CHAPTER 7

Working With Reports and Dashboards

The following topics describe how to use Prime Performance Manager reports and dashboards. Topics include:

Using Reports

The Reports navigation tree item in the Prime Performance Manager web interface allows you view all reports that are globally available. Selecting a report in the navigation tree displays the report information in the content area.

You can configure Prime Performance Manager to gather critical information at scheduled intervals from network objects. Prime Performance Manager uses the information to calculate statistics, such as Ethernet, peer flap, performance, device availability, and other statistics. Prime Performance Manager generates reports based on these statistics.

Prime Performance Manager supports predefined system reports. These reports are listed in the Report XML Definitions page (Home > Reports Documentation) page. The XML and the property files describe the MIB tables and the fields that are polled for data from the device. It also describes the fields that are mapped to the report columns.

To generate new reports for the devices, refer to the predefined system reports as examples, and add new report XML files to the etc/pollers/user directory in the Prime Performance Manager gateway installation directory, by default it is /opt/CSCOppm-gw.

The new user-defined report XML files must have a unique filename from the predefined system report files. For additional details on how to define new reports, see the *Cisco Prime Network 1.1 Integration Developer Guide*.

To view all reports:

Step 1 Log into the Prime Performance Manager GUI application.

Step 2 In the navigation area, select **Reports**.

Step 3 Expand the Reports navigation tree to the report you want to view, then click the report. For example, if you want to view current TCP reports, select **Reports > Application Traffic > TCP**.

All TCP reports appear. See Viewing Reports, page 7-4 for more information.

To view the report for a single device of a specified report type:

Step 1 Select a device using the Device Summary List. (See Using the Devices Summary List, page 8-1.)

Step 2 Click the type of report you want to view.

Reports for the active devices appear in the right content pane.

Step 3 Select a device.

The reports for that specific device are displayed. See Viewing Device Level Reports, page 7-3 for more information

Viewing Report Status

The Reports Status table in the Prime Performance Manager web interface content pane allows you to globally enable and disable reports that are displayed in the left navigation tree.

Note Only reports that run on a regularly scheduled interval are displayed in the Hourly and Daily data. Reports that run continuously are not displayed.

To access the main Reports page:

Step 1 In a web browser, launch the Prime Performance Manager web interface (see Accessing the Prime Performance Manager Web Interface, page 3-1).

Step 2 In the navigation tree, click **Reports**.

The Reports Status table in the content area displays the report type and the status (enabled or disabled).

Step 3 Select the report that you wish to disable and click **Save**.

The reports in the left navigation tree refreshes to display the status of the report disabled.

To enable a report in Prime Performance Manager web interface, check the check box in the Status column.

Related Topics

Viewing Network Level Reports, page 7-3

Viewing Device Level Reports, page 7-3

Viewing Network Level Reports

The Network Level Reports display a summary of the top level graph view summary that is available for a particular report, in the left navigation pane. At Network Level, Table/CSV/Graph views are available to all devices in the network. To view a Network Level Report, select **Reports > Availability > Interfaces**.

The right content pane displays the network level graph view summary of devices available.

To view the different types of reports in the right content pane, click the **Reports** drop-down arrow and select the reports you want to view.

Related Topic

Viewing Graph Series Editor Details, page 7-8

Viewing Device Level Reports

The Device Level Reports display details on reports that are available for a particular device. If you select a device from the top level graph view summary in the right content pane (see Viewing Network Level Reports, page 7-3 for details) it displays the reports detail for that device with the device name in the left navigation pane.

See Working With Reports and Dashboards, page 7-1 for more information.

After you select a device, the Report Status tab appears. This tab displays the devices that are specific to that device. See Viewing Report Status, page 7-2 for more information

Related Topics

- Viewing Device, Gateway, or Unit Details, page 7-6
- Displaying Active Alarms and Event History, page 9-1
- Active Alarms and Event History Toolbar, page 9-4

Enabling Reports Using the CLI

Using CLI commands, you can generate reports that can be run at specified intervals. You can enable and disable automatic generation of these reports, using the ppm statreps commands (see ppm statreps, page B-55).

