HP OpenView Performance Insight

Report Pack for Network Node Manager

Software Version: 1.0

Reporting and Network Solutions

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1

Overview

This chapter covers the following topics:

- Introduction
- Report Types
- Ways to Customize Reports
- Options for Viewing Reports
- Sources for Additional Information

Introduction

The NNM Event Report Pack provides information on events from the nodes managed by NNM. You can use it to analyze trends in events and to monitor network performance.

You can do the following activities using the report pack:

- view vendor report
- view category report
- view severity report
- view devices in the network that cause the most number of alarms
- view the most severe alarms

These reports help you understand the overall status of your network, identify types of problems and where they occur, identify reliable vendors, and decide where more resources must be added on the network. You can also compare the number of events in each severity group against expected service levels, and share this information with internal or external customers.

Features

The NNM Event Report Pack provides:

- Reporting based on events collected by HP OpenView Network Node Manager by category and severity

- Customizing the look and feel, as well as the type of data that is shown
- Customer orientation that allows customers to log in and see only relevant information displayed

Report Types

When you install NNM Event Report Pack, reports are created in the NNM_Report directory. This directory has two child directories: Availability and Event. Reports in the Availability directory relate to NNM stations, Vendors, Customers and Device Type.

The following tables displays the distribution of parameters that the reports use to filter data and reports under each directory. **[X*]** denotes that a sample report is shown at the end of this Guide.

The reports in the **Availability** subdirectory are as follows:

Reports	**NNM Station**	**Vendor**	**Customer**	**Device Type**
Detailed Availability **[X*]**	**X**	**X**	**X**	**X**
Availability: Forecast by Customer			**X**	**X**
Availability: Forecast by Vendor		**X**		**X**
Availability: SLA Report **[X*]**		**X**	**X**	**X**

The **Event** directory has the subdirectories such as General Reports, Category Reports, Severity Reports and Consolidated reports.

The following table lists the **General** reports:

Reports	**NNM Station**	**Vendor**	**Customer**	**Device**	**Device Type**	**Category**	**Severity**
Event Summary by Customer			**X**				
Event Summary by Device Type					**X**		
Event Summary by NNM Station **[X*]**	**X**						
Event Summary by Vendor		**X**					
Executive Summary by Customer	**X**		**X**			**X**	**X**
Executive Summary by Vendor **[X*]**	**X**	**X**				**X**	**X**
Forecast by Category	**X**					**X**	

Reports	NNM Station	Vendor	Customer	Device	Device Type	Category	Severity
Forecast by Severity **[X*]**	**X**						**X**
Hot Spots Report	**X**			**X**			
Hot Spots: Top 20 By Device **[X*]**	**X**			**X**			**X**

The following table lists the reports under the **Category** subdirectory:

Reports	NNM Station	Vendor	Customer	Device	Device Type	Category	Severity
NNM Event Summary by Category and Device **[X*]**	**X**			**X**		**X**	
NNM Event Summary by Category and Device Type	**X**				**X**	**X**	
NNM Event Summary by Category and Severity	**X**					**X**	**X**
NNM Event Summary by Category and Vendor	**X**	**X**				**X**	

The following table lists the reports in the **Severity** subdirectory:

Reports	NNM Station	Vendor	Customer	Device	Device Type	Category	Severity
NNM Events by Severity and Category	**X**					**X**	**X**
NNM Events Summary by Severity and Device **[X*]**	**X**			**X**			**X**
NNM Event Summary by Severity and Device Type	**X**				**X**		**X**
NNM Event Summary by Severity and Vendor	**X**	**X**					**X**

The following table lists the reports in the **Consolidated** subdirectory:

Reports	NNM Station	Vendor	Customer	Device	Device Type	Category	Severity
NNM Events by Category	**X**	**X**		**X**	**X**	**X**	**X**
NNM Events by Severity	**X**	**X**		**X**	**X**	**X**	**X**
Executive Summary by Category	**X**	**X**	**X**			**X**	
Executive Summary by Severity **[X*]**	**X**	**X**	**X**				**X**
Hot Spot Report	**X**			**X**			**X**

Ways to Customize Reports

The contents of a report can be customized by applying group filters, by editing parameters, by editing tables and graphs, and by importing customers. If you apply a group filter, you are filtering out data for the purpose of creating customer-specific reports. If you edit a table, graph, or parameter, you are making a temporary change to a report.

Group Filters

If you intend to share your reports with customers, or want divisions within your enterprise to see division-specific performance data, your reports must be customer-specific, containing data limited to one customer. Creating customer-specific reports is an administrator task that involves the following steps:

- Importing custom property information (customer names and device locations) using Common Property Tables 3.0
- Creating a group account for all of the users affiliated with a particular customer
- Creating a group filter for the group account

For more information about creating filters for group accounts, refer to the *HP OpenView Performance Insight 5.0 Administration Guide*.

Report Parameters

Reports use some parameters to filter data as applicable. If you edit a parameter, you are applying a constraint to the report with the intention of eliminating data you do not want to see.

Constraining the contents of a report by editing parameters is optional and you may apply multiple constraints at once. NNM Report Pack has the following editable parameters:

- Category
- Category ID

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

To edit parameters, click the **Edit Parameters** icon at the bottom right-hand corner of the report. When the **Edit Parameters** window opens, type the constraint in the field and then click **Submit**.

Options for Viewing Reports

Before reports can be viewed using a Web browser, they must be deployed. Enable the Deploy Reports option during installation of NNM Event Report Pack. Then the reports are deployed and available for remote viewing.

The method of report viewing available to you depends on how OVPI was installed. If the client component is installed on your system, you have access to Report Viewer, Report Builder, and the Management Console. If the client component was not installed on your system, the Web Access Server is your only option for viewing reports.

For more information about the client components, refer to the *Performance Insight Installation Guide*. For more information about deploying, viewing, and undeploying reports, refer to the *Performance Insight Guide to Building and Viewing Reports*.

Sources for Additional Information

For information regarding the latest enhancements to NNM Event Report Pack 1.0 and any known issues affecting this package, refer to the *NNM Event Report Pack 1.0 Release Statement*. The following documents provide additional information:

- *Common Property Tables 3.0 User Guide*
- *Reporting and Data Analysis with Network Node Manager*
- *Managing Your Network with HP OpenView Network Node Manager*

The following documents are sources of information about OVPI:

- *HP OpenView Performance Insight 5.0 Administration Guide*
- *HP OpenView Performance Insight 5.0 Installation Guide*
- *HP OpenView Performance Insight 5.0 Guide to Building and Viewing Reports*

OVPI Manuals and manuals for individual reporting solutions that run on OVPI are distributed with the products on the product distribution CDs. The manuals are also available for downloading from the following site:

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

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

Every title listed under **Reporting and Network Solutions** indicates the manual's date of publication. Since updated user guides are posted to this site on a regular basis, you should check this site for updates before using an older PDF that may not longer be current.

2

The Package Installation

This chapter covers the following topics:

- Preparing for Installation
- Installing OVPI Integration Module on NNM
- Installing NNM Event Report Pack 1.0
- Package Removal

Preparing for Installation

Before installing the NNM Event Report Pack, verify that your computer meets all the prerequisites for installing Network Node Manager (NNM) and HP OpenView Performance Insight (OVPI) on separate servers.

