NNM Event Report Pack

Software Version: 1.1

NNM 7.5x and HP Performance Insight 5.2

User Guide



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The following table indicates changes made to this document since the last released edition.

Chapter	Changes
Chapter 1	Version number changes, added information about what's new in this version
Chapter 2	Added new upgrade chapter
Chapter 3	Version number changes
Chapter 4	New procedures to configure distributed system using LIR (location independent reporting) and copy policies

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Contents

	Overview	'
	NNM Events and NNM Availability	7
	Folders and Reports	7
	Ways to Customize Reports	§
	Sources for Additional Information	. 10
2	The Upgrade Install	. 13
	Guidelines for a Smooth Upgrade	. 11
	Upgrading to Version 1.1	. 12
	Package Removal	. 14
3	The New Install	. 15
	Prerequisites	. 15
	Installing NNM Event and Availability	. 15
	Accessing Deployed Reports	. 17
	Package Removal	. 17
4	Setting Up a Distributed System	. 19
	Configuring the Central Server	15 14 15 15 15 15 15 15 15 22 22 23 23 31
	Configuring a Satellite Server	. 22
	System Clocks	. 22
5	Collecting Data from NNM 7.5x	. 23
	Adding and Modifying Properties	. 25
	Changing the HTTP Port Number of OVI on NNM	. 31
	Synchronizing Node or Category Information	. 31
	Changing the NNM Events Data Tool	. 31
	Checking Collection Failures	. 32
6	Sample Reports	. 38
Δ	Version History	45

В	Editing Tables and Graphs	19
	View Options for Tables	
	View Options for Graphs.	60
Inde	x	57

1 Overview

This chapter covers the following topics:

- NNM Events and NNM Availability
- Folders and Reports
- Ways to Customize Reports
- Sources for Additional Information

NNM Events and NNM Availability

HP Performance Insight is a performance management and reporting application. Long-term data collection, in-depth analysis, and automated web-based reporting are this application's primary strengths. You install the NNM Event and Availability Report Pack on OVPI. Once the report pack is installed and you are collected data from your NNM management stations, the report pack begins processing event and downtime data. The report pack does this by issueing directives to Performance Insight. Performance Insight responds to these directives by summarizing and aggregating event and downtime data.

NNM 7.5x defines an event using the following attributes:

- Category
- Severity
- Device
- Device Type
- Vendor
- Customer

This report pack lets you see event and downtime data aggregated in helpful ways. You can see whether availability for a particular device is improving or worsening. You can see whether availability for a particular customer is improving or worsening. You can look at the distribution of alarms across alarm categories. You can see the trend line for each alarm category. You can also look at the distribution of severity levels, see the trend line for each severity level, and find out which devices are responsible for the majority of alarms in each alarm category.

Folders and Reports

When you install NNM Event and Availability, OVPI creates the NNM_Report directory. This directory has two child directories:

- Availability
- Event

The **Availability** directory contains four reports:

- Detailed Availability
- Availability Forecast by Customer
- Availability Forecast by Vendor
- Availability SLA

The **Event** directory contains multiple subdirectories:

- General
- Category
- Severity
- Consolidated

General

The General directory contains seven reports:

- Event Summary by Customer
- Event Summary by Device Type
- Event Summary by NNM Station
- Event Summary by Vendor
- Event Summary by Customer
- Executive Summary by Vendor
- Forecast by Category

Category

The Category directory contains four reports:

- NNM Event Summary by Category and Device
- NNM Event Summary by Category and Device Type
- NNM Event Summary by Category and Severity
- NNM Event Summary by Category and Vendor

Severity

The Severity directory contains four reports:

- NNM Events by Severity and Category
- NNM Event Summary by Severity and Device
- NNM Event Summary by Severity and Device Type
- NNM Event Summary by Severity and Vendor

Consolidated

The Consolidated directory contains five reports:

- NNM Events by Category
- NNM Events by Severity
- Executive Summary by Category
- Executive Summary by Severity
- Hot Spot Report

Ways to Customize Reports

You can customize reports by importing customer names, by applying group filters, by editing parameters (applying constraints), and by editing tables and graphs. While group filters appeal to service providers, or any organization that wants to share reports with customers, editing a table, graph, or parameter is something any user can do.

Group Filters

If you want to share reports with your customers, you have to configure OVPI to produce customer-specific reports. Here is an overview of the steps involved:

- Use Common Property Tables to import customer names and device locations
- Create a group account for all the users affiliated with each customer
- Create a group filter for each group account

For more information about group filters, refer to the OVPI Administration Guide.

Editing Parameters

Editing a parameter applies a constraint to the reports. The constraint eliminates data you are not interested in seeing. The NNM Event and Availability Report Pack supports the following parameters:

- Category
- Category ID
- Customer
- Customer ID
- Device
- Device Type
- NNM Station
- Severity
- Severity ID
- Vendor

Overview 9

If you are using Report Viewer, follow these steps to edit a parameter:

- 1 Select Edit → Parameter Values from the menu bar.
- 2 When the Modify Parameter Values window appears, click the Current Value field.
- 3 Enter a new value.
- 4 Click OK.

If you are using the Web Access Server, follow these steps:

- 1 Click the Edit icon at the bottom right-hand corner of the report.
- 2 When the Edit Parameters window opens, type the constraint in the appropriate field.
- 3 Click Submit.

Sources for Additional Information

The demo package for the NNM Event and Availability Report Pack contains a sample of every report in the package. If you have access to the demo package and you want to see what fully populated reports look like, install the demo package. For information regarding the latest enhancements to this package, and any known issues affecting this package, refer to the *NNM Event and Availability Report Pack Release Notes*. You may also be interested in the following documents:

- Common Property Tables User Guide
- Reporting and Data Analysis with Network Node Manager
- Managing Your Network with HP OpenView Network Node Manager
- OVPI Report Packs, CD-ROM Release Notes, April 2007

You can download the documents listed above from this site:

http://ovweb.external.hp.com/lpe/doc_serv/

The user guides for OVPI are listed under **Performance Insight**. The user guides for report packs and datapipes are listed under **Performance Insight Report Packs**. Each entry for a manual indicates a date. If a manual is revised and reposted, the date will change. Since we post revised manuals on a regular basis, you should compare the date on your PDF against the date on the web edition and use the web edition if it is newer.

2 The Upgrade Install

This chapter covers the following topics:

- Guidelines for a Smooth Upgrade
- Upgrading to Version 1.1
- Package Removal

If you are installing the NNM Event and Availability Report Pack for the first time, this chapter does not apply to you. See Chapter 3, The New Install.

Guidelines for a Smooth Upgrade

When you insert the report pack CD in the CD-ROM drive and launch the package extraction program, the install script extracts every package from the CD and copies the results to the Packages directory on your system. When the extract finishes, the install script prompts you to launch Performance Insight and start Package Manager. Before running Package Manager, review the following guidelines:

- Prerequisites for the NNM Event and Availability Report Pack
- Upgrading Common Property Tables
- Upgrading NNM Event and Availability in a Distributed Environment

Prerequisites for the NNM Event and Availability Report Pack

Make sure the following software is installed before upgrading:

- OVPI 5.2
- All service packs available for OVPI
- Common Property Tables 3.6

Upgrading Common Property Tables

If you are running an older version of Common Property Tables, you must upgrade that package to version 3.6 or higher. If you are not running any version of Common Property Tables, Package Manager will install the latest version of Common Property Tables for you, automatically.

Do not install an upgrade for Common Property Tables *and* other packages at the same time. Install the upgrade package for Common Property Tables and *only* the upgrade package for Common Property Tables. For more information about installing and using Common Property Tables, refer to the *Common Property Tables User Guide*.

Upgrading NNM Event and Availability in a Distributed Environment

Following is an overview of the upgrade procedure in a distributed environment:

- 1 Disable trendcopy on the central server.
- 2 For the central server:
 - Upgrade to Common Property Tables 3.6; deploy reports
 - Upgrade to NNM Event and Availability 1.1; deploy reports
- **3** For each satellite server:
 - Upgrade to Common Property Tables 3.6 or higher
 - Upgrade to NNM Event and Availability 1.1
- 4 Re-enable trendcopy on the central server.
- 5 Reconfigure your central and satellite servers. For details, see Chapter 4, Setting Up a Distributed System.