After you enable generation of a report, it will run at the specified intervals until you disable it with the appropriate CLI command.

Enabling reports using the CLI, is the same as enabling and disabling reports from the Reports page. To enable or disable report aging settings, select **Report** in the left navigation pane and enter the aging value in the Aging Settings.

The database report aging occurs once every day before the backup starts. It is triggered by the cron job ppmCron.sh backup

To enable reports using the CLI:

Step 1 Log in as the root user.

Step 2 Enter:

```
cd /opt/CSCOppm-gw/bin
```

Step 3 Enter the following CLI command to enable all report types:

```
./ppm statreps all
```

To see a list of all report-related CLI commands, enter the following command:

```
./ppm rephelp
```

Viewing Reports

After you generate reports, you can view them using the Prime Performance Manager web interface. You can view historical reports for all objects of a specific type. For example, all link reports for all links.

You can also view reports for a specific object. For example, all link reports for a specific link.

For the reports whose output type is Graph, the Graph Series Editor window is displayed when you click the Custom series icon. See Viewing Graph Series Editor Details, page 7-8 for details.

For these reports, you can use the Sort Parameter option to select the criteria to include a top set of series. You can also use this option to sort the graphs that are displayed.

You can access reports in the Prime Performance Manager web interface through these categories. Prime Performance Manager provides over 900 reports divided into the following categories:

- Application Traffic
- Availability
- IP Protocols
- IP QoS
- IP SLA
- Mobile Statistics
- Resources
- Transport Statistics

The best way to view the individual reports is to drill down the Reports navigation tree. Another way to view the reports provided with Prime Performance Manager is viewing the Report Status tab. See Viewing Report Status, page 7-2.

Note Prime Performance Manager reports are based on the MIBs supported on the devices. For a list of MIBs supported in Prime Performance Manager, in the navigation area, click **Home**, then under Reports Documentation click **SNMP MIBs**.

Yo can view a web report either for all objects of a specified type or for a single object of a specified type.

To view a web report for all objects of a specified type:

Step 1 Select **Reports** in the Prime Performance Manager web navigation tree and click the type of report you want to view

For example, if you want to view hourly TCP Segments report, select **Reports > Application Traffic > TCP> TCP Segments > 15 Minutes/Hourly/Daily**.

All link reports appear.

Step 2 Click the **Reports** drop-down arrow and navigate to the type of report you need. (You need to select the various drop-down menus)

Step 3 Select **Duration** from the drop-down lists. For example, if you wanted to view hourly link reports for the last 12 hours, choose **Last 12 Hours** from the **Duration** drop-down.

For most Statistics and Accounting reports, to customize the date, time range, or both, click the **Customize the date and time range** icon. Note that these dates are the dates with server time zone.

Step 4 Click the **Output Mode** drop-down to view the corresponding report in Graph/Table/CSV mode.

CSV reports for all devices are generated in /opt/CSCOppm-gw/reports and prefixed with the report type for additional context.

For example, B20110308.0945-0500-20110308.1000-0500_ppm-xxx-vm38.csv report is prefixed with CPU.B20110308.0945-0500-20110308.1000-0500_ppm-xxx-vm38.csv.

Step 5 Click the green arrow to run the report

To view a web report for a single object of a specified type:

Step 1 Click a device in the web navigation tree to select an object in a device.

Step 2 In the content area in the right pane, click the **Reports** tab.

Reports appear for the active object only.

Step 3 Click the **Reports** drop-down arrow and navigate to the type of report you need. (You need to select the various drop-down menus)

Step 4 Select **Duration** from the drop-down lists. For example, if you wanted to view hourly link reports for the last 12 hours, choose **Last 12 Hours** from the **Duration** drop-down.

For most Statistics and Accounting reports, to customize the date, time range, or both click the Customize the date and time range icon. Note that these dates are the dates with server time zone.