Prerequisites for Installation

NNM Event Report Pack 1.0 has a combination of core-product requirements and package-level requirements. The core product requirements are as follows:

- OVPI 5.0
- Any available OVPI 5.0 Service Pack
- NNM OVPI Integration Module

The package-level prerequisites are as follows:

- Common Property Tables 3.0

NNM and OVPI should be in the same time zone.

You will find information about each Service Pack, including installation instructions, in the release notes for the Service Pack.

Distributed Environments

If you are running NNM Event Report Pack on a distributed system, the central server, every satellite server, and every remote poller must be running OVPI 5.0 and with available Service Packs.

Before Installing NNM Event Report Pack, you must verify that the Network Node Manager (NNM) services are operating on the management station.

Installing OVPI Integration Module on NNM

To verify that NNM services are operating on the management station, follow these steps.

Make sure on Windows, Perl shipped with NNM is in the PATH.

1 Execute `ovstatus -v` to verify that NNM is installed and running.

All of the processes, including `pmd`, should be running. Refer to the *HP OpenView Network Node Manager Quick Start Installation Guide* for instructions on how to install the NNM product.

2 Insert the RNS 5.0 CD and start the Installer.

Windows: Run `setup.bat`

UNIX: Run `setup`

3 Source OV NNM environment variables:

Windows: Source `.%OV_BIN%\ov.envvars.bat` into Windows environment.

UNIX: If running `sh` or `ksh` on HP-UX or Solaris, source `. /opt/OV/bin/ov.envvars.sh` into UNIX environment.

If running `csh` on HP-UX or Solaris, source `/opt/OV/bin/ov.envvars.csh` into UNIX environment.

4 Install the NNM OVPI Integration Module (if not already installed).

a Insert the RNS 5.0 CD and select **`2`** from the Reporting and Network Solutions 5.0 Main Menu.

b Select **`2`** from the NNM Value-add Components Menu. Messages about NNM such as version and installation are listed.

c Enter the address of the system running the OVPI Report Application Server. Example: **`ovpi.testhp.com`**

d Enter the port number that the OVPI Report Application Server is running on. Example: **`80`**

e Select **`0`** from the Reporting and Network Solutions 5.0 Main Menu.

f Select **`0`** again to complete installation and **Exit**.

5 Start the `ICO_RNS` service on Windows. This step is not required on UNIX.

When you install NNM/OVPI Integration Utilities, a Windows service called `ICO_RNS` is installed. To move event data from NNM to OVPI, this service must be running. Though the installation process creates the server and sets its start status to *automatic*, it does not actually start the service.

You must manually start the service the first time. After this, whenever the machine is restarted, this process is also restarted automatically.

Installing NNM Event Report Pack 1.0

Perform the following tasks to install NNM Event Report Pack 1.0:

- Task 1: Extract packages from the product distribution CD
- Task 2: If necessary, upgrade Common Property Tables
- Task 3: Install NNM Event Report Pack 1.0

Task 1: Extracting Packages from the RNS 5.0 CD

Follow these steps to copy OVPI packages from the Reporting and Network Solutions CD to the Packages directory on your system:

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 5.0 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 **s**elect 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.

You can navigate to the Packages directory on your system to see the following directories under the NNM Event Report Pack directory:

- 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 other packages. Selection tables are linked to graphs and you may experiment with view options for individual tables and graphs.

Task 2: Upgrade Common Property Tables

If you are running an older version of Common Property Tables, you must first upgrade to Common Property Tables 3.0. Installing this particular upgrade package is no different from installing other upgrade packages; however, keep in mind that you cannot install the upgrade for Common Property Tables *and* other packages at the same time. Finish the upgrade for Common Property Tables first, then run the install wizard a second time to install the other packages.

Task 3: Installing NNM Event Report Pack 1.0

If Package Manger is not running, select Package Manager from the Management Console and follow these steps.

1. Click **Next**. The Package Location window opens.
2. Click the **Install** radio button.
3. 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.
5. Accept the default settings for Deploy Reports; also accept the defaults for application server name and port in the same window.
6. Enter `trendadm` as username and password.
7. Click **Next**. The Package Selection window opens.
8. Select the check box next to the following package names:

   CommonPropertyTables 3.0

   NNM_Event 1.0

   NNM_Event_Demo 1.0
9. Click **Next**. The Type Discovery window opens.
10. To run Type Discovery immediately after package installation, *unselect* Type Discovery and click **Next**.
11. The Selection Summary window opens; verify if the contents of this window are correct.
12. Click **Install** to begin the installation process. The Installation Progress window opens and the install process begins. When the install process is complete, an installation complete message appears.
13. Click **Done** to return to the Management Console.
14. Restart OVPI Timer.

For information on how to Configure NNM Event Report Pack, see Chapter 3, NNM Event Report Pack Configuration.

Package Removal

Follow these steps to uninstall NNM Event Report Pack 1.0:

> If you remove a report pack, the associated tables and all the data in those tables will be deleted. If you want to preserve the data in those tables, archive the data before removing the report pack.

1. Log in to the system. On UNIX systems, log in as *trendadm*.
2. Stop OVPI Timer and wait for processes to terminate.
3. Launch **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 Report Pack 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 the username and password as *trendadm*.
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.

3

NNM Event Report Pack Configuration

This chapter covers the following topics:

- Provisioning NNM Management Station
- Adding and Modifying Properties
- Configuring Servers in a Distributed System

Provisioning NNM Management Station

A list of NNM stations is required to collect the event and availability data. There are two ways to provision the NNM list. One is to use OVPI forms, as described in "Using Forms on page 21" and the alternative method is to use Bulk Import.

Bulk Import

To import, a list of NNM Stations use Bulk Import which involves the following tasks.

- Task 1: Creating the NNM station list file
- Task 2: Importing the NNM station list file

Task 1: Creating the NNM stations 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 21

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: Importing the NNM stations 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 in the `$DPIPE_HOME/log/trend.log`.

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.
3. Put the category list into OVPI.

By default, the data collection is done every 1 hour. The data aggregated by NNM is at the periodicity (polling granularity) of 15 minutes.

Adding and Modifying Properties

Reports use the following parameters to filter data as applicable. An alphabetical list of properties that can appear in reports is shown below:

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

- Vendor

Property information comes from the following sources:

- 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.

Using Forms

This section discusses the following forms:

- Add or Update NNM List
- Remove NNM Station
- Add or Update Category Information
- Remove Alarm Category
- Update Availability Threshold

These forms are used to create, update or remove property data. Forms are available with OVPI 5.0. 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

You can use the Add or Update NNM list form to add or update an NNM station for OVPI to collect data. This form lists the collection or polling interval and polling granularity.

To update an NNM station, do as follows:

1. Launch the Management Console (piadmin).
2. Click the **Objects** icon, and under General Tasks window the Add or Update NNM list form will appear in the window on the right. Navigate to the NNM station you want to update, and 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.

