

HP OpenView Performance Insight

NNM Event and Availability Report Pack User Guide

Software Version: 1.0

Reporting and Network Solutions 7.0



January 2005

© Copyright 2005 Hewlett-Packard Development Company, L.P.

Legal Notices

Warranty

Hewlett-Packard makes no warranty of any kind with regard to this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

A copy of the specific warranty terms applicable to your Hewlett-Packard product can be obtained from your local Sales and Service Office.

Restricted Rights Legend

Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause in DFARS 252.227-7013.

Hewlett-Packard Company
United States of America

Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19(c)(1,2).

Copyright Notices

© Copyright 2004-2005 Hewlett-Packard Development Company, L.P., all rights reserved.

No part of this document may be copied, reproduced, or translated into another language without the prior written consent of Hewlett-Packard Company. The information contained in this material is subject to change without notice.

Trademark Notices

OpenView is a U.S. registered trademark of Hewlett-Packard Development Company, L.P.

Java™ is a U.S. trademark of Sun Microsystems, Inc.

Oracle® is a registered U.S. trademark of Oracle Corporation, Redwood City, California.

UNIX® is a registered trademark of The Open Group.

Windows® and Windows NT® are U.S. registered trademarks of Microsoft Corporation.

Support

Please visit the HP OpenView web site at:

<http://www.managementsoftware.hp.com/>

This site provides contact information and details about the products, services, and support that HP OpenView offers. To reach the Support site, click **Support**. The Support site provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valuable support customer, you can benefit by using the support site to:

- Search for documents of interest
- Submit and track progress on support cases
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Join online discussions with other software customers
- Research and register for software training

Most of the support areas require you to register as an HP Passport user and log in. You may also require a support contract.

To find more information about access levels, go to the following URL:

http://support.openview.hp.com/access_level.jsp

To register for an HP Passport ID, go to:

<https://passport.hp.com/hpp2/newuser.do>

contents

- Chapter 1 Overview** 7
 - NNM Events and NNM Availability 7
 - Folders and Reports 7
 - Ways to Customize Reports 9
 - Sources for Additional Information 10

- Chapter 2 Package Installation** 11
 - Integrating NNM and OVPI 11
 - Prerequisites Related to OVPI 11
 - Installing NNM Event and Availability 12
 - Accessing Deployed Reports 13
 - Package Removal 13

- Chapter 3 Distributed Systems** 15
 - Configuring the Central Server 15
 - Configuring a Satellite Server 16
 - System Clocks 16

- Chapter 4 Provisioning NNM Management Stations** 17
 - Adding and Modifying Properties 17
 - Changing the HTTP Port Number of OVI on NNM 25
 - Synchronizing Node or Category Information 25
 - Changing the NNM Events Data Tool 25
 - Checking Collection Failures 26

- Chapter 5 10 Sample Reports** 27

- Index** 41

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

The NNM Event and Availability Report Pack provides trending analysis for event and downtime data collected from NNM stations. NNM uses the following attributes to define an event:

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

The NNM Event and Availability Report Pack allows you to see event and downtime data aggregated in helpful ways. You can see whether availability for a particular device is improving or worsening; and you can see whether availability for a particular customer is improving or worsening. You can look at the distribution of alarms across alarm categories, and see the trend line for each alarm category; and you can look at the distribution of severity levels, and see the trend line for each severity level. In addition, you can 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:

- 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:

- 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:

- 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:

- 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:

- 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 applying group filters, by editing parameters (same as applying constraints), by editing tables and graphs, and by importing customer names. Service providers, or any organization that wants to share reports with customers, require group filters in order to produce customer-specific reports. If you edit a table, graph, or parameter, you are making a temporary change to a report. Any user can make these edits.

Group Filters

If you want to share reports with your customers, you must 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 creating filters for group accounts, refer to the *Performance Insight 5.0 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

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 1.0 Release Statement*. You may also be interested in the following documents:

- *Common Property Tables 3.5 User Guide*
- *Reporting and Data Analysis with Network Node Manager*
- *Managing Your Network with HP OpenView Network Node Manager*

Manuals for the core product, OVPI, and manuals for the reporting solutions that run on OVPI can be downloaded from the following site:

<http://www.managementsoftware.hp.com/>

Select **Support** > **Product Manuals** to open the **Product Manual Search** page. Manuals for OVPI are listed under **Performance Insight**. Manuals for report packs, datapipes, NNM SPIs, and NNM correlators are listed under **Reporting and Network Solutions**.