Step 5 Click the **Output Mode** drop-down to view the corresponding report in Graph/Table/CSV mode.

CSV reports for all devices are generated in /opt/CSCOppm-gw/reports and prefixed with the report type for additional context.

For example, B20110308.0945-0500-20110308.1000-0500_ppm-xxx-yy38.csv report is prefixed with CPU.B20110308.0945-0500-20110308.1000-0500_ppm-xxx-yy38.csv. All the CSV reports are available only after they are compressed in .zip format.

Step 6 Click the green arrow to run the report

Tip For details on web toolbars and icons, see Using the Toolbar, page 3-6.

Related Topics

Viewing Device Level Reports, page 7-3

Viewing Graph Series Editor Details, page 7-8

Enabling and Disabling Reports, page 7-8

Enabling Reports Using the CLI, page 7-3

Viewing Device, Gateway, or Unit Details

The Details tab displays information such as naming and status details for the chosen device, gateway, or unit.

To view the details of a selected device, gateway, or unit:

Step 1 From the Reports menu, choose a report.

Step 2 Select an object from the reports and then click a device from the top level graph view summary in the right content pane.

Step 3 The Reports, Details, Events, Alarms and Report Status tab displays. See Table 7-1 for more details.

Table 7-1 Gateway and Unit Details

Section	Field	Description
Naming Information	Display Name	The device display name.
	Custom Name	The custom device name, if one is defined. If not, this field displays, Unknown.
	Sync Name	The device synchronization name.
	IP Address or Host Name	The device IP address or DNS name, as discovered by Prime Performance Manager.
	SysName	The name set on the router and returned, using the SNMP variable sysName.
	Device Type	Type of the device.
	Location	The device physical location. If the device location details are not available, this field displays Unknown.
	Unit	The name of the unit to which the device belongs.

Table 7-1 Gateway and Unit Details (continued)

Section	Field	Description
Status Information	Is Ignored	Indicates whether the device is Ignored (that is, whether to include the device when aggregating and displaying Prime Performance Manager status information).
	Alarm Severity	Indicates the alarm severity of the object.
	Status	The device's current status: • Active • Discovering • Polling • Unknown • Unmanaged • Waiting • Warning
	Last Status Change	Date and time when the device status was last changed.
	Status Reason	Status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude appears.
Polling Information	Report Polling	Indicates whether report polling is enabled for this device.
	First Discovered	The date and time when Prime Performance Manager first discovered the device.
	Last Poll IP Address	The last IP address that was polled for this device.
	Last Full Poll Time	The date and time of the last full poll of the device for device-related MIBs
	Last Poll Response (secs)	The time, in seconds, taken by this device to respond to the last poll request.
	Avg. Poll Response (secs)	The average time, in seconds, taken by this device to respond to Prime Performance Manager poll requests.
Descriptive Information	Contact	The contact person for the managed device and contact information, if available. If the contact details are not available, this field displays Unknown.
	Software Version	The software version (for example, the ONS package or IOS version) that is installed on the device.
	Software Description	Comprehensive information about the software that is installed on the device.
Uptime Information	Uptime	The time the device has been up, in days, hours, minutes, and seconds.
	Reboot Time	The date and time of the last device reboot.
	Reboot Reason	The reason for the last reboot of the device.

Table 7-1 Gateway and Unit Details (continued)

Section	Field	Description
IP Address	IP Address	IP addresses associated with this device, including the primary SNMP address and all backup IP addresses, that are intended for SNMP.
	Last Regular Poll Time	The date and time of the last full poll of the device. If the IP address has never been polled, Prime Performance Manager displays, Never Polled.
	SNMP Pollable	Indicates whether the IP address is used for SNMP polling.

To view the details of a gateway or unit:

Step 1 In the navigation tree Summary List, choose **Gateway/Units**.

Step 2 Choose a gateway or unit from the Gateway/Units table in the content pane.

The Details, Events and Alarms tab provides detailed information about the gateway or unit. See Table 7-1 for information.