Upgrading to Version 1.1

Perform the following tasks to upgrade to version 1.1:

- Task 1: Stop OVPI Timer and extract packages from the report pack CD
- Task 2: Upgrade to Common Property Tables 3.6
- Task 3: Install the Upgrade Packages
- Task 4: Restart OVPI Timer

Task 1: Stop OVPI Timer and extract packages from the report pack CD

- 1 Log in to the system. On UNIX systems, log in as root.
- 2 Stop OVPI Timer and wait for processes to terminate.

On Windows, do the following:

- Select Control Panel > Administrative Tools > Services.
- b Select OVPI Timer from the list of services.
- c From the Action menu, select **Stop**.

On UNIX, as root, do one of the following:

```
HP-UX: sh /sbin/init.d/ovpi_timer stop
```

Sun: sh /etc/init.d/ovpi timer stop

- 3 Insert the report pack CD in the CD-ROM drive. On Windows, a Main Menu opens automatically; on UNIX, mount the CD if the CD does not mount automatically, navigate to the top level directory on the CD, and run the ./setup command.
- 4 Type 1 in the choice field and press **Enter**. The install script displays a percentage complete bar. When the copy is complete, the install script starts Package Manager. The Package Manager welcome window opens.

If you navigate to the Packages directory on your system, you will see the following folders under the Database folder:

- NNM_Event.ap
- NNM_Event_Demo.ap
- UPGRADE_NNM_Event_to_11.ap

Task 2: Upgrade to Common Property Tables 3.6

Follow these rules:

- Do not install any other package with the CPT upgrade package; install the CPT upgrade package and *only* the CPT upgrade package.
- When prompted to accept or disable the option to Deploy Reports, accept the default. If you do not deploy reports, you will not deploy the change forms that come with Common Property Tables.
- When the install finishes, click **Done** to return to the Management Console.

If you need more help with this task, refer to the Common Property Tables User Guide.

Task 3: Install the Upgrade Packages

- From the Management Console, select **Tools > Package Manager**. The Package Manager welcome window opens.
- 2 Click **Next**. The Package Location window opens.
- 3 Click Install.
- 4 Click Next. The Report Deployment window opens. Accept the defaults for Deploy Reports, Application Server, and Port. Type your user name and password for the OVPI Application Server.
- 5 Click Next. The Package Selection window opens.
- 6 Click the check box next to the following packages (depending on which packages you are upgrading):

UPGRADE NNM Event to 11.ap

- 7 Click **Next**. The Type Discovery window opens. Disable the default.
- 8 Click Next. The Selection Summary window opens
- 9 Click **Install**. The Installation Progress window opens and the install begins. When the install finishes, a package install complete message appears.
- 10 Click Done.



Do not be surprised if the UPGRADE package you just installed disappears from view. Package Manager will display what you just installed as *NNM Event and Availability Report Pack 1.1*. This is not an error.

Task 4: Restart OVPI Timer

On Windows, do the following:

- **a** Select Control Panel > Administrative Tools > Services.
- b Select OVPI Timer from the list of services.
- c From the Action menu, select Start.

The Upgrade Install 13

On UNIX, as root, do one of the following:

HP-UX: sh /sbin/init.d/ovpi_timer start

Sun: sh /etc/init.d/ovpi timer start

Package Removal

Follow these steps to uninstall NNM Event and Availability:

- 1 Log in to the system. On UNIX systems, log in as *trendadm*.
- 2 Stop OVPI Timer and wait for processes to terminate.

Windows: Select Control Panel > Administrative Tools > Services

UNIX: As root, do one of the following:

HP-UX: sh /sbin/init.d/ovpi_timer stop

Sun: sh /etc/init.d/ovpi_timer stop

- 3 Start Package Manager. The Package Manager welcome window opens.
- 4 Click **Next.** The Package Location window opens.
- 5 Click the **Uninstall** radio button.
- 6 Click **Next**. The Report Undeployment window opens.
- 7 If NNM Event and Availability reports were deployed from this server, accept the defaults for Undeploy Reports, Application Server Name, and Port. Otherwise, clear the check box and skip to step 9.
- 8 Type your username and password for the OVPI Application Server.
- 9 Click **Next**. The Package Selection window opens.
- 10 Click the check box next to the following packages:

NNM_Event 1.1

NNM_Event_Demo 1.1

- 11 Click OK.
- 12 Click **Next.** The Selection Summary window opens.
- 13 Click **Uninstall.** The Progress window opens and the removal process begins. When the uninstall process is complete, a package removal complete message appears.
- 14 Click **Done** to return to the Management Console.
- 15 Restart OVPI Timer.

Windows: do the following:

- g Select Control Panel > Administrative Tools > Services.
- b Select OVPI Timer from the list of services.
- c From the Action menu, select **Start**.

UNIX: as root, do one of the following:

HP-UX: sh /sbin/init.d/ovpi_timer start

Sun: sh /etc/init.d/ovpi_timer start

3 The New Install

This chapter covers the following topics:

- Prerequisites
- Installing NNM Event and Availability
- Accessing Deployed Reports
- Package Removal

Prerequisites

You cannot use the NNM Event and Availability Report Pack unless your NNM server and your OVPI server are integrated. If your servers are not yet integrated, you need to do this now. Refer to the *NNM/PI Integration Guide* for more information about enabling integration on the NNM server and running the Integration Wizard on the OVPI server.

The following software that must be running on your OVPI server before installing the NNM Event and Availability Report Pack:

- OVPI 5.2
- Any and all Service Packs available for OVPI 5.2
- Common Property Tables 3.6

Installing NNM Event and Availability

Perform the following tasks to install the report pack:

- Task 1: Stop OVPI Time and extract report packs from the report pack CD
- Task 2: If necessary, upgrade Common Property Tables
- Task 3: Install the NNM Event and Availability Report Pack

Task 1: Stop OVPI Timer and extract packages from the report pack CD

- 1 Log in to the system. On UNIX systems, log in as root.
- 2 Stop OVPI Timer and wait for processes to terminate.

Windows: Select Control Panel > Administrative Tools > Services

UNIX: As root, do one of the following:

HP-UX: sh /sbin/init.d/ovpi_timer stop

Sun: sh /etc/init.d/ovpi_timer stop

- 3 Insert the report pack CD in the CD-ROM drive. Do one of the following:
 - On Windows, run the setup.bat command if auto run is disabled. If outrun is enabled, a Main Menu appears.
 - On *UNIX*, mount the CD manually if the CD does not mount automatically, then run the setup command.
- Type 1 to select OVPI report packs in the choice field and press Enter. The install script displays a percentage complete bar. When extraction is complete, the install script starts Package Manager. The Package Manager Welcome window opens.

If you navigate to the Packages directory on your system, you will see the following directories under the parent directory for the report pack:

- NNM_Event.ap
- NNM Event Demo.ap

Installing the demo package is optional. You may install the demo package by itself, or you may install the demo package along with the report pack.

Task 2: Upgrade Common Property Tables

If you are running an older version of Common Property Tables, upgrade to Common Property Tables 3.6. If you are not running any version of Common Property Tables, skip this task.

Installing the Common Property Tables upgrade package is no different from installing other upgrade packages; however, do not install this upgrade package *and* other packages at the same time. Install the Common Property Tables upgrade package and *only* the Common Property Tables upgrade package. When the installation is complete, click **Done** to return to the Management Console.

Task 3: Installing NNM Event and Availability Report Pack

- 1 Start Package Manager. The Package Manager welcome window opens.
- 2 Click Next. The Package Location window opens.
- 3 Click **Install**. Approve the default installation directory or use the browse feature to select a different directory, if necessary.
- 4 Click **Next**. The Report Deployment window opens. Accept the default settings for Deploy Reports; also accept the defaults for application server name and port in the same window.
- **5** Enter your username and password for the OVPI Application Server.
- 6 Click Next. The Package Selection window opens.
- 7 Select the check box next to the following packages:

Common Property Tables 3.6 (if not already installed)

NNM Event 1.1

NNM Event Demo 1.1

- 8 Click **Next**. The Type Discovery window opens.
- **9** To run Type Discovery immediately after package installation, *unselect* Type Discovery and click **Next**. The Selection Summary window opens.
- 10 Click **Install**. The Installation Progress window opens and the install process begins. When the install process is complete, an installation complete message appears.
- 11 Click Done.