The manuals listed under **Reporting and Network Solutions** indicate the month and year of publication. If a user guide is revised, the date of publication will change even if the software version number does not change. Since we post revised user guides on a regular basis, you should search this site for updates before using an older manual that may be outdated.

Package Installation

This chapter covers the following topics:

- Integrating NNM and OVPI
- Installing NNM Event and Availability
- Accessing Deployed Reports
- Package Removal

Integrating NNM and OVPI

NNM Event and Availability Report Pack cannot function unless your NNM server is integrated with your OVPI server. If server integration has not taken place yet, do it now. You can integrate NNM and OVPI by installing the NNM/Performance Insight Integration Module. This module includes components for your NNM server and components for your OVPI server. For details, refer to the *NNM/Performance Insight Integration Module 2.0 User Guide*.

If your operating system is Windows, installing the Integration Module installs a Windows service called ICO_RNS that moves event data from NNM to OVPI. Although the installation process creates the service and sets its start status to *automatic*, it does not actually start the service. You must start the service manually the first time you run it. Later, whenever the machine is restarted, ICO_RNS will start automatically.



If your operating system is UNIX, no services need to be started manually the first time.

Prerequisites Related to OVPI

Following is a list of software that must be running on your OVPI server before installing the NNM Event and Availability Report Pack:

- OVPI 5.0 installed on you OVPI server
- Any available OVPI 5.0 service pack installed on your OVPI server
- Common Property Tables 3.0 or higher installed on your OVPI server

Installing NNM Event and Availability

Perform the following tasks to install the report pack:

- Task 1: Stop OVPI Timer and extract report packs from the RNS 7.0 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 OVPI packages from the RNS 7.0 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/ovpi_timer stop**

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

- 3 Insert the RNS 7.0 CD. 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.
- 4 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 3.0 or higher. Installing the upgrade package is no different from installing other upgrade packages; however, you cannot 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. When Package Manager indicates that the installation is complete, click **Done** to return to the Management Console.

Task 3: Installing NNM Event and Availability Report Pack 1.0

- 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 package names:
 - CommonPropertyTables 3.5*
 - NNM_Event 1.0*
 - NNM_Event_Demo 1.0*
- 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.

Accessing Deployed Reports

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

- OVPI clients
- Web browser

If the client components are installed on the user's system, the user has access to Report Viewer, Report Builder, and the Management Console. If the client components are not installed on the user's system, using a web browser to view reports is the only way the user can view reports.

For more information about the client components, refer to the *Performance Insight Installation Guide*. For more information about the Management Console, including how to use the Object/Property Management view to launch reports specific to a selected object, refer to the *Performance Insight 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.

- 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 1.0*
 - NNM_Event_Demo 1.0*
- 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.

Distributed Systems

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: Set up connections with satellite server databases
- Task 2: Configure trendcopy pull commands and modify the entry in `trendtimer.sched`.

Task 1: Set up connections with satellite server databases

- 1 Start the Management Console.
- 2 Click the **Systems** icon on the lower left. The **System/Network Administration** pane opens.
- 3 Right-click the **Databases** folder. When prompted, select **Add OVPI Database**. The Add Database Wizard opens.
- 4 Click **Next**.
- 5 Type the hostname and port number for the database you want to add; click **Next**.
- 6 Review the Summary. Repeat Steps 4 and 5 for each additional database.
- 7 Click **Finish** when you are done.

Task 2: Configure trendcopy pull commands and modify the entry in `trendtimer.sched`

- 1 Open the following files:
`$DPIPE_HOME/scripts/hourly_NNM_Event.pro`
`$DPIPE_HOME/scripts/hourly_NNM_Avail.pro`
- 2 Modify the trendcopy commands so that each command includes the correct server name for each satellite server.

