about this wizard.

➤   If the client and Web Access Server are on separate systems, you must do the following:

1   Make sure that the font is installed on both systems.

2   Change the fonts.cfg and the fonts.prp files on both systems.

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