12 Restart OVPI Timer.

Windows: do the following:

- Select Control Panel > Administrative Tools > Services.
- **b** Select OVPI Timer from the list of services.
- c From the Action menu, select **Start**.

UNIX: as root, do one of the following:

HP-UX: sh /sbin/init.d/ovpi_timer start

Sun: sh /etc/init.d/ovpi_timer start

Accessing Deployed Reports

When you installed the report pack, you enabled the Deploy Reports option. As a result, the reports in this package (as well as any forms that come with it) were deployed to the OVPI Application Server. Once reports reside on the OVPI Application Server, you have two ways to view them:

- OVPI client applications
- Web browser

If the client applications are installed on your system, you have access to Report Viewer, Report Builder, and the Management Console. If you don't have the clients, use a web browser to reach the Web Access Server.

For more information about the clients, refer to the *OVPI Installation Guide*. For details about the Management Console, including how to use the Object/Property Management view to launch reports specific to a selected object, refer to the *OVPI Administration Guide*.

Package Removal

Follow these steps to uninstall NNM Event and Availability:

- 1 Log in to the system. On UNIX systems, log in as *trendadm*.
- 2 Stop OVPI Timer and wait for processes to terminate.

Windows: Select Control Panel > Administrative Tools > Services

UNIX: As root, do one of the following:

```
HP-UX: sh /sbin/init.d/ovpi_timer stop
```

Sun: sh /etc/init.d/ovpi timer stop

- 3 Start Package Manager. The Package Manager welcome window opens.
- 4 Click **Next.** The Package Location window opens.
- 5 Click the **Uninstall** radio button.
- 6 Click **Next.** The Report Undeployment window opens.

The New Install 17

- 7 If NNM Event and Availability reports were deployed from this server, accept the defaults for Undeploy Reports, Application Server Name, and Port. Otherwise, clear the check box and skip to step 9.
- 8 Type your username and password for the OVPI Application Server.
- 9 Click Next. The Package Selection window opens.
- 10 Click the check box next to the following packages:

NNM_Event 1.1

NNM_Event_Demo 1.1

- 11 Click OK.
- 12 Click Next. The Selection Summary window opens.
- 13 Click **Uninstall.** The Progress window opens and the removal process begins. When the uninstall process is complete, a package removal complete message appears.
- 14 Click **Done** to return to the Management Console.
- 15 Restart OVPI Timer.

Windows: do the following:

- Select Control Panel > Administrative Tools > Services.
- **b** Select OVPI Timer from the list of services.
- c From the Action menu, select Start.

UNIX: as root, do one of the following:

HP-UX: sh /sbin/init.d/ovpi_timer start

Sun: sh /etc/init.d/ovpi_timer start

4 Setting Up a Distributed System

If you intend to run the NNM Event and Availability Report Pack in a distributed environment across multiple servers, you must configure the central server and each satellite server. This chapter covers the following topics:

- Configuring the central server
- Configuring a satellite server
- Synchronizing system clocks

Configuring the Central Server

To configure the central server, perform the following tasks:

- Task 1: Register the satellite server by setting the database role
- Task 2: Enable LIR
- Task 3: Add LIR mappings
- Task 4: Verify the automatically generated copy policies
- Task 5: Modify the hourly NNM Event.pro file
- Task 6: Modify the hourly NNM Avail.pro file

Task 1: Register the satellite server by setting the database role

- 1 Start the Management Console (log on with Administrator privileges).
- **2** Click the **Systems** icon in the navigation pane.
- 3 Navigate to the OVPI Databases folder and select the database system.
- 4 Click Database Properties.
- 5 From the Database Role list, select the Satellite Server role.
- **6** Enter any information necessary to configure the Satellite Server role.



To add a new database reference, you can use the Add Database Reference Wizard in the System and Network Administration application.

Task 2: Enable LIR

- 1 Start the Management Console (log on with Administrator privileges).
- 2 Click the **Systems** icon in the navigation pane.
- 3 Navigate to the OVPI Databases folder and select the central server.
- 4 Click LIR Configuration.

5 Select the LIR enabled check box.

Task 3: Add LIR mappings

- 1 Start the Management Console (log on with Administrator privileges).
- 2 Click the **Systems** icon in the navigation pane.
- 3 Navigate to the OVPI Databases folder and select the central server.
- 4 Click LIR Configuration.
- 5 Click Add Mapping.
- 6 From the Select Satellite Server list, select a satellite server to which to add a mapping.
- 7 Select the **Category** data table option.
- 8 Select NNM_Event from the drop down list.
- 9 Select the rate data type.
- 10 Click Add to List.
- If you want to add additional LIR mappings, click **Add to list** and repeat step 6 through step 10.
- 12 Click OK.
- 13 Click Apply.

A copy policy is automatically generated for the hourly data and for each LIR mapping that you add. The data type selected when adding an LIR mapping (in step 9 above) determines the type of data copied (defined in the generated copy policy). The type of data copied (defined in the generated copy policy) is one summarization level greater than the data type selected in the LIR mapping. For example, if you select an hourly data type, you will generate a daily data copy policy.

Task 4: Verify the automatically generated copy policies

Verify that a copy policy has been generated for the following tables and that the copy type is set correctly (to Property and Data):

- 1 Start the Management Console (log on with Administrator privileges).
- 2 Click the **Copy Policy** icon in the navigation pane to start the Copy Policy Manager.
- **3** Find the following tables and verify the copy type is set to Property and Data for each table:
 - SH_NNM_Event
 - SH NNM Avail
 - RVNNM Avail

A copy policy is required for RVVNNM_Avail only if the cust_id, make, and node_type variables are unique on each satellite server; if these variables are not unique and a copy policy exists for this table, delete the copy policy.

If a copy policy has not been generated for a table, do the following:

- 1 Click the **New Copy Policy** icon or select **File > New Copy Policy** from the Copy Policy Manager. The Copy Policy Wizard displays.
- 2 Click Next. The Satellite Server and Copy Policy Selection Page displays.

- 3 Select a satellite server from the pull down list. This is the satellite server from which data is copied to the central server.
- 4 Select **Single Table** and select the table from the pull down list.
- 5 Click Next. The Copy Type Selection Page displays.
- **6** Select Property and Data.
- 7 Click **Next**. The Summary page displays.
- **8** Verify the information in the summary window. If the information is not correct, you can modify it by clicking Back.
- 9 Click Finish.
- 10 Repeat step 4 step 9 for all missing tables.

If the copy type is not set to Property and Data, do the following:

- 1 Double-click the copy policy.
- **2** Select the **Property and Data** copy type.
- 3 Click OK.

Task 5: Modify the hourly NNM Event.pro file

1 Navigate to:

```
{DPIPE HOME}/scripts/
```

where $\{DPIPE_HOME\}$ is the directory in which OVPI is installed.

- 2 Open the file.
- 3 Comment out block0 if this server is a non-collecting central server

Task 6: Modify the hourly_NNM_Avail.pro file

1 Navigate to:

```
{DPIPE HOME}/scripts/
```

where {DPIPE HOME} is the directory in which OVPI is installed.

- 2 Open the file.
- **3** Comment out the following line in block1:

```
{DPIPE HOME}/bin/trend sum -f {DPIPE HOME}/scripts/hourly NNM Avail.sum
```

4 If you did NOT configure a copy policy for the RVNNM_Avail table (refer to task 5), comment out the following line in block1:

```
{DPIPE_HOME}/bin/trend_sum -f {DPIPE_HOME}/scripts/hourly NNM Avail allnnm.sum
```

Configuring a Satellite Server

Follow these steps to configure each satellite server.