- 3 If necessary, add more commands.
- 4 *Optional.* If the installation requires rate data to be available on the central server, change *SH_NNM_Event*, *SH_NNM_Avail* in copy commands to *RNNM_Event*, *RNNM_Avail*.
 - ▶ If you copy polled rate data from each satellite server every hour, you will increase the amount of traffic between the satellites and the central server and you will increase the processing load on the central server.
- 5 The *NNM_Event.pro* calls the hourly process file to collect both Event and Availability summarizations. Edit the *\$DPIPE_HOME/lib/trendtimer.sched* file. To ensure that the satellite server completes hourly summarizations before the central server does the same, change the OVPI Timer start time from 1:00 to 1:00+20. By default, this process starts at beginning of every hour.

Configuring a Satellite Server

Follow these steps to configure a satellite server.

- 1 Switch off the following aggregations by commenting out the entries listed below, from the *\$DPIPE_HOME/lib/trendtimer.sched* file:

```
24:00+03:00 - - {DPIPE_HOME}/bin/trend_proc -f {DPIPE_HOME}/scripts/
daily_NNM_Event.pro

24:00+03:00 - - {DPIPE_HOME}/bin/trend_proc -f {DPIPE_HOME}/scripts/
daily_NNM_Avail.pro

SU+24:00 - - {DPIPE_HOME}/bin/trend_proc -f {DPIPE_HOME}/scripts/
weekly_NNM_Event.pro

MONTH1+24:00 - - {DPIPE_HOME}/bin/trend_proc -f {DPIPE_HOME}/scripts/
monthly_NNM_Event.pro

MONTH1+24:00 - - {DPIPE_HOME}/bin/trend_proc -f {DPIPE_HOME}/scripts/
monthly_NNM_Avail.pro

MONTH1+24:00 - - {DPIPE_HOME}/bin/trend_proc -f {DPIPE_HOME}/scripts/
yearly_NNM_Avail.pro
```

- 2 Modify the *hourly_NNM_Event.pro*, by commenting out all entries except the following summarization:


```
{DPIPE_HOME}/bin/trend_sum -f {DPIPE_HOME}/scripts/hourly_NNM_Event.sum
```
- 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.

Provisioning NNM Management Stations

This chapter covers the following topics:

- [Adding and Modifying Properties](#)
 - Using bulk import
 - Using forms bundled with the NNM Event and Availability Report Pack
- [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 19](#)

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 tool imports the `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 lower.

- Put the category list into OVPI.



By default, data collection is done every hour. The data aggregated by NNM is at the periodicity (polling granularity) of 15 minutes.

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 displayed, select the particular object you would like 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 timeout

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.

NNM Event Report



Add or Update NNM List

A list of NNM Station is required to collect the event and availability data. The table below lists the NNM Station configured for OVPI data collection. This form can be used to update or create new NNM Station for OVPI to collect data.

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	600
bisqit2.cnd.hp.com	8,092	60	15	600
ovpihpt6.india.hp.com	8,092	60	15	600

NNM Station

OVI Port Number

Poll Interval (in mins)

Poll Granularity (in mins)

HTTP timeout (in secs)

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.

NNM Event Report

Remove NNM Station



A list of NNM Station is required to collect the event and availability data. The table below lists the NNM Station configured for OVPI data collection. This form can be used to remove the selected NNM Station from collection by OVPI.

NNM Station	OVI Port	HTTP Timeout
suntest21.cnd.hp.com	8,092	600

NNM Station

OVI Port Number

HTTP timeout (in secs)

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:

- 1 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.

NNM Event Report



Add or Update Category Information

Every NNM Station has a set of Category list for its alarms. The tables below lists the NNM Stations and their Category list. This form can be used to update or add new alarm category for a choosen NNM Station.

NNM Station	Category Id	Category Name
All NNM Stations	3	Threshold Alarms
bisqit2.cnd.hp.com	4	Status Alarms
default	5	Configuration Alarms
ovpihpt6.india.hp.com	6	Application Alert Alarms
suntest21.cnd.hp.com	7	Problem Diagnosis Alarms

NNM Station

Category Id


Category Name

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.

NNM Event Report



Remove Alarm Category

Every NNM Station has a set of Category list for its alarms. The tables below lists the NNM Stations and their Category list. This form can be used to remove a category for an NNM Station.