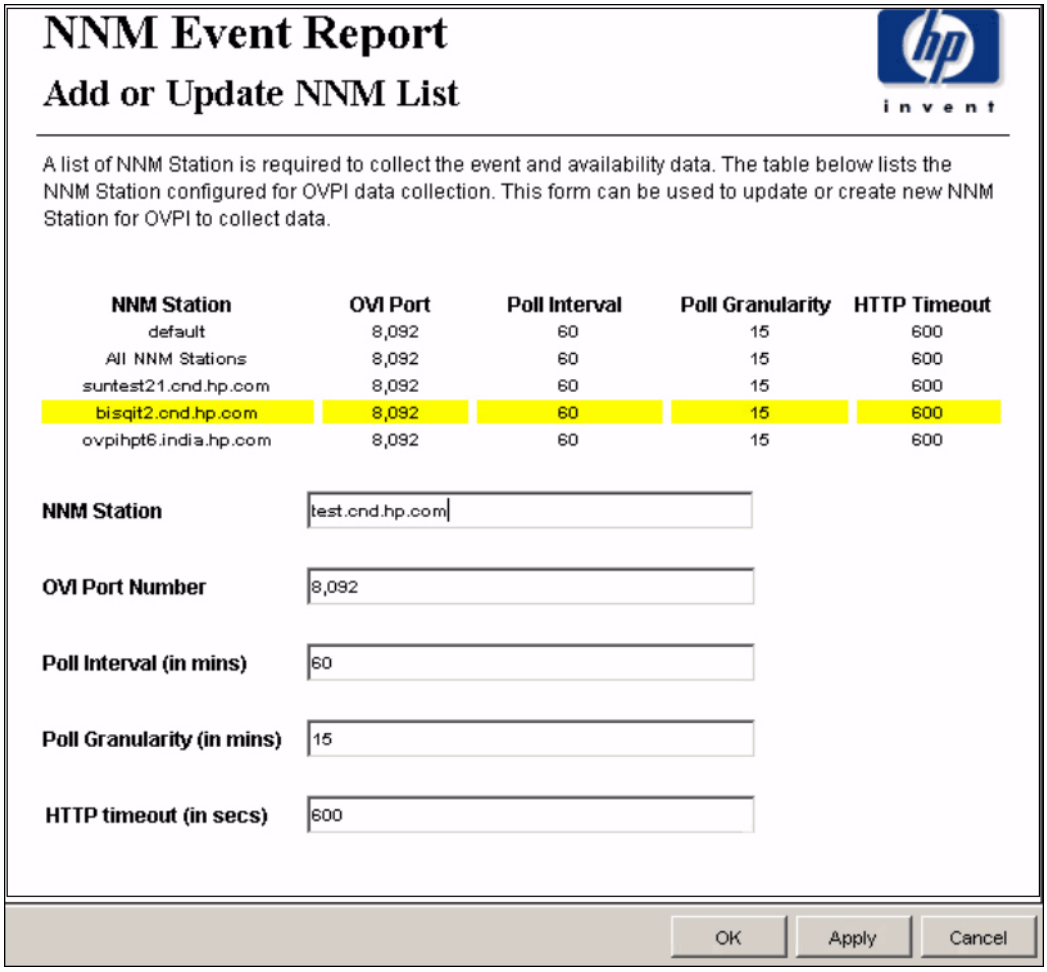
5 Make the changes. Click **Apply** to save changes, **OK** to save changes and close the form, or **Cancel** to close the form without saving changes.

To add a new NNM station, do as follows:

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.



Remove NNM Station

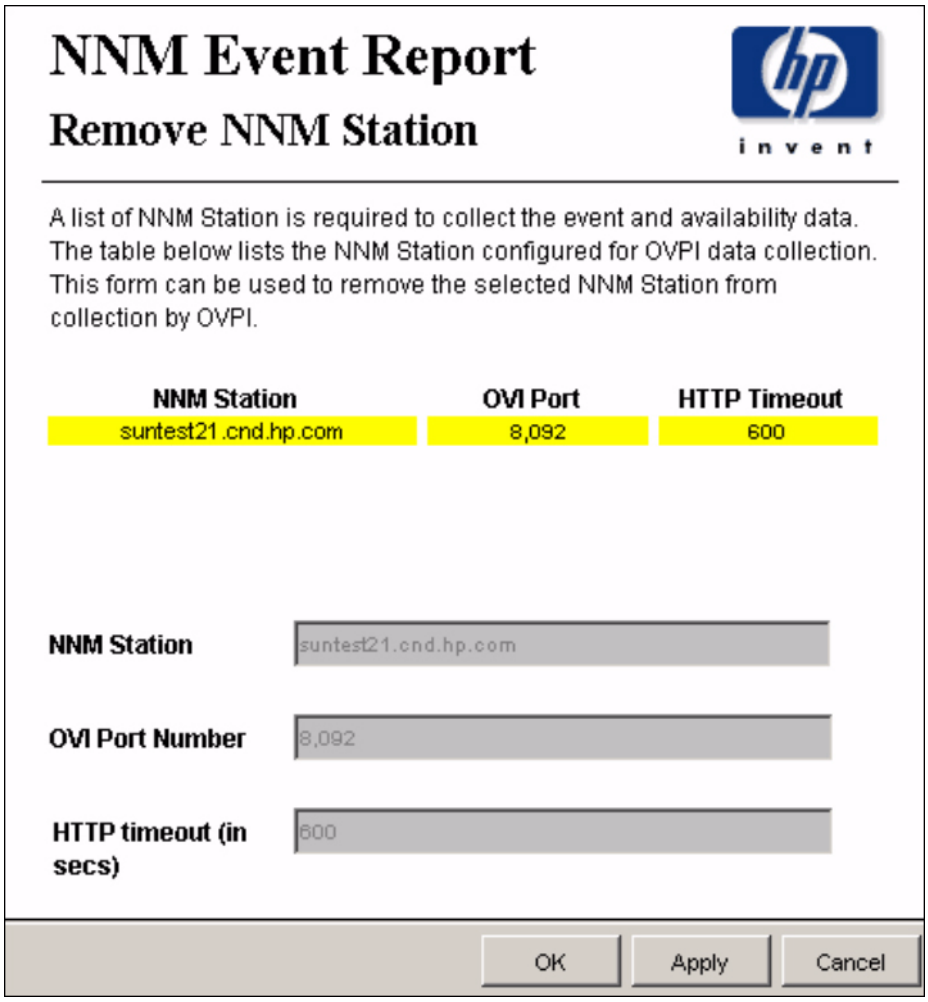
To remove a single NNM station, do as follows:

1. Launch the Management Console (piadmin).
2. Open the Object/Property Management view and 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 Stations form from the Object Specific Tasks window. The form opens.

   The form displays the NNM station 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. But if there is any existing data, that will still be 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

To update a new alarm category for an NNM station, do as follows:

1 Launch the Management Console (piadmin).

2 Click **Objects**, and under General Tasks window, the Add or Update Category Information form will appear in the window on the right.

The form displays the category based on the selected NNM station, in a tabular format.