1 Modify the {DPIPE_HOME}/scripts/hourly_NNM_Event.pro file (where {DPIPE HOME} is the directory in which OVPI is installed).

Make the following changes:

- Comment out block1_init.
- Uncomment block2, including the begin and end lines.
- 2 Modify the {DPIPE HOME}/scripts/hourly NNM Avail.pro file.

Make the following changes:

• If you configured a copy policy for the RVNNM_Avail table on the central server (refer to task 5), comment out the following two lines in block1:

```
{DPIPE_HOME}/bin/trend_sum -f {DPIPE_HOME}/scripts/hourly_NNM_Avail_allnnm.sum {DPIPE_HOME}/bin/ovpi_run_sql -sqlscript {DPIPE_HOME}/scripts/{DBVENDOR}/update_SH_NNM_Avail.sql -logfile {DPIPE_HOME}/tmp/update_SH_NNM_Avail.out
```

• Uncomment the following three lines in block2:

```
begin: block2 wait
{DPIPE_HOME}/bin/trendcopy -t SH_NNM_Avail
end: block2
```

• If you configured a copy policy for the RVNNM_Avail table on the central server (refer to task 5), uncomment the following line in block2:

```
{DPIPE HOME}/bin/trendcopy -t RVNNM Avail
```

3 Make sure that each satellite server is collecting data from a disjoint set of NNM stations.

System Clocks

Make sure that the system clock on each satellite server is synchronized with the system clock on the central server.

5 Collecting Data from NNM 7.5x

This chapter covers the following topics:

- Adding and Modifying Properties
- Changing the HTTP Port Number of OVI on NNM
- Synchronizing Node or Category Information
- Changing the NNM Events Data Tool
- Checking Collection Failures

A list of NNM stations is required to collect event and availability data. There are two ways to produce this list: bulk import and OVPI forms.

Adding and Modifying Properties

Property information comes from the following sources:

- Forms bundled with the NNM Event and Availability Report Pack
- Common Property Tables batch-mode property import
- Common Property Tables (Device, Customer, Vendor)
- Category List Table
- NNM List Table
- NNM List Tables "add new" and "update" forms
- Category List Table "add new" and "update" forms
- Automatic feed from the network

If you have customers associated with specific devices or specific interfaces, or if you have vendors associated with specific devices, use Common Property Tables to import this information.

Bulk Import

To import a list of NNM stations using bulk import, perform these tasks:

- Task 1: Create the NNM station list file
- Task 2: Import the NNM station list file
- Task 3: OVPI data collection

Task 1: Creating the NNM station list file

Create a property parameter file NNM_List.dat in the directory $DPIPE_HOME/data/PropertyData/NNM_Event/$ when bulk import of NNM stations is to be done or a set of NNM stations for collection is required. To import one NNM station, use forms as described in Using Forms on page 24.

The format of the data is as follows:

```
<nnm_station_1><tab><ovi_port_number>
<nnm_station_n-1><tab><ovi_port_number>
<nnm_station_n><tab><ovi_port_number>
Example:
nnm1.hp.com 8092
nnm2.hp.com 8092
nnmn.hp.com 8092
```

The default OVI port number is 8092.



Change this port number only if you have changed the port number for the CommandResponder pluglet of OVI.

Task 2: Import the NNM station list

To import the NNM station list, run the NNM List Importer tool:

```
$DPIPE_HOME/bin/trend_proc -f $DPIPE_HOME/scripts/NNM_Event_import_nnm.pro
```

The NNM List Importer tool imports NNM_List.dat to the OVPI database. The imported list is now ready for data collection.

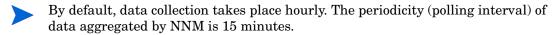


Errors are logged to: \$DPIPE HOME/log/trend.log

Task 3: Data collection

Once the NNM stations list is provisioned, the system is ready for collection. During the first collection, the data collection tool will automatically:

- 1 Get the nodes from NNM with Device Type, Vendor, and Category information.
- 2 Get data for the last two days from the NNM station or as available in NNM, whichever is faster.
- 3 Put the category list into OVPI.



Using Forms

This section describes the following forms:

- Add or Update NNM List
- Remove NNM Station
- Add or Update Category Information

- Remove Alarm Category
- Update Availability Threshold

Use these forms to create, update, or remove property data.

To launch a form, click the **Objects** icon in the panel on the left side of the Management Console window. The Object/Property Management view opens. Object Manager shows a list of objects. The type of object presented depends on which Object Manager View is open. The default view is the Device view, showing a list of devices. To change the view, select **View > Change View** and use the pop-up window to select a different view. Once the type of object you are interested in updating is in view, select the particular object you want to update.

When you select the object, **Object Specific Tasks** will appear in the window on the right. Double-click and open the form. Click **Apply** to save changes, **OK** to save changes and close the form, or **Cancel** to close the form without saving changes.

Add or Update NNM List

Use the Add or Update NNM List form to add or modify the following:

- OVPI port number
- Polling interval
- Polling granularity
- HTTP time-out

Follow these steps to update an NNM station:

- 1 Launch the Management Console.
- 2 Click the Objects icon. The Add or Update NNM List form appears under General Tasks. Navigate to the NNM station you want to update, then double-click the Add or Update NNM list form.
- 3 Highlight the row that contains the data you want to change.
- 4 If required, change the Polling Granularity and then change the following entry in the \$DPIPE HOME/trendtimer.sched:

```
01:00 - - {DPIPE_HOME}/bin/trend_proc -f {DPIPE_HOME}/scripts/NNM_Event.pro
```

For example, if Polling Interval is 180 mins, then change the entry as shown below:

```
03:00- - {DPIPE_HOME}/bin/trend_proc -f {DPIPE_HOME}/scripts/NNM_Event.pro
```

Polling Granularity is the result of duration units divided by Polling Interval. For a given Polling Interval, events data collected can be aggregated over smaller units of duration (called Polling Granularity). For example, if Polling Interval is 60 mins, then Polling Granularity can have values such as 30, 60, and 180 mins.

5 Make the changes. Click **Apply** to save changes, **OK** to save changes and close the form, or **Cancel** to close the form without saving changes.

Follow these steps to add a new NNM station:

- 1 Select any row.
- 2 Enter the name of the NNM station in the NNM Station field. Change other values as required.

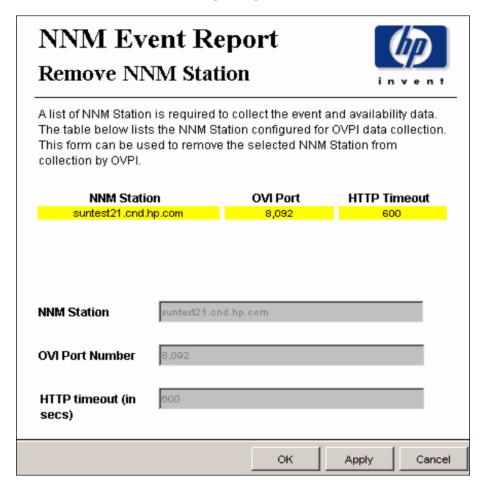
3 Click **Apply** to save changes, **OK** to save changes and close the form, or **Cancel** to close the form without saving changes.

A list of NNM Station is rec NNM Station configured fo Station for OVPI to collect (r OVPI data collectio		ity data. The table bei e used to update or (
NNM Station	OVI Port	Poll Interval	Poll Granularity	HTTP Timeout
default	8,092	60	15	600
All NNM Stations	8,092	60	15	600
suntest21.cnd.hp.com	8,092	60	15 15	600
bisqit2.cnd.hp.com ovpihpt6.india.hp.com	8,092 8,092	60	15 15	600
OVI Port Number	8,092			
Poll Interval (in mins)	60			
Poll Granularity (in mins)	15			
	600			

Remove NNM Station

Follow these steps to remove a single NNM station:

- 1 Launch the Management Console.
- 2 Open the Object/Property Management view. Select **View > Change View** and use the pop-up window to select OV NNM view. The NNM stations are listed here.
- 3 Select the NNM station you want to remove.
- 4 Double-click the Remove NNM Station form under **Object Specific Tasks**. The form opens, showing NNM stations configured for OVPI data collection.
- 5 Highlight the row that contains the NNM station that you want to remove.
 - Once you remove an NNM station, that NNM station will stop collecting data. Existing data is still available.
- 6 Click **Apply** to remove the NNM station, **OK** to save changes and close the form, or **Cancel** to close the form without saving changes.