Enabling and Disabling Reports

To enable/disable specific reports, select the **Setting** tab (see Viewing Historical Statistics Report Settings, page 7-9) in the Reports page. All reports (5 Minute, 15 Minute, Hourly Report, Daily Report) can be enabled or disabled. By default, all the reports are run every 15 minutes, hourly and daily.

You can see the device appearing at the bottom on the left navigation tree, after a specific device is selected from the right pane.

Note Administrator (Level 5) and operator (Level 3) users can enable 5-minute reports. However, the SNMP polling interval for the devices that require a 5-minute report, can only be set by administrator users.

The XML report definition are located on the gateway in the /opt/CSCOppm-gw/etc/pollers/system or /opt/CSCOppm-gw/etc/pollers/user directories. Administrator (Level 5) access is required to edit the report definitions.

Enabling a 5-minute report increases disk space utilization required for the units and decreases the performance of the units because of the increase in disk activity.

Viewing Graph Series Editor Details

The Graph Series Editor window allows you to show or hide a selected data series.This window appears if you select the report output as Graph. Most network-level reports contain the top 10 series of data.

See Table 7-2 for more details.

Table 7-2 Graph Series Editor

Column or Buttons	Descriptions
Selected Series	Displays the domain name IDs for the data that is used to create the report.
Available Series	Displays the list of available objects for this report. If there are many objects in the report, the objects in the Available Series column span multiple pages and all objects are not shown on one page. See Using the Toolbar, page 3-6 for more information on using the paging features. To view all selected objects, sort the table by the Display column.
Display Depending on the report type you select, other columns displayed will differ.	Column of check boxes that allow you to display (by checking) or hide (by unchecking) the data series associated with the chosen backhaul. The Prime Performance Manager displays only 10 series, by default.
Clear Selection	Deselects the selected list of series and the **OK** button is grayed out. This is a simple way to deselect all the display check boxes.
OK	Applies the selections you made. If you deselect all items in the dialog box, the **OK** and **Clear Selection** buttons are grayed out.
Cancel	Cancels your selections and closes the Graph Series Editor window.

Viewing Historical Statistics Report Settings

To view the Prime Performance Manager historical statistics:

Step 1 In Prime Performance Manager web interface, in the navigation tree, click **Reports**.

The Report Status window appears as described in Viewing Reports, page 7-4.

Step 2 Click **Report Settings**.

The Historical Stats Report Settings information (Table 7-3) is displayed.

- Click **Disabled** or **Enabled** to change the state of any of the reports.

  Enabling/Disabling reports flag allows you to view the reports (5 minute, 15 minute hourly and daily) at different intervals at the device level.
- Click any field, except the Reports Directory field, to modify its value.

Table 7-3 Historical Statistics Report Settings

Area	Field	Description
General Settings	Reports Directory	Specifies the directory in which Prime Performance Manager reports are stored. You must use the CLI to change the directory in which the reports are stored; you cannot click on this field to modify it.
	Time Mode	Specifies the time mode, either 12-hour or 24-hour, for the reports.
	Master Report Flag	If this option is enabled, the individual report settings are used. If this is option is disabled, all reports are turned off.
	5 Min Report Flag	If this option is enabled/flagged, a 5-minute report is generated.To enable a 5-minute report, you should edit the corresponding XML definition of the report. See Enabling and Disabling Reports, page 7-8 for mode details.
	15 Min Report Flag	If this option is enabled/flagged, a 15-minute report is generated.
	Hourly Report Flag	If this option is enabled/flagged, a hourly report is generated.
	Daily Report Flag	If this option is enabled/flagged, a daily report is generated.
	Weekly Report Flag	If this option is enabled/flagged, a weekly report is generated.
	Monthly Report Flag	If this option is enabled/flagged, a monthly report is generated.
	Export CSV Reports	Specifies whether to automatically generate reports in CSV format.
	Perform Disk Space Checking	Specifies whether disk space checking is enabled or disabled. Usage of disk space increases after each report is enabled. The increase in disk space is specific to each report, number of devices and device configuration. Monitor the usage of disk space and disable the reports for specific devices or decrease the aging value to delete old reports frequently.