3 Highlight the row that contains the data you want to change.

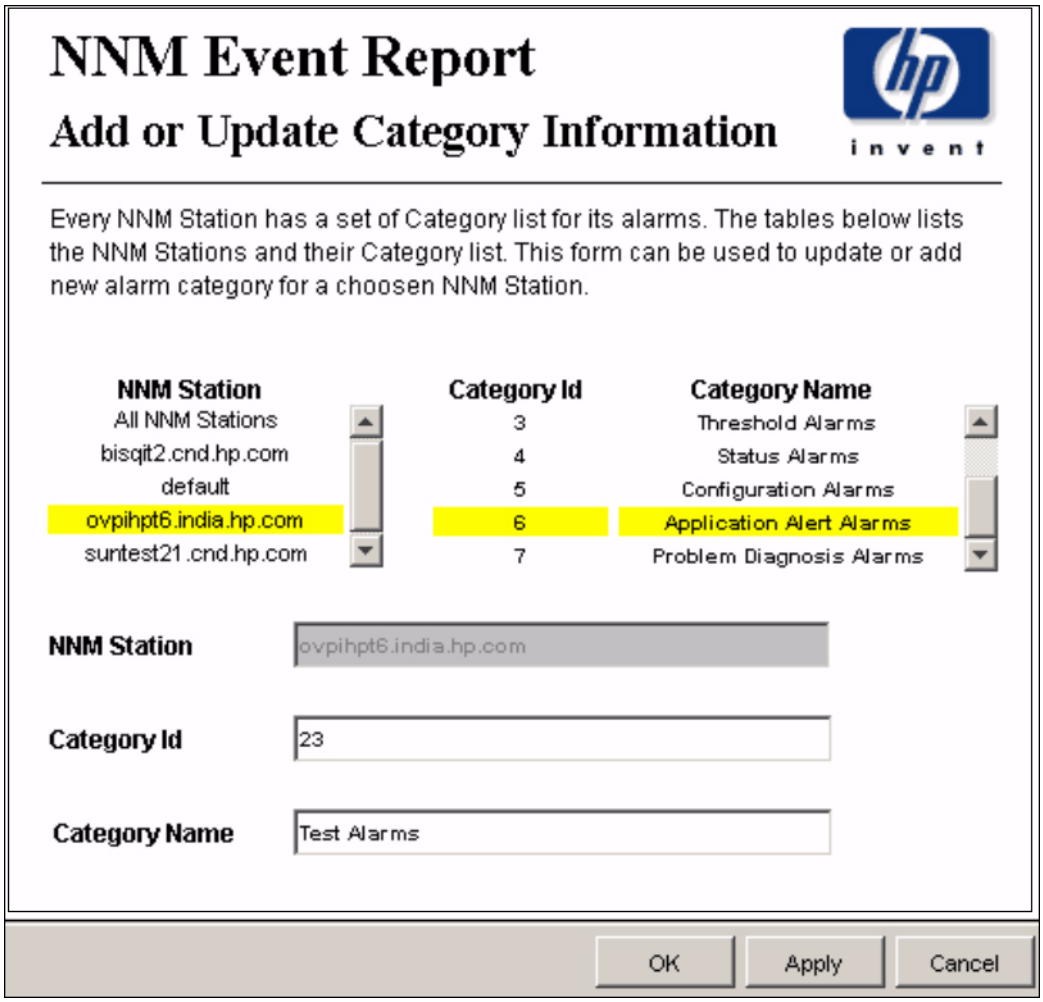
4 Make the changes. Click **Apply** to save changes, **OK** to save changes and close the form, or **Cancel** to close the form without saving changes.

To add a new NNM station, do as follows:

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.



Remove Alarm Category

To remove a category for an NNM station, do as follows:

1 Launch the Management Console (piadmin).

2 Open the Object/Property Management view and select **View > Change View** and use the pop-up window to select OV NNM view. The NNM stations are listed here.

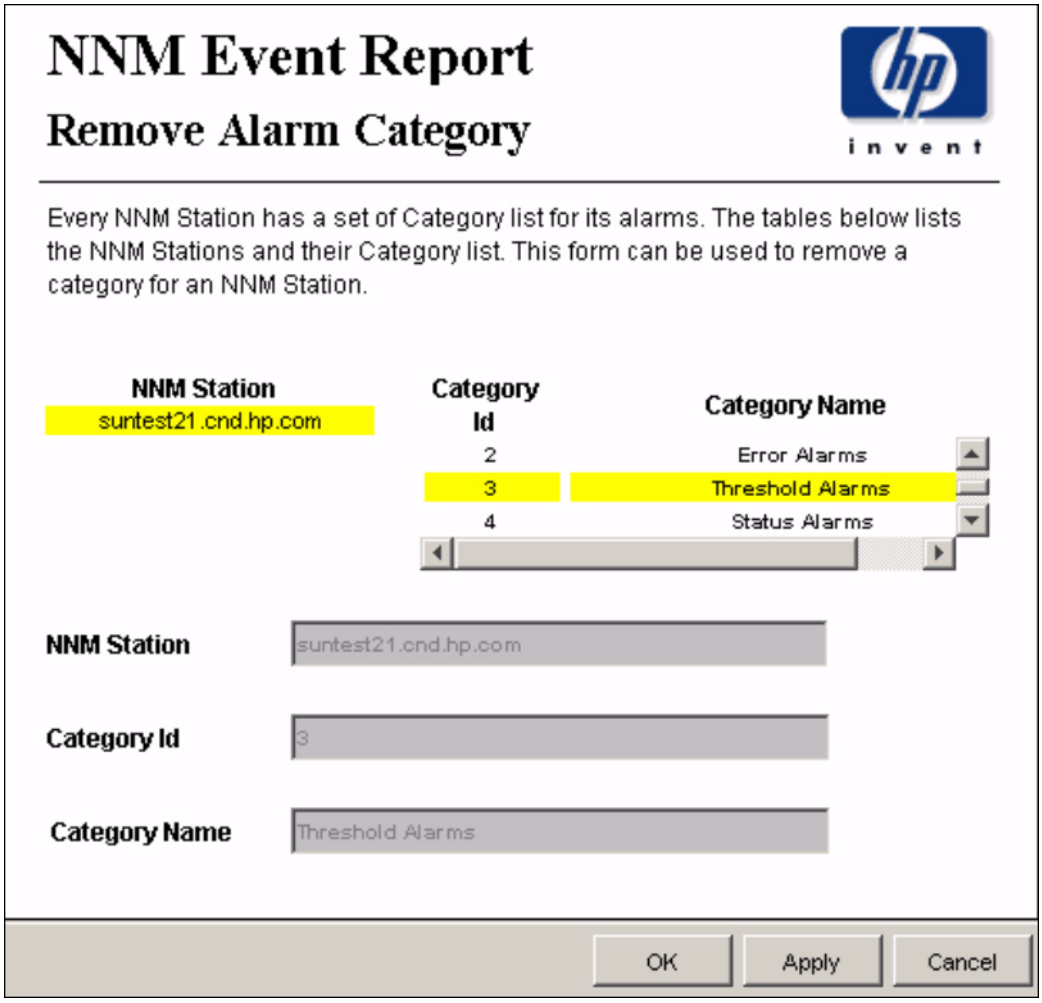
3 Select the NNM station that you want to remove.