NNM Station	Category Id	Category Name
suntest21.cnd.hp.com	2	Error Alarms
	3	Threshold Alarms
	4	Status Alarms

NNM Station

Category Id

Category Name

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.

NNM Event Report

Update Availability Threshold



The availability threshold is the availability percentage level. Any value below this value would be treated as an SLA violation. The availability threshold value can be based on NNM Station, Customer, Vendor and Device Type. This form can be used the modify the availability threshold value.

Availability Threshold

NNM Station	Customer	Vendor	Device Type	Availability Threshold (%)
ovpihpt6.india.hp.com	Customer Unassigned	Unset	IPRouter	95.00
ovpihpt6.india.hp.com	Customer Unassigned	Unset	Node	95.00
ovpihpt6.india.hp.com	Customer Unassigned	Unset	PC	95.00
ovpihpt6.india.hp.com	Customer Unassigned	Unset	Workstation	95.00
ovpihpt6.india.hp.com	Customer Unassigned	cisco	IPRouter	95.00
suntest21.cnd.hp.com	Customer Unassigned	Unset	IPRouter	95.00

NNM Station

Customer Id

Vendor

Device Type

Availability Threshold

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:

- 1 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

```
$OV_BIN/ICO_ctl.ovpl -s : to stop OVI
```

```
$OV_BIN/ICO_ctl.ovpl -g : to start OVI
```