Table 7-3 Historical Statistics Report Settings (continued)

Area	Field	Description
Aging Settings	5 Min Stats Aging (Days)	Specifies the database aging value for 5-minute statistics. When records exceed the specified value, they are aged out of the database.
	15 Min Stats Aging (Days)	Specifies the database aging value for 15-minute statistics. When records exceed the specified value, they are aged out of the database.
	Hourly Stats Aging (Days)	Specifies the database aging value for hourly statistics. When records exceed the specified value, they are aged out of the database.
	Daily Stats Aging (Days)	Specifies the database aging value for daily statistics. When records exceed the specified value, they are aged out of the database.
	Weekly Stats Aging (Days)	Specifies the database aging value for week statistics. When records exceed the specified value, they are aged out of the database.
	Monthly Stats Aging (Days)	Specifies the database aging value for monthly statistics. When records exceed the specified value, they are aged out of the database.
	5 Min CSV Aging (Days)	Specifies the database aging value for 5-minute CSV statistics. When records exceed the specified value, they are aged out of the database.
	15 Min CSV Aging (Days)	Specifies the database aging value for 15-minute CSV statistics. When records exceed the specified value, they are aged out of the database.
	Hourly CSV Aging (Days)	Specifies the database aging value for hourly CSV statistics. When records exceed the specified value, they are aged out of the database.
	Daily CSV Aging (Days)	Specifies the database aging value for daily CSV statistics. When records exceed the specified value, they are aged out of the database.
	Weekly CSV Aging (Days)	Specifies the database aging value for weekly CSV statistics. When records exceed the specified value, they are aged out of the database.
	Monthly CSV Aging (Days)	Specifies the database aging value for monthly CSV statistics. When records exceed the specified value, they are aged out of the database.

Managing Report Policies

You can create report policies to customize report attributes for certain device types or individual devices. For example, you might decide if you want to enable or disable reports based on the device type, or set custom report intervals to a device type or specific devices. Devices discovered during device discovery are assigned the standard report policies. However, you can:

- Change the report policy based on the device type. For example, to change the reports generated for all Cisco 7606 routers, you would modify the Cisco7606s report policy.
- Create a new report policy and assign devices to it. For example, if you want to assign the same report policy to a group of devices with different device types, you create the report policy and assign each device to it.

Related Topics

- Editing Report Policy Parameters, page 7-12
- Creating a New Report Policy, page 7-12
- Assigning Devices to Report Policies, page 7-13

Editing Report Policy Parameters

To edit the parameters of an existing report policy:

Step 1 Log into the Prime Performance Manager GUI as the administrative (Level 5) user.

Step 2 In the navigation area, click **Reports**.

Step 3 In the Report Policy Editor window, click the **Report Policies** tab.

Step 4 Scroll to the device type group you want to modify and click the **Edit Policy** tool in the Edit Policies column.

The Edit Report Policy: *devicegroup* window appears. This is the same window that is displayed when you click the Report Status tab. However, changes that you make here only apply to the device group that you selected, whereas changes made in the Report Status tab apply to all devices.

Step 5 Modify any of the following:

- Check the reports that you want enabled for this device type.
- Check the report intervals that you want applied to this device group:
  - 5 Minute
  - 15 Minute
  - Hourly
  - Daily
  - Weekly
  - Monthly
  - CSV Only

Note You cannot edit the report policy name of policies created by Prime Performance Manager. These are based on the device types discovered during device discovery.

Step 6 On the Report Policy toolbar, click the **Save Report Policy** tool.

Creating a New Report Policy

To create a new polling group:

Step 1 Log into the Prime Performance Manager GUI as the administrative (Level 5) user.

Step 2 In the navigation area, click **Reports**.

Step 3 In the Reports window, click the **Report Policies** tab.

Step 4 On the Report Policy Editor toolbar, click the **Add Report Policy** tool.