4 Double-click the Remove Alarm Category form from the Object Specific Tasks window. The form opens.

The forms displays the list of NNM stations and their Category list.

5 Highlight the row that contains the NNM station, Category Id and Category Name that 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

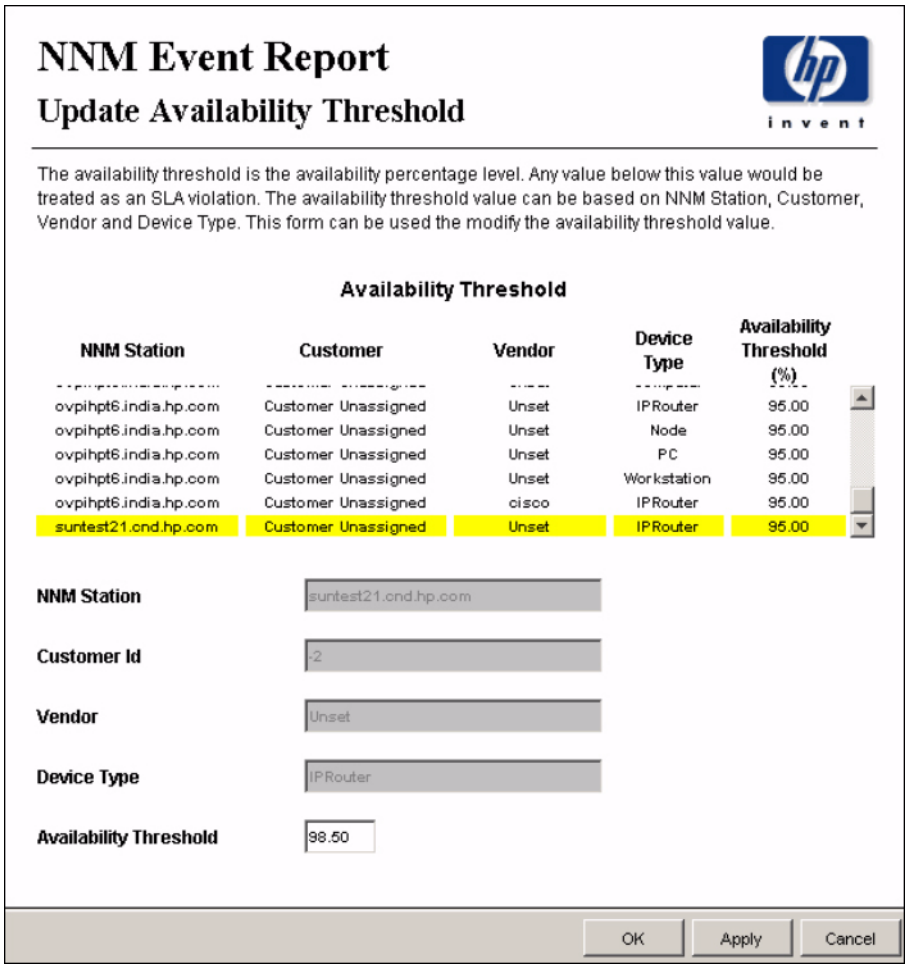
The Availability Threshold (percentage of availability) values are based on NNM station, Customer, Vendor and Device type. Threshold is the line between normal and abnormal performance. When this line is crossed, an exception is recorded. Thresholds are set to default values that are easily changed to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

To change the threshold value, do as follows:

1. Launch the Management Console (piadmin).
2. Click **Objects**, and under General Tasks window, the Update Availability Threshold form will appear in the window on the right. Double-click the Update Availability Threshold form to open it.

   The form displays a table listing the NNM stations, Customer, Vendor, Device Type and the Availability Thresholds.
3. Highlight the row that contains the Availability Threshold, which 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.



Configuring Servers in a Distributed System

If your system is distributed, and you installed NNM Event Report Pack, you must configure the central server and each satellite server.

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 file `$DPIPE_HOME/lib/trendtimer.sched`. To ensure that the satellite server completes hourly summarizations before the central server does the same, Change the trendtimer start time from 1:00 to 1:00+20. By default, this process starts at beginning of every hour.
6. Ensure that all system clocks are synchronized. This is critical in a distributed environment in which linked processes run on different machines. If the system clocks are not synchronized, the sequence of executing these processes will be inaccurate.

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.

Other Configurations

You may want to edit other configurations to change the port number or synchronize node information or category information.

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
   ```

To Synchronize the Node Information or Category Information

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

- To update NNM Event 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
  ```

- The alarm category can increase overtime. (Example: If you install new RNS SPI's) To update NNM Event report pack use the following script to get the node information:

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

Configuring HTTP Timeout on OVPI for OVI Communication

To overcome HTTP timeout on OVPI, use Add or Update NNM List form and update the HTTP Timeout field. 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 OV NNM Events Data Tool

OV NNM provides Events data using the following tools:

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

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

To change the tool to ovdwquery, do as follows:

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 tool will now be used in the next poll cycle, to get events data from OV NNM.

To change the tool to ovdumpevents, do as follows:

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 the NNM Stations are logged in `$DPIPE_HOME/log/trend.log`. Check for entries with `get_nnm_aggevt.pl`, the module that collects events data from NNM Stations.
2. On NNM, the collection details and failures, if any, are logged in

   `$OV_TMP/OVPI/NNM_EVT_RP_*log`

4

NNM Event Reports

This chapter covers the following topics:

- NNM Event Reports
- Availability Reports
- Event Reports

NNM Event Reports

The NNM Event Report pack provides a summary of event data collected from NNM stations based on the following parameters:

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

This chapter provides a brief description and screen shots for some of the Availability and Event reports. Sample reports are shown to illustrate the different report formats.

Description of terms used in the reports:

mtbf (mean time between failure)	mean time between failure for selected vendor and device type
mttr (mean time to repair)	mean time to repair for selected vendor and device type
availability	availability for selected vendor and device type
downtime	downtime for selected vendor and device type

Availability Reports

You can use the following Availability Reports to check the availability of network devices:

- Detailed Availability Report: This provides mttr, mtbf, availability and downtime of nodes managed by NNM.
- Forecast by Customer: This provides 30, 60 and 90 days' forecast on mttr, mtbf and downtime.
- Forecast by Vendor: This provides 30, 60 and 90 days' forecast on mttr, mtbf and downtime.
- SLA Report: This provides information on the availability, downtime (with threshold values of availability breaches) for vendors and customers.