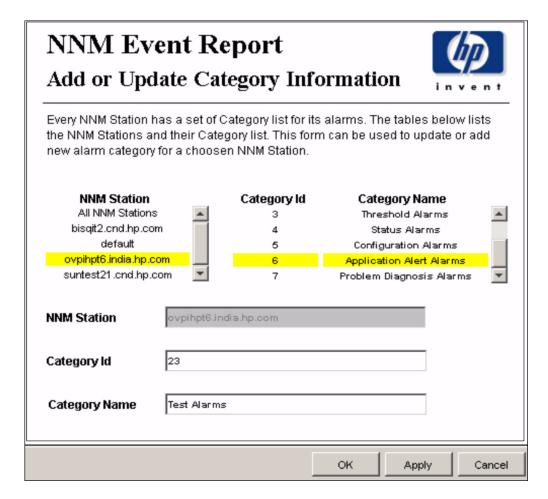
Add or Update Category Information

Follow these steps to update a new alarm category for an NNM station:

- 1 Launch the Management Console.
- 2 Click Objects. The Add or Update Category Information is listed under General Tasks. Double-click the form.
- 3 Navigate to the NNM station and double-click the form. The form opens, showing category information.
- 4 Highlight the row that contains the data you want to change.
- 5 Make the changes. Click **Apply** to save changes, **OK** to save changes and close the form, or **Cancel** to close the form without saving changes.

Follow these steps to add a new NNM station:

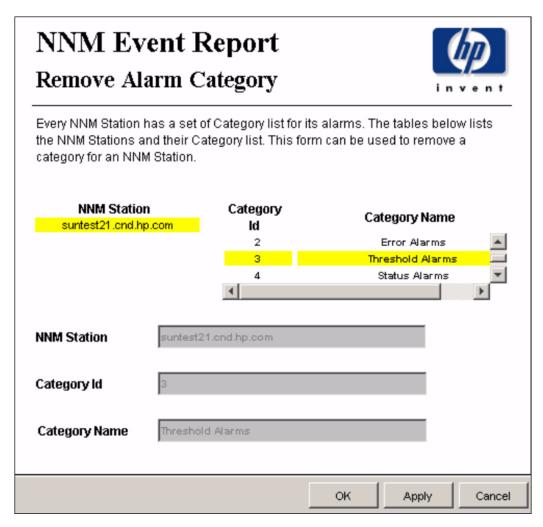
- Select any row.
- **2** Enter the new Category Id and Category Name.
- 3 Click Apply to save changes, OK to save changes and close the form, or Cancel to close the form without saving changes.



Remove Alarm Category

Follow these steps to remove a category for an NNM station:

- 1 Launch the Management Console.
- 2 Open the Object/Property Management view. Select **View > Change View** and use the pop-up window to select OV NNM view. The NNM stations are listed here.
- 3 Select the NNM station that you want to remove.
- 4 Double-click the Remove Alarm Category form under **Object Specific Tasks**. The form opens, showing NNM stations, Category Id, and Category Name.
- 5 Highlight the row you want to remove.
- 6 Click Apply to remove a category for an NNM station, OK to save changes and close the form, or Cancel to close the form without saving changes.

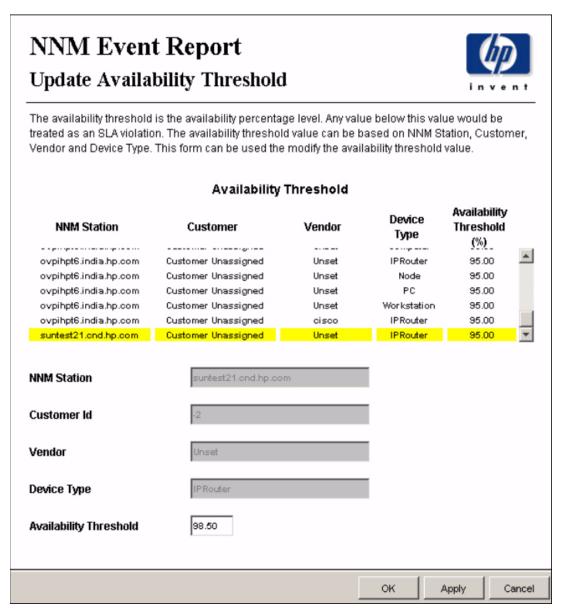


Update Availability Threshold

The Availability Threshold (percentage of availability) values are based on NNM station, Customer, Vendor and Device type. Threshold is the line between normal and abnormal performance. When this line is crossed, an exception is recorded. Thresholds are set to default values that are easily changed to reflect individual needs.

Follow these steps to change the threshold value:

- 1 Launch the Management Console (piadmin).
- 2 Click Objects., Under General Tasks you will see the Update Availability Threshold form. Double-click the form. The forms opens, showing the Availability Threshold table.
- 3 Highlight the row that contains the Availability Threshold you want to change.
- 4 Make the changes. Click **Apply** to save changes, **OK** to save changes and close the form, or **Cancel** to close the form without saving changes.



Changing the HTTP Port Number of OVI on NNM

If the port number 8092 is already in use, do the following to change the port number:

On NNM, change the **<serverPort>8092</serverPort>** parameter in the file specified below to identify the new HTTP port number.

UNIX

```
$OV_INSTALL_DIR/conf/OVPI_INTEGRATION/ResponderProxyPluglet.config
Windows
$OV_INSTALL_DIR/newconfig/OVPI_INTEGRATION/
ResponderProxyPluglet.config
```

2 Re-start the OVI CommandResponder pluglet. To start or stop OVI, do as follows:

UNIX

```
$0V_BIN/ICO_ctl.ovpl -s : to stop OVI
$0V_BIN/ICO_ctl.ovpl -g : to start OVI
Windows
$0V_BIN%\ICO_ctl.ovpl -s : to stop OVI
$0V BIN%\ICO ctl.ovpl -g : to start OVI
```

Synchronizing Node or Category Information

Use the get_nnm_aggevt tool to synchronize the node information or category information from all NNM stations.

• To update the NNM Event and Availability Report Pack with current node information from NNM, use the following script to get the node information:

```
$DPIPE HOME/bin/perl $DPIPE HOME/scripts/get nnm aggevt.pl -i
```

• If you install new SPIs, the alarm category will change. To update the NNM Event and Availability Report Pack, use the following script to get node information:

```
$DPIPE_HOME/bin/perl $DPIPE_HOME/scripts/get_nnm_aggevt.pl -c
```

Changing the NNM Events Data Tool

NNM uses the following tools to provide event data:

- ovdumpevents: This tool is the default data collection tool on OVPI.
- ovdwquery: This tool is based on RDBMS.

For more information about these tools, refer to the *HP OpenView Network Node Manager Managing Your Network with HP OpenView Network Node Manager.*

Follow these steps to change the tool to ovdwquery:

1 Access the \$DPIPE_HOME/lib directory

2 Create a configuration file named NNM_Event_Report.conf with the following entry:

AGG_TOOL, ovdwquery

The new tool will be used in the next poll cycle.

Follow these steps to change the tool to ovdumpevents:

- 1 Access the \$DPIPE_HOME/lib directory
- **2** Do one of the following:
 - Remove the conf file NNM_Event_Report.conf
 - Modify the AGG_TOOL entry in the above configuration file as AGG_TOOL, ovdumpevents

Checking Collection Failures

Check the following log files in sequence:

1 On OVPI, the collection details for all NNM stations are logged here:

```
$DPIPE_HOME/log/trend.log.
```

Check for entries with $get_nnm_aggevt.pl$, the module that collects event data from NNM stations.