Windows

```
%OV_BIN%\ICO_ctl.ovpl -s : to stop OVI
```

```
%OV_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 in `$DPIPE_HOME/log/trend.log`. Check for entries with `get_nnm_aggevt.pl`, the module that collects event data from NNM stations.
- 2 On NNM, collection details and failures, if any, are logged in `$OV_TMP/OVPI/NNM_EVT_RP_*.log`

10 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.

Network Node Manager



Detailed Availability Report

The Detailed Availability Report, reports on availability, mtrr, mtbf, total downtime and the outages, by the NNM Station, Vendor, Customer and Device type. Select the nnm station, customer, vendor and the device type from the top tables to view the daily, monthly and yearly availability metrics.

NNM Station	Vendor	Customer	Device Type
All	HP	Halley	Router
ovpint6.india.hp.com	DEF	Himalaya	
ovpihpt6.india.hp.com			

Availability metrics for the above selected NNM Station, Vendor, Customer and Device Type

Month to Date | Monthly | Yearly

Mon, Mar 1 12:00 AM - Mon, Mar 22 3:03 PM

Date	Availability (%)	MTTR (in sec)	Total Downtime (in sec)	MTBF (in sec)	Outage Count
21, Mar	94.44	425.00	4,800	100.00	48
20, Mar	94.44	425.00	4,800	100.00	48
19, Mar	94.44	425.00	4,800	100.00	48
18, Mar	94.44	425.00	4,800	100.00	48
17, Mar	94.44	425.00	4,800	100.00	48
16, Mar	94.44	425.00	4,800	100.00	48
15, Mar	94.44	425.00	4,800	100.00	48
14, Mar	94.44	425.00	4,800	100.00	48
13, Mar	94.44	425.00	4,800	100.00	48
12, Mar	94.44	425.00	4,800	100.00	48
11, Mar	94.44	425.00	4,800	100.00	48

Network Node Manager

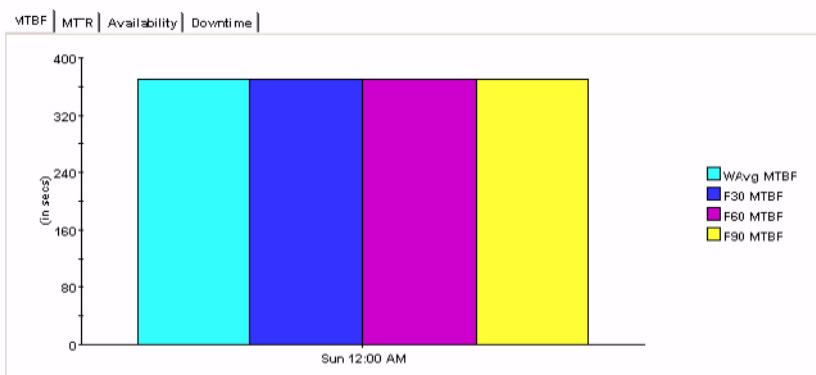


Availability: Forecast By Customer

The Availability Forecast with Baseline Report, reports on mean time between failure (mtbf), mean time to repair(mtr) and counttime. Select the Customer and Device type to view corresponding forecastwith baseline details for mtbf, mtr, availability and downtime.

Customer	Device Type
<div style="background-color: yellow; border: 1px solid black; padding: 2px; display: inline-block;">ABC</div> All Customers Halley Himalaya Ozzy	<div style="background-color: yellow; border: 1px solid black; padding: 2px; display: inline-block;">All</div> Bridge Router

Baseline Vs F30, F60 and F90 of metrics for the selected Customer and Device Type