Detailed Availability Report

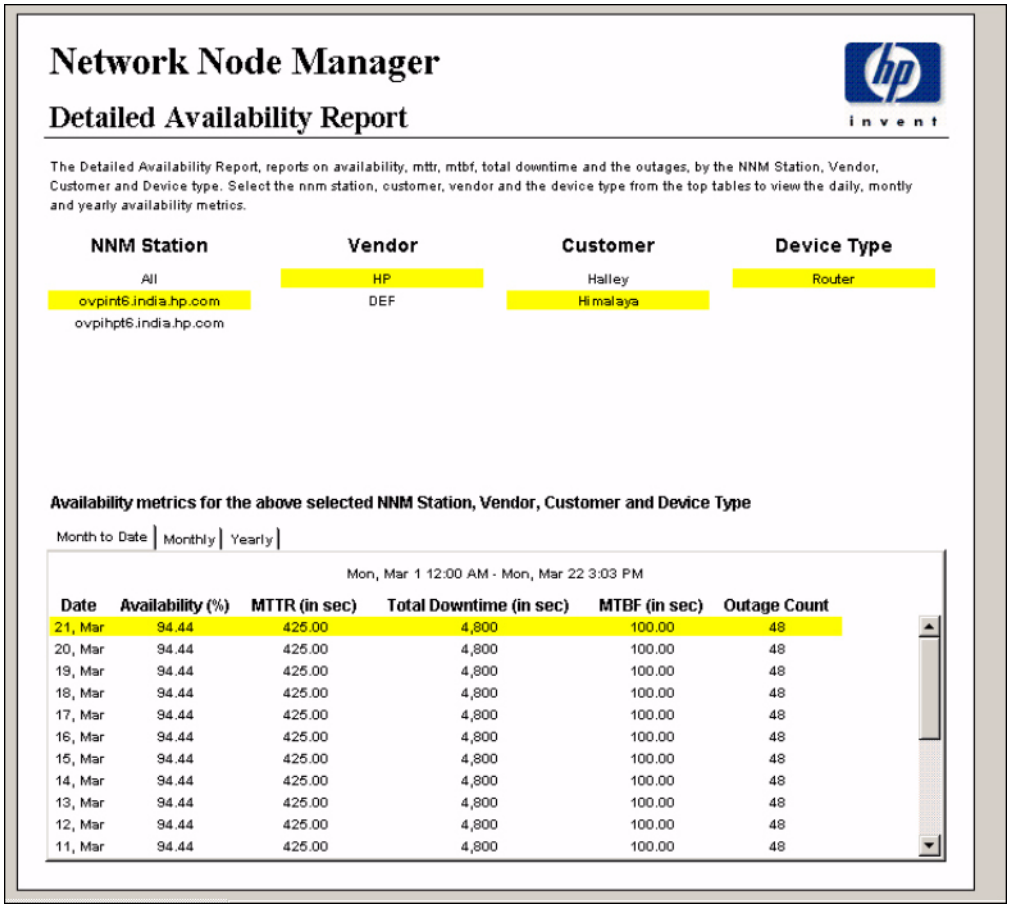
You can use the **Detailed Availability** report to view reports on the statistics and the availability metrics.

To view availability metrics:

1. Open the report and select the NNM station.
2. Select the customer.
3. Select the vendor.
4. Select the device type.

The reports display the statistics based on month to date, monthly and yearly availability metrics:

- Month to date — This displays the statistics on a daily basis for this month.
- Monthly — This displays the summary of statistics on a monthly basis for the last 6 months.
- Yearly — This displays the summary of statistics for the last 3 years.



Network Node Manager

Detailed Availability Report

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The Detailed Availability Report, reports on availability, mttr, 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, montly 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

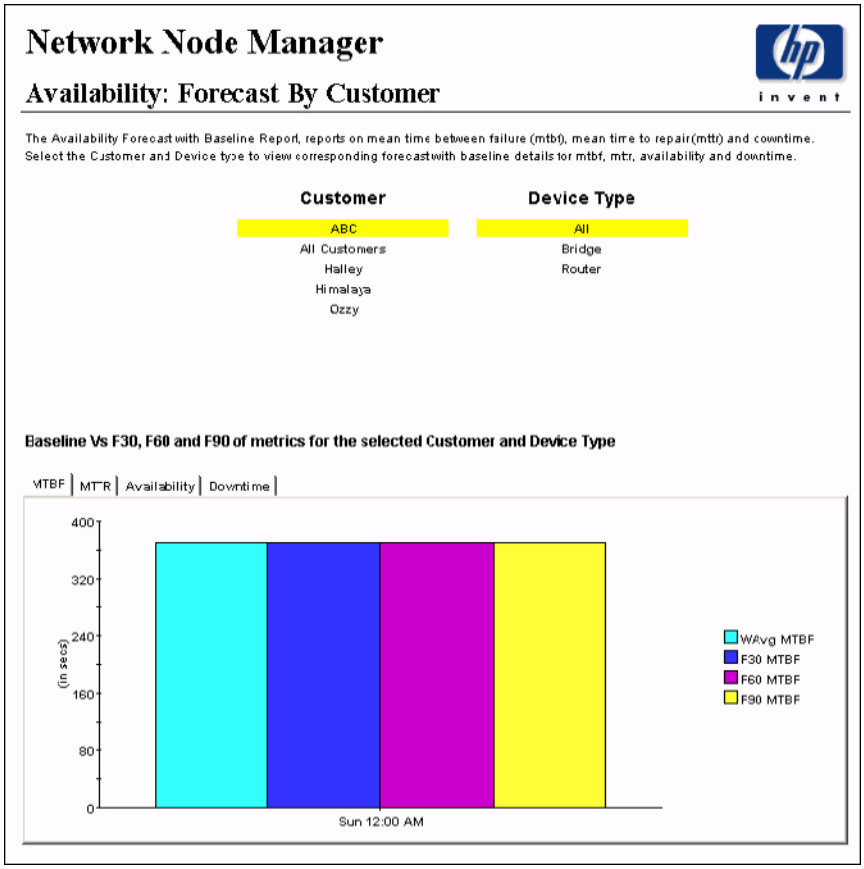
Date	Availability (%)	MTTR (in sec)	Total Downtime (in sec)	MTBF (in sec)	Outage Count
21, Mar	94.44	425.00	4,800	100.00	48
20, Mar	94.44	425.00	4,800	100.00	48
19, Mar	94.44	425.00	4,800	100.00	48
18, Mar	94.44	425.00	4,800	100.00	48
17, Mar	94.44	425.00	4,800	100.00	48
16, Mar	94.44	425.00	4,800	100.00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

Forecast by Customer

You can use the **Availability: Forecast by Customer** report to view the mtbf, mttr, availability, and downtime.

To view the summary forecast:

1. Open the **Availability: Forecast by Customer** report.
2. Select the customer and device type from the respective table in the report. The report displays the following:
   - `MTBF`: This shows the mean time between failure for selected vendor and device type.
   - `MTTR`: This shows the mean repair time for the selected vendor and device type.
   - `Availability`: This shows the availability for the selected vendor and device type.
   - `Downtime`: This shows the downtime for selected vendor and device type.