2 On NNM, collection details and failures, if any, are logged here:

```
$OV_TMP/OVPI/NNM_EVT_RP_*log
```

6 Sample Reports

This chapter provides samples of the following reports:

- 1 Detailed Availability Report
- 2 Availability Forecast by Customer
- 3 Availability SLA Report
- 4 Executive Summary by Vendor
- 5 Event Summary by NNM Station
- 6 Forecast by Severity
- 7 Hot Spots Top 20
- 8 NNM Events by Category and Device
- 9 NNM Events by Severity and Device
- 10 Executive Summary by Severity

Sample 1: Detailed Availability

Daily, monthly, and yearly availability information for a selected customer, and a selected type of device, on a per-vendor basis. This report does not show availability across multiple NNM stations. This report aggregates data at the NNM station level.

First select the NNM station, then select a vendor, a customer, and a device type. The table below the selection fields provides statistics for:

- Availability
- MTTR
- Total downtime
- MTBF
- Outage count

Use this report to see if availability for a particular device type managed by a particular NNM station is improving or worsening.

Sample 2: Availability Forecast by Customer

If multiple NNM stations are in use, this report aggregates data from all of them, and rolls up data to the customer level. Once you select a customer, you can either select *All* or a particular device type. The bar graph provides baseline, F30, F60, and F90 values for:

- MTBF
- MTTR
- Availability

Downtime

Use this report to see whether the customer you selected is expected to see improved availability metrics or degraded availability metrics.

Sample 3: Availability SLA

The availability SLA report aggregates data for multiple NNM stations. It answers four questions:

- On average, is a particular vendor operating above or below the threshold for availability?
- Is a particular device type from one vendor operating above or below the threshold?
- On average, are the devices owned by a customer operating above or below the threshold?
- Is a device type owned by a particular customer operating above or below the threshold?

This report looks at downtime details as well as availability details. You can compare actual availability to the SLA value (the threshold for availability), and you can compare actual downtime to the SLA value (the threshold for downtime).

Sample 4: Executive Summary by Vendor

This report aggregates alarm category and alarm severity data at the vendor level, on a station by station basis. Use this report to determine:

- The distribution of alarms across alarm categories
- Whether the number of alarms per category is increasing or decreasing
- The distribution of severity levels
- Whether the number of alarms per severity level is increasing or decreasing

Sample 5: Event Summary by NNM Station

This report aggregates the total number of events on a station by station basis. Use this report to find out what the total is for each NNM station and whether the total is increasing or decreasing.

Sample 6: Forecast by Severity

This report produces an alarm severity forecast. It aggregates severity data across all devices on a station by station basis, calculates a baseline value for each severity level, then lets you compare the baseline value to F30, F60, and F90. Use this report to find out which severity level was most prevalent over the baseline period and how each severity level is expected to behave in the future.

Sample 7: Hot Spots Top 20

This report aggregates events for each device on a station by station basis. Use this report to find out which devices are responsible for the most events. Select a station, then select a severity level. The graph below produces a list of devices, ranked by number of events, highest to lowest, allowing you to see event statistics for the twenty devices responsible for the majority of events.

Sample 8: NNM Events by Category and Device

This report aggregates event category statistics on a station by station basis. Use this report to drill down from an event category to a list of the devices responsible for the alarms in that category. The devices are ranked by the number of events in that alarm category, highest to lowest. Use this report to find out which devices are responsible for majority of events in each alarm category.

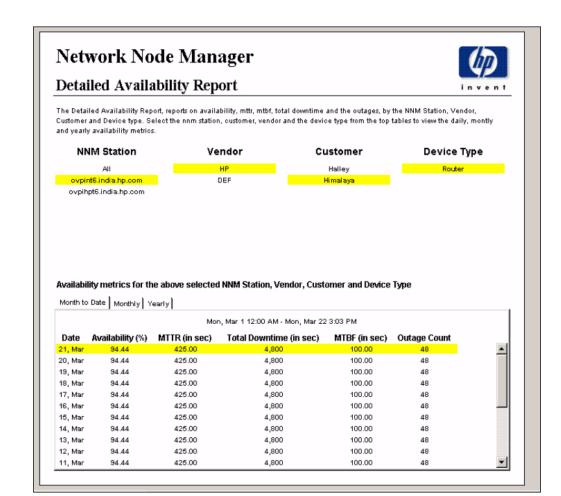
Sample 9: NNM Events by Severity and Device

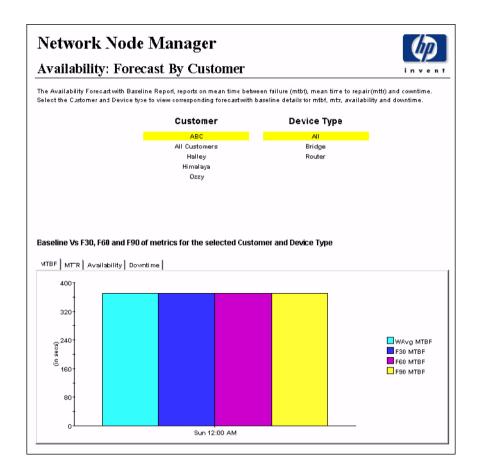
This report aggregates severity level statistics on a station by station basis. Use this report to drill down from a severity level to a list of the devices responsible for the alarms in that level. The devices are ranked by number of events in that severity level, highest to lowest. Use this report to find out which devices are responsible for most of the events in each severity level.

Sample 10: Executive Summary by Severity

This report compiles data about the number of events per severity level. The results are available on a vendor-by-vendor basis and on a customer-by-customer basis. After selecting the NNM station, select a vendor and a severity level. The graph to the right shows the trend line for the number of events for this particular device and this particular severity level. You can also select a customer and a severity level. The graph to the right shows the trend line for the number of events for this particular customer and this particular severity level. Use this report to find out whether the event count for a severity level is increasing or decreasing.

Sample Reports 35







Availability: SLA Report

The Availability: SLA Report, reports on availability with threshold. It also reports the total downtime. Select the customer and device type (or vendor and device type) to view summary of availability with threshold breach and downtime.



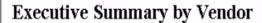
Availability and Downtime details for the selected Vendor and Device Ttype





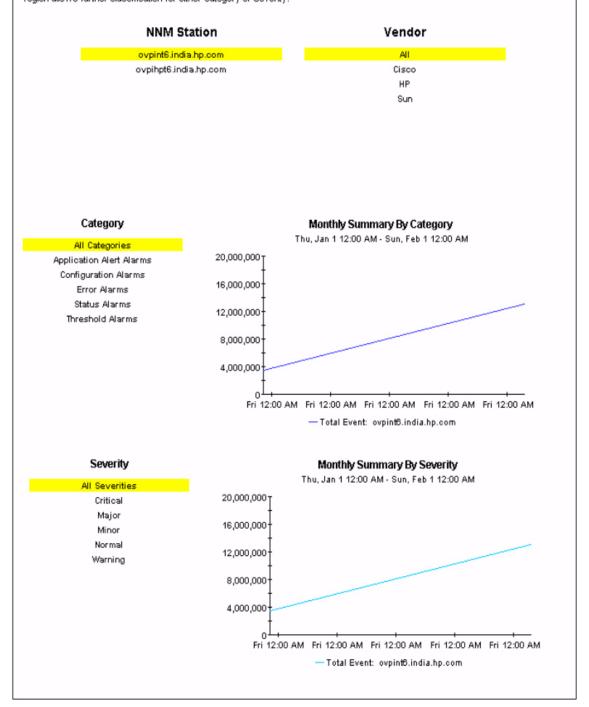
Availability and Downtime details for the selected Customer and Device Ttype







The Executive Summary by Vendor, reports on the events count based on category and severity for a selected NNM Station and Vendor. Select the nnm station and vendor from the top tables to view the corresponding monthly events count summary. The tabbed region allows further classification for either Category or Severity.





Event Summary By NNM Station

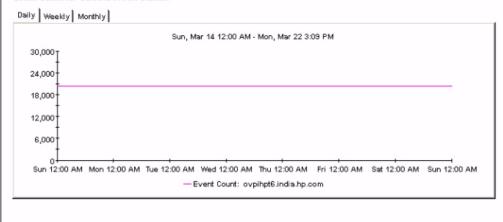
The NNM Event Report by NNM Station, gives event count based on NNM Stations. Select the NNM Station from the table below to view its event count summary.