Network Node Manager



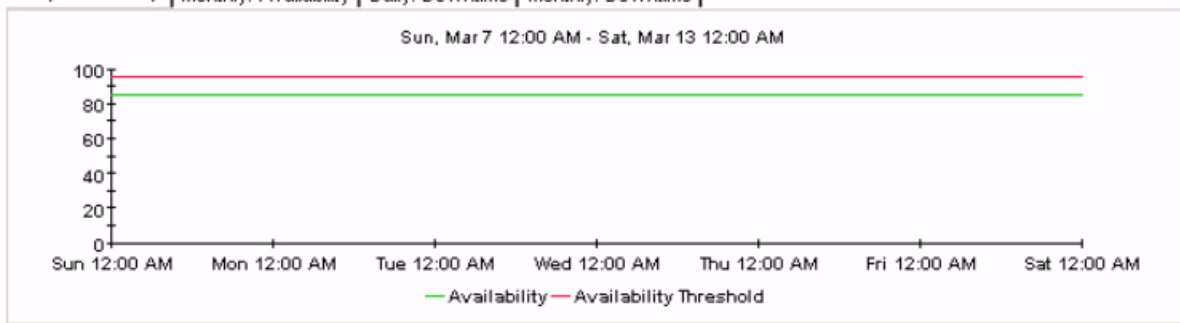
Availability: SLA Report

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.

Vendor	Device Type
AAA	All
All	Bridge
DEF	Computer
HP	Router
UNKNOWN	

Availability and Downtime details for the selected Vendor and Device Type

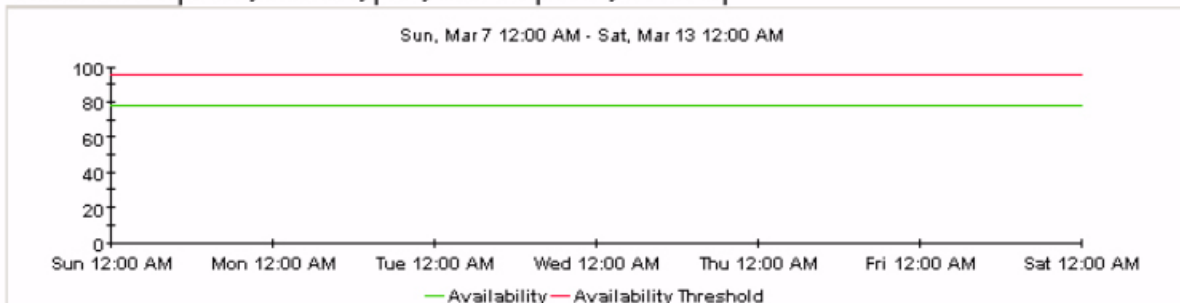
Daily: Availability | Monthly: Availability | Daily: Downtime | Monthly: Downtime



Customer	Device Type
Customer Unassigned	All
All Customers	Bridge
ABC	Router
Ozzy	
Halley	
HaleBob	

Availability and Downtime details for the selected Customer and Device Type

Daily: Availability | Monthly: Availability | Daily: Downtime | Monthly: Downtime



Network Node Manager

Executive Summary by Vendor



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.

NNM Station

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

Vendor

All
Cisco
HP
Sun

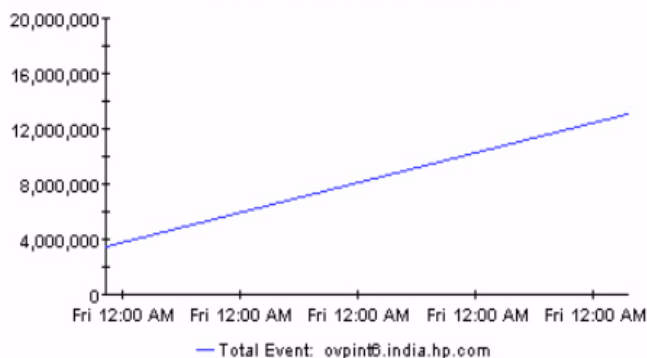
Category

All Categories

- Application Alert Alarms
- Configuration Alarms
- Error Alarms
- Status Alarms
- Threshold Alarms

Monthly Summary By Category

Thu, Jan 1 12:00 AM - Sun, Feb 1 12:00 AM



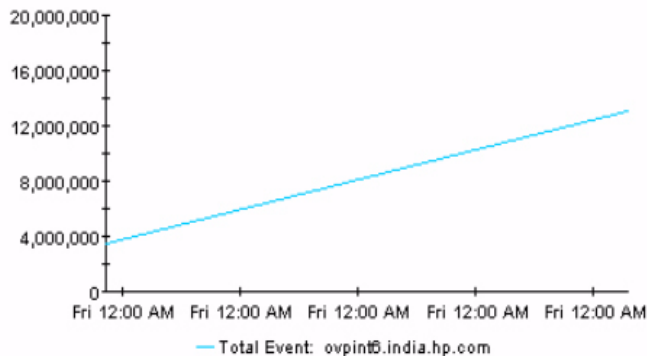
Severity

All Severities

- Critical
- Major
- Minor
- Normal
- Warning

Monthly Summary By Severity

Thu, Jan 1 12:00 AM - Sun, Feb 1 12:00 AM



Network Node Manager

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

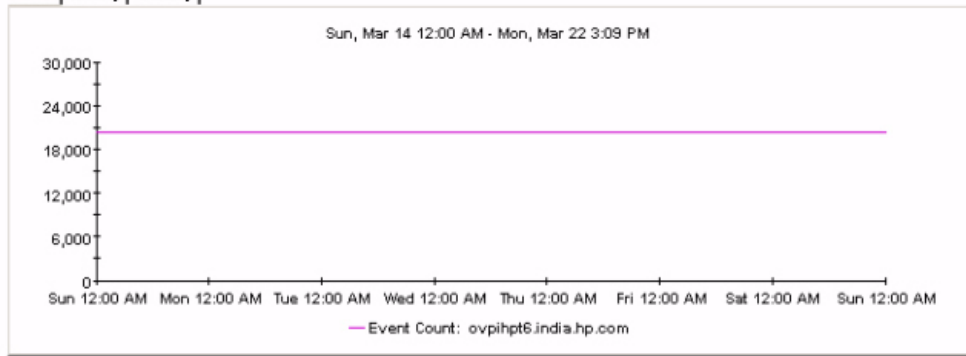
All

ovpihpt6.india.hp.com

ovpint6.india.hp.com

Event Count for Selected NNM Station

Daily | Weekly | Monthly



Network Node Manager

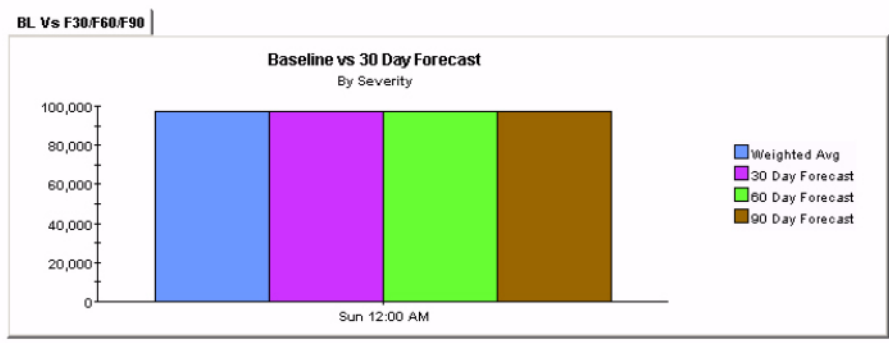


Forecast By Severity

The NNM Event Forecast 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 corresponding 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		-1	All Severities
		1	Normal
		2	Warning
		3	Minor
		4	Major
		5	Critical

30, 60 and 90 Days Events Count Forecast for the selected NNM Station and Severity



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	Severity	
All	sev_id	sev_name
ovpihpt6.india.hp.com	-1.00	All Severities
ovpint6.india.hp.com	1.00	Normal
	2.00	Warning
	3.00	Minor
	4.00	Major
	5.00	Critical


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

Daily | Weekly

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