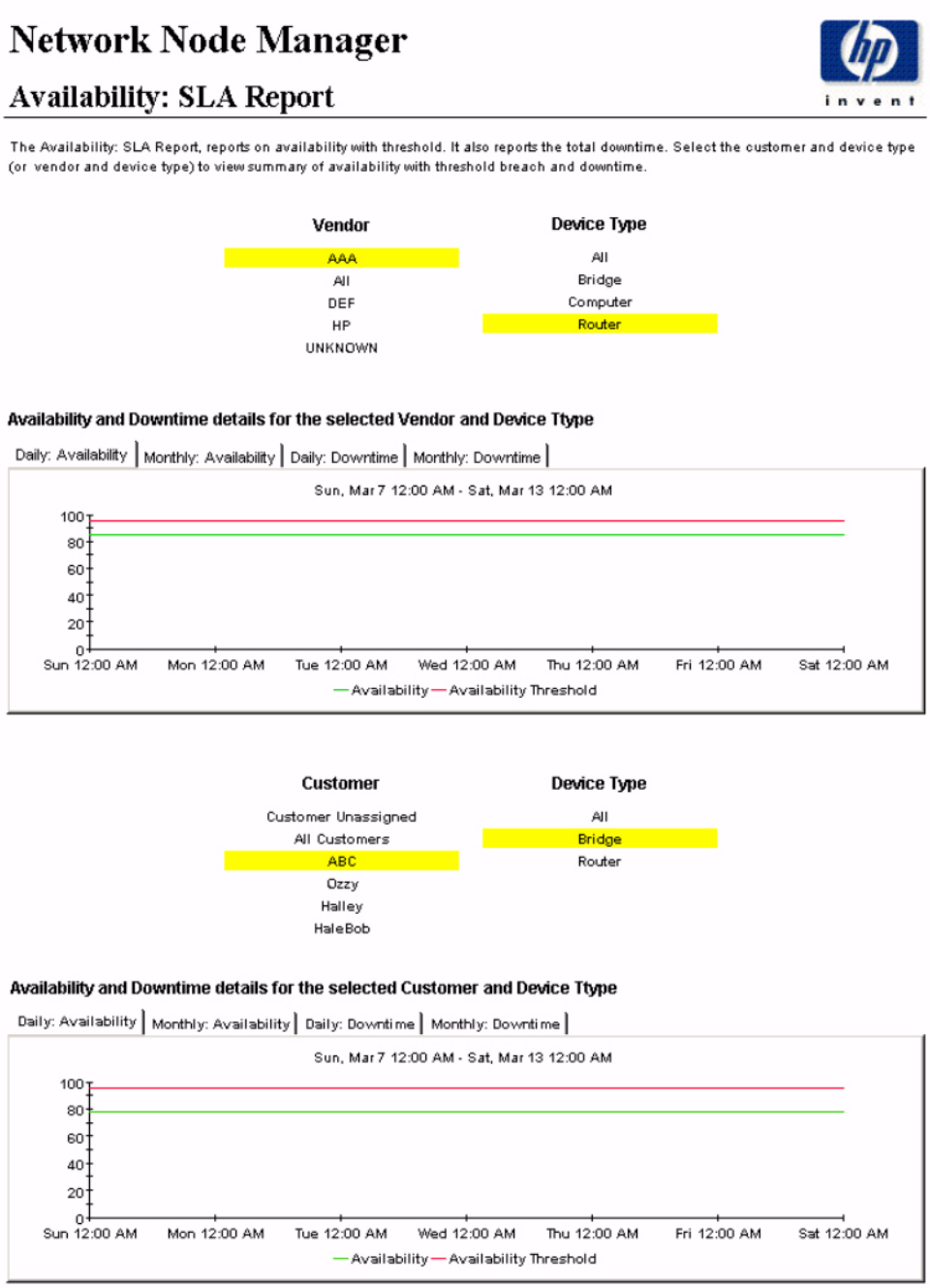


SLA Report

You can use the **Availability SLA Report** to view the availability with threshold and total downtime based on vendor and device type or customer and device type.

To view the summary of availability with threshold breach and downtime:

1. Select the vendor and do one of the following:
   - Select the device type.
   - Select the customer and device type from the from the respective table in the report.
2. Select a specific time period. This could be a day or a month. The availability and downtime details appear as follows:
   - `Daily Availability`: This shows the availability and availability threshold for the last seven days.
   - `Monthly Availability`: This shows the availability and availability threshold for the previous months.
   - `Daily Downtime`: This shows the total downtime for the last seven days.
   - `Monthly Downtime`: This shows the total downtime for the last six months.



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Availability: SLA Report

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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 Ttype

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

Sun, Mar 7 12:00 AM - Sat, Mar 13 12:00 AM

100
80
60
40
20
0

Sun 12:00 AM Mon 12:00 AM Tue 12:00 AM Wed 12:00 AM Thu 12:00 AM Fri 12:00 AM Sat 12:00 AM

Availability Availability Threshold

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

Availability and Downtime details for the selected Customer and Device Ttype

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

Sun, Mar 7 12:00 AM - Sat, Mar 13 12:00 AM

100
80
60
40
20
0

Sun 12:00 AM Mon 12:00 AM Tue 12:00 AM Wed 12:00 AM Thu 12:00 AM Fri 12:00 AM Sat 12:00 AM

Availability Availability Threshold

Event Reports

Reports in the **Event** directory are organized in the following sub-directories:

- General
- Consolidated

- Category
- Severity

An Event Report includes information on the Event, Executive Summary by Customer, Device Type, NNM Station, and Vendor. You can analyze events in each severity group by comparing the numbers against expected service levels. This analysis could be useful for your internal or external customers.

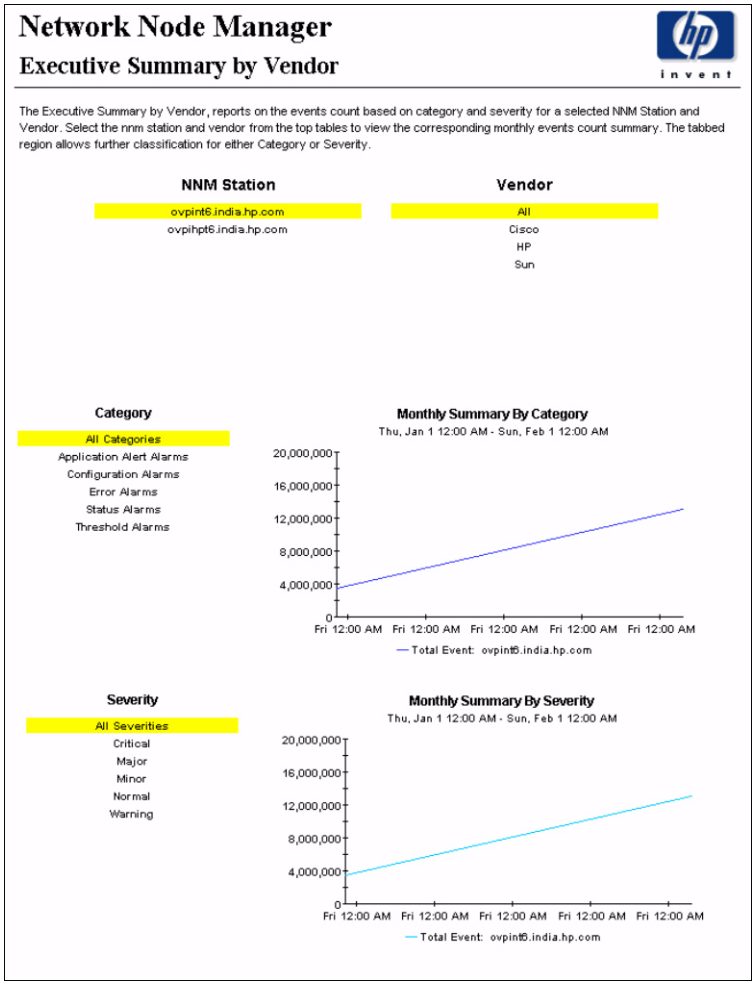
Executive Summary by Vendor

This is a General report available under the Events directory. The Executive Summary by Customer report is similar to this report.