NNM Station

All

ovpihpt6.india.hp.com ovpint6.india.hp.com

Event Count for Selected NNM Station



Network Node Manager Forecast By Severity The NNM Event Forcast by Severity Report, forecasts total events for 30, 60 and 90 days. Select the NNM Station and the Severity from the top tables to view the correspodning expected total events from the graph below, along with the baseline data. The baseline event count is weighted average. NNM Station Severity ovpihpt6.india.hp.com Severity ID Severity ovpint6.india.hp.com All Severities Normal Warning Minor Major Critical 30, 60 and 90 Days Events Count Forecast for the selected NNM Station and Severity BL Vs F30/F60/F90 Baseline vs 30 Day Forecast By Severity 100,000 80,000 Weighted Avg 30 Day Forecast 60,000 90 Day Forecast 40,000 20,000

Sun 12:00 AM

Network Node Manager Hot Spots Report: Top 20 The top 20 Hot Spots Report reports on the top 20 devices generating the most severe events, aggregated daily and weekly. NNM Station **sev_id** -1.00 1.00 ovpihpt6.india.hp.co ovpint6.india.hp.com 2.00 3.00 4.00 5.00

Top 20 Devices generating most events for the selected NNM Station and Severity

Top 20 Devices Generating Most Events Wed, Mar 17 12:00 AM · Thu, Mar 18 12:28 PM		
Device	Event Count	
All Nodes	144.00	
acapulco.grenoble.hp.com	144.00	

Severity

sev_name All Severities Normal

Minor

Major

Critical

Network Node Manager NNM Events by Category and Device



The NNM Events by Category and Device, report provides event count grouped by category and device. Select the NNM Station from the top table to view the list of categories. Select category from the top table to view the list of event count by device, aggregated over monthly, weekly and daily.

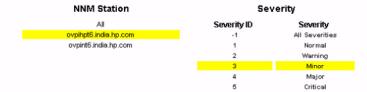


Event Count by Device for the selected NNM Station and Category

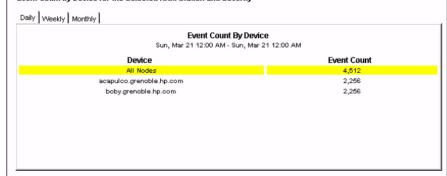
Daily Weekly Monthly		
Event Count By Device Sun, Mar 21 12:00 AM - Sun, Mar 21 12:00 AM		
Device	Event Count	
All Nodes	11,280	
boby.grenoble.hp.com	6,768	
acapulco.grenoble.hp.com	4,512	

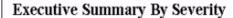


The NNM Events by Severity and Device, report provides event count grouped by severity and device. Select the NNM Station from the table below to view the list of severity for the nodes belonging to NNM Station. Select severity from the top table to view the list of event count by device aggragated over monthly, weekly and daily.



Event Count by Device for the Selected NNM Station and Severity





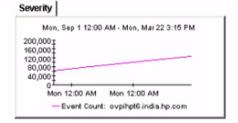


The Executive Summary Report, reports the monthly event count based onf Vendor and Customer. It also forecasts the total events for 30, 60 and 90 days using the weighted average of total events, aggegated by Severity. Choose the NNM Station from the top table to view the details as required.

NNM Station

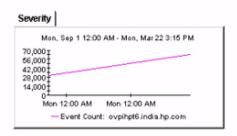
ovpihpt6.india.hp.com ovpint6.india.hp.com

Monthly Summary By Vendor for Selected NNM Station



Monthly Summary By Customer for Selected NNM Station

Customer	Severit	у
Halley	ld	Severity
Himalaya All Customers	3	Minor
	2	Warning
	1	Normal
	-1	All Severities



A Version History

Version	Release Date	Changes
1.0	November 2004	19 reports; no datapipe
1.1	April 2007	new features: LIR Configuration Supports Copy Policy Manager new upgrade package: UPGRADE_NNM_Event_to_11 defect fixes: QXCR1000327601 QXCR1000348185

48 Appendix A

B Editing Tables and Graphs

Any table or graph can be viewed in several ways. Although the default view is usually adequate, you can easily change to a different view. If you are using Report Viewer, right-click the object to open a list of view options. If you are using the Web Access Server, follow these steps to change the default view of a table or graph:

- 1 Click **Preferences** on the links bar.
- 2 Expand **Reports** in the navigation frame.
- 3 Click Viewing.
- 4 Select the Allow element editing box.
- 5 Click Apply.
- 6 Click the Edit icon next to the table or graph.

View Options for Tables

Right-clicking a table, or selecting the Edit Table icon if you are using the Web Access Server, opens a list of table view options.



Select **Set Time Period** to alter the relative time period (relative to now) or set an absolute time period. The Set Time Period window opens.

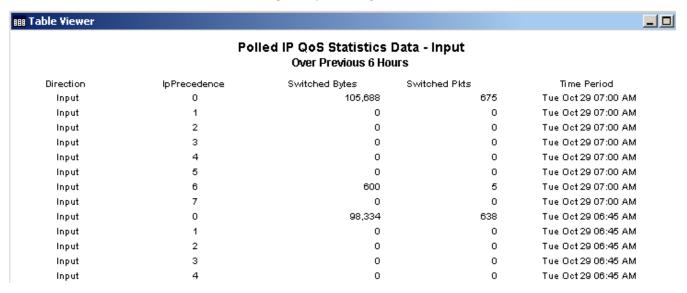
You may shorten the period of time covered by the table from, for example, 42 days to 30 days or to 7 days. If you are interested in a specific period of time that starts in the past and stops *before* yesterday, click **Use Absolute Time** and select a Start Time and an End Time.

Select **Change Constraint Values** to loosen or tighten a constraint, thereby raising or lowering the number of elements that conform to the constraint. The Change Constraint Values window opens. To loosen a constraint, set the value lower; to tighten a constraint, set the value higher.

The **Select Nodes/Interfaces** allows you to change the scope of the table by limiting the table to specific nodes, specific interfaces, or a specific group of nodes or interfaces. The Select Node Selection Type window opens.

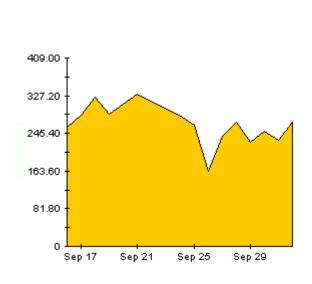
Change Max Rows increases or decreases the number of rows in a table. The default is 50. If you expand the default, the table may take more time to open. If you are trending a large network, using the default ensures that the table opens as quickly as possible.

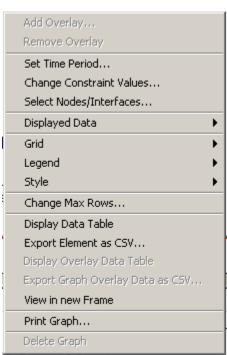
View in new Frame opens the table in a Table Viewer window, shown below. If necessary, make the data in the table more legible by resizing the window.



View Options for Graphs

Right-clicking a graph, or clicking the Edit Graph icon if you are using the Web Access Server, opens the following list of view options.





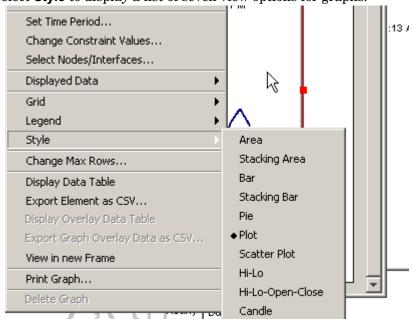
50 Appendix B

The following table provides details about each option.

Option	Function
Set Time Period	Same as the table option shown above.
Change Constraint Values	Same as the table option shown above.
Select Nodes/Interfaces	Same as the table option shown above.
Displayed Data	For every point on a graph, display data in a spreadsheet.
Grid	Add these to the graph:
	X axis grid lines
	Y axis grid lines
	X and Y axis grid lines
Legend	Delete or reposition the legend.
Style	See the illustrations below.
Change Max Rows	Same as the table option shown above.
Display Data Table	See below.
Export Element as CSV	Same as the table option shown above.
View in New Frame	Opens graph in a Graph Viewer window.
Print Graph	Same as the table option shown above.