Network Node Manager

NNM Events by Category and Device



invent

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.

NNM Station	Category	
All	Category ID	Category
ovpht6.india.hp.com	-1	All Categories
ovpint6.india.hp.com	1	LOGONLY
	2	Error Alarms
	4	Status Alarms

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

Network Node Manager



invent

NNM Events by Severity and Device

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 aggregated over monthly, weekly and daily.

NNM Station	Severity ID	Severity
All	-1	All Severities
ovpipt6.india.hp.com	1	Normal
ovpirt6.india.hp.com	2	Warning
	3	Minor
	4	Major
	5	Critical

Event Count by Device for the Selected NNM Station and Severity

Daily | Weekly | Monthly

Event Count By Device	
Sun, Mar 21 12:00 AM - Sun, Mar 21 12:00 AM	
Device	Event Count
All Nodes	4,512
acapulco.grenoble.hp.com	2,256
boby.grenoble.hp.com	2,256

Network Node Manager

Executive Summary By Severity

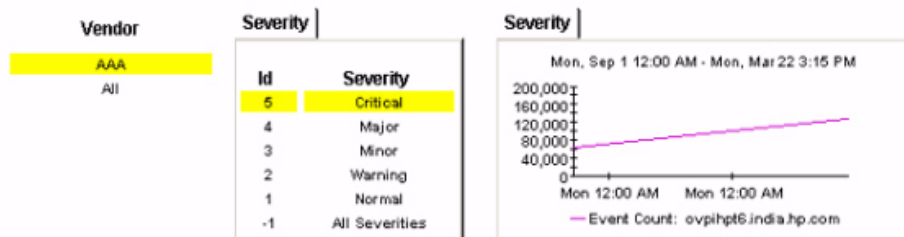


The Executive Summary Report, reports the monthly event count based on Vendor and Customer. It also forecasts the total events for 30, 60 and 90 days using the weighted average of total events, aggregated by Severity. Choose the NNM Station from the top table to view the details as required.

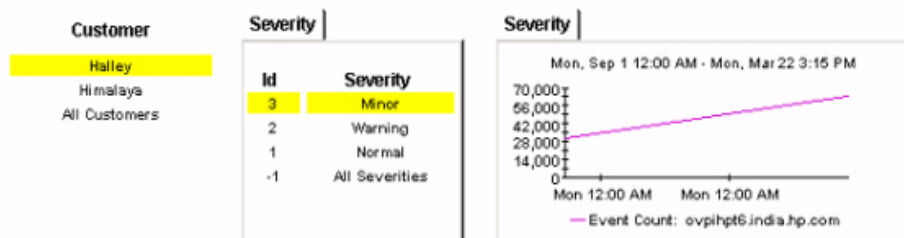
NNM Station

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

Monthly Summary By Vendor for Selected NNM Station



Monthly Summary By Customer for Selected NNM Station



A

Add or Update Category Information (form), **22**
Add or Update NNM List (form), **19**
alarm category, **8**
Availability folder, **8**
availability threshold, **24**

B

bulk import, **18**

C

change view, **19**
Common Property Tables, **12**
Consolidated (folder), **9**

D

demo package, **12**

E

editing parameters, **9**
Event folder, **8**
extracting packages, **12**

G

General folder, **8**
group accounts, **9**
group filters, **9**

H

hourly_NNM_Avail.pro, **15**
hourly_NNM_Event.pro, **15**
HTTP port numbers, **25**

P

polling granularity, **20**
polling interval, **20**
Product Manuals Search (web page), **10**

R

Remove Alarm Category (form), **23**
Remove NNM Stations (form), **21**

S

Severity folder, **8**

U

Update Availability Threshold (form), **24**