Step 5 In the Save Report Policy dialog box, enter the report policy name.

Step 6 Click **OK**.

Step 7 On the Report Policy Editor toolbar, click the **Save Polling Group** tool.

Step 8 Complete the "Editing Report Policy Parameters" procedure on page 7-12 to edit the reports and report intervals that you want for the new report policy.

Assigning Devices to Report Policies

By default, Prime Performance Manager creates device type report policies and assigns devices to them based on their device type. You can create custom report policies and reassign the devices to them.

To assign a device to a custom report policy:

Step 1 Log into the Prime Performance Manager GUI as the administrative (Level 5) user.

Step 2 In the navigation area, expand the **Summary Lists** and click **Devices**.

Step 3 In the device table, select the row of the device whose report policy you want to change. To select more than one device, press **Shift** and highlight the device table row.

Step 4 From the Devices window toolbar Actions menu, choose **Edit Report Policy**.

Step 5 In the Edit Report Policy dialog box, choose the report policy that you want to assign. The following options appear:

- The device type report policy. This option is not displayed if you choose multiple devices with different device types.
- This Device Only—If selected, allows you to edit the report policy parameters and assign it to the selected devices.
- Default—Assigns the device(s) to the default report policy.
- Custom groups—If you created report policies, they are displayed.

Step 6 Click **OK**.

Working with Dashboards

Prime Performance Manager dashboards present data from different sources on a single page. For example, the ICMP (Internet Control Message Protocol) application dashboard presents the top ten ICMP hourly packet rates, total errors, total echoes, and echo replies. The CPU/Memory dashboard presents the top ten hourly CPU average and peak utilization as well as the top ten hourly memory pool average and peak utilization. Many dashboards are provided with the Prime Performance Manager package. High-level dashboard categories include:

- Application
- Availablity
- Health
- IP Protocol
- IP QoS
- IPSLA
- Resource

- Response Time
- Transport
- VPDN Statistics
- Video Monitoring Statistics

Note Prime Performance Manager 1.1 includes only some of the dashboard categories listed above.

You can modify the provided Prime Performance Manager dashboards or create new ones. For information, see the *Cisco Prime Performance Manager Integration Developer Guide*.

Editing Dashboard Status

To change the Prime Performance Manager dashboard status, that is, to change the data displayed in the dashboards:

Step 1 Log into the Prime Performance Manager GUI.

Step 2 In the navigation area, click **Dashboards**.

Step 3 In the Dashboard Status Table, check the dashboard item that you do want enabled; uncheck items that you do not want enabled. (By default, all dashboard items are enabled.)

Step 4 On the Dashboard Status Table toolbar, click **Save All Dashboard Entries**.

Items that you enabled are displayed in the navigation tree; items that you disabled are removed.

Editing Dashboard Display

You can change the information displayed in a dashboard at the dashboard level or at the individual data display level.

To change a dashboard display:

Step 1 Log into the Prime Performance Manager GUI.

Step 2 In the navigation area, click **Dashboards**.

Step 3 In the Dashboard tree, click the dashboard item that you want to modify. You can either choose the dashboard, to modify the entire dashboard, or you can choose a dashboard item.

Step 4 From the dashboard toolbar, choose any of the following items to modify the dashboard display:

- Interval—Modifies the dashboard interval:
  - Hourly
  - Daily
  - Weekly
  - Monthly
- Duration—You change the dashboard duration:

  - 12 hours
  - 24 hours
  - 3 days
  - 7 days
- Duration—You change the dashboard duration:
  - 12 hours
  - 24 hours
  - 3 days
  - 7 days

Step 5 To change the date and time range, click the **Change Date and Time Range** tool. (See Customizing Date and Time Ranges, page 3-6.)

Step 6 To change the information display, click **View Chart** or **View Table**, respectively. You can change the display for the entire dashboard, or for individual dashboard elements by clicking the tools within each element.

Step 7 When finished, click the **Run Selected Report for Selected Report Duration** tool.