Style Options

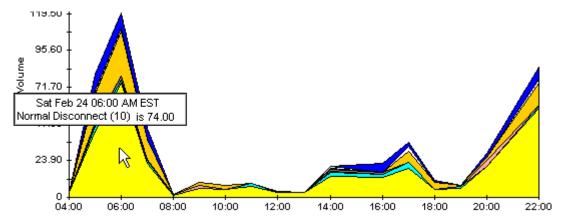
Select **Style** to display a list of seven view options for graphs.



Editing Tables and Graphs 51

Style > Area

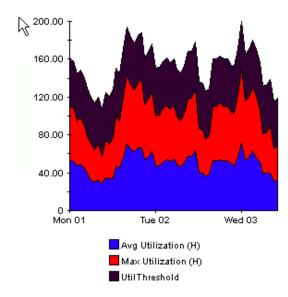
The plot or bar chart changes to an area graph. While relative values and total values are easy to view in this format, absolute values for smaller data types may be hard to see. Click anywhere within a band of color to display the exact value for that location



To shorten the time span of a graph, press SHIFT+ALT and use the left mouse button to highlight the time span you want to focus on. Release the mouse button to display the selected time span.

Style > Stacking Area

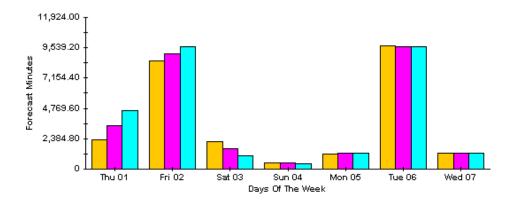
The area or plot graph changes to a stacking area graph. This view is suitable for displaying a small number of variables.



52 Appendix B

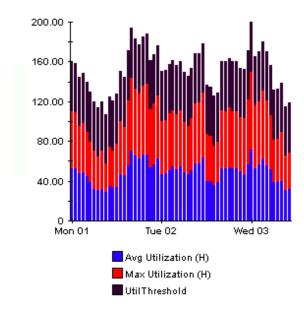
Style > Bar

The graph changes to a bar chart. This view is suitable for displaying relatively equal values for a small number of variables. There are three variables in the graph below.



Style > Stacking Bar

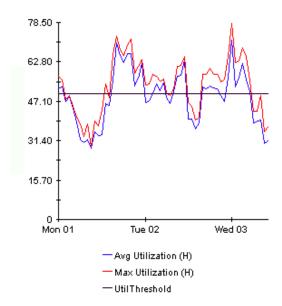
The plot or area graph changes to a stacking bar chart. If you increase the width of the frame, the time scale becomes hourly. If you increase the height of the frame, the call volume shows in units of ten.



Editing Tables and Graphs 53

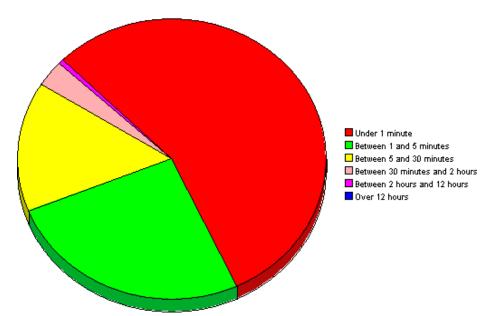
Style > Plot

Bands of color in an area graph change to lines. If you adjust the frame width, you can make the data points align with hour; if you adjust the frame height, you can turn call volume into whole numbers.



Style > Pie

An area graph becomes a pie chart. Bands in an area graph convert to slices of a pie and the pie constitutes a 24-hour period. This view is helpful when a small number of data values are represented and you are looking at data for one day.

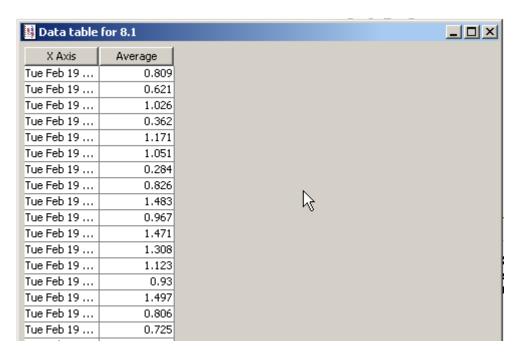


If you are looking at data for more than one day, you will see multiple pie graphs, one for each day.

54 Appendix B

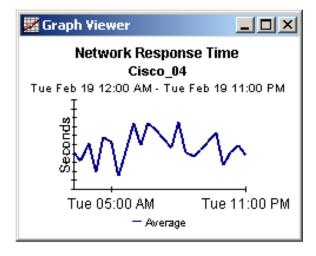
Display Data Table

This option changes a graph into a spreadsheet.



View in New Frame

The graph opens in a Graph Viewer window. Improve legibility by resizing the window.



Editing Tables and Graphs 55

56 Appendix B

Index

A

Add or Update Category Information (form), 28	HTTP port numbers, 31
Add or Update NNM List (form), 25	L
alarm category, 8	
Availability folder, 8	legend options, 51 LIR Configuration, 19, 47
availability threshold, 30	Lin Configuration, 19, 41
В	0
bulk import, 23	OVPI Timer starting, 13
C	stopping, 12
change max rows option, 51	P
change view, 25	polling granularity, 25
Common Property Tables, 13, 16 upgrading, 11	polling interval, 25
Consolidated (folder), 9	R
Copy Policy Manager, 20, 47	Remove Alarm Category (form), 29
D	Remove NNM Stations (form), 27
defect fixes	S
AVCP1000997601 47	
QXCR1000327601, 47 QXCR1000348185, 47	Severity folder, 8
QXCR1000348185, 47	Severity folder, 8 style options for graphs, 51
	style options for graphs, 51
QXCR1000348185, 47 demo package, 16	style options for graphs, 51
QXCR1000348185, 47 demo package, 16 Display Data Table, 51 displayed data option, 51	style options for graphs, 51 U Update Availability Threshold (form), 30
QXCR1000348185, 47 demo package, 16 Display Data Table, 51	upgrading Common Property Tables, 11
QXCR1000348185, 47 demo package, 16 Display Data Table, 51 displayed data option, 51 E editing parameters, 9	style options for graphs, 51 U Update Availability Threshold (form), 30
QXCR1000348185, 47 demo package, 16 Display Data Table, 51 displayed data option, 51 E editing parameters, 9 Event folder, 8	upgrading Common Property Tables, 11
QXCR1000348185, 47 demo package, 16 Display Data Table, 51 displayed data option, 51 E editing parameters, 9	U Update Availability Threshold (form), 30 upgrading Common Property Tables, 11 Use Absolute Time, 49 V
QXCR1000348185, 47 demo package, 16 Display Data Table, 51 displayed data option, 51 E editing parameters, 9 Event folder, 8	U Update Availability Threshold (form), 30 upgrading Common Property Tables, 11 Use Absolute Time, 49
QXCR1000348185, 47 demo package, 16 Display Data Table, 51 displayed data option, 51 E editing parameters, 9 Event folder, 8 extracting packages, 15	U Update Availability Threshold (form), 30 upgrading Common Property Tables, 11 Use Absolute Time, 49 V version history, 47
QXCR1000348185, 47 demo package, 16 Display Data Table, 51 displayed data option, 51 E editing parameters, 9 Event folder, 8 extracting packages, 15 G	U Update Availability Threshold (form), 30 upgrading Common Property Tables, 11 Use Absolute Time, 49 V version history, 47
QXCR1000348185, 47 demo package, 16 Display Data Table, 51 displayed data option, 51 E editing parameters, 9 Event folder, 8 extracting packages, 15 G General folder, 8	U Update Availability Threshold (form), 30 upgrading Common Property Tables, 11 Use Absolute Time, 49 V version history, 47

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