You can use the **Executive Summary by NNM Vendor** report to view the Event Count based on vendors of the devices managed by all NNM stations.

To view the summary for a specific vendor:

1. Open the **Executive Summary by NNM Vendor** report.
2. Select the vendor from the respective table in the report. The summary displays the Executive Summary Count as follows:
   - `Daily`: This shows the daily summary statistics for the last seven days.
   - `Weekly`: This shows the weekly summary for the last four weeks.
   - `Monthly`: This shows the monthly summary for the last six months.



Event Summary by NNM Station

This report is a General report available under the Events directory. Other reports similar to this report are:

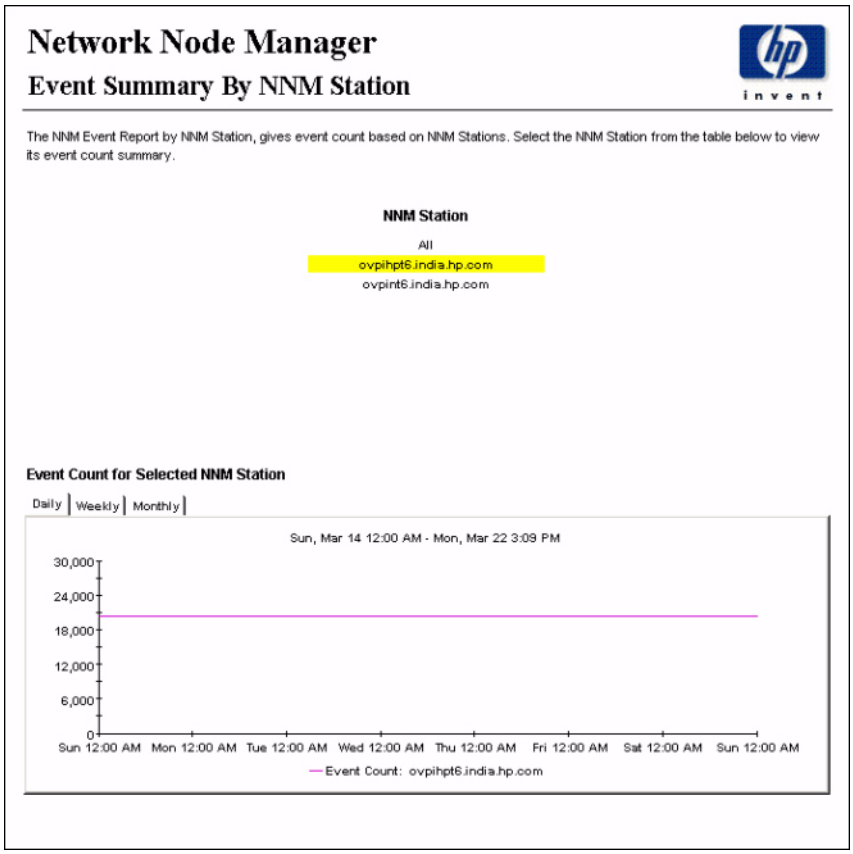
- Event Summary by Vendor
- Event Summary by Customer
- Event Summary by Device

You can use the **Event Summary by NNM Station** report to view the Event Count based on the currently managed NNM stations.

To view the Event Count for a specific NNM station:

1. Open the **Event Summary by NNM Station** report.
2. Select the NNM station from the respective table in the report. The summary displays the Event Count as follows:
   - `Daily`: This provides the daily statistics for the last seven days

- `Weekly`: This provides the weekly statistics for the last four weeks
- `Monthly`: This provides the monthly statistics for the last six months



Forecast by Severity

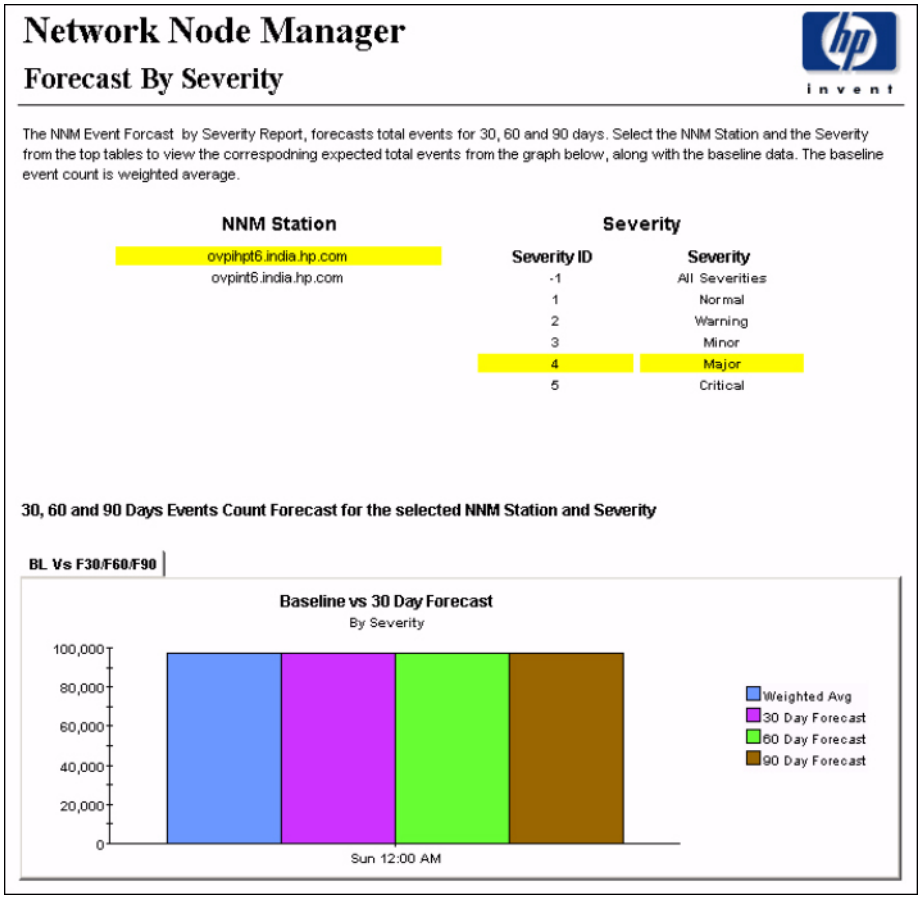
This is a General report available under the Events directory. The **Forecast by Category** is similar to this report.

You can use the **Forecast by Severity** report to view the forecast of total events for 30, 60 and 90 days.

To view the report:

1. Open the **Forecast by Severity** report.
2. Select the NNM Station and the Severity from the respective table in the report.

   The total events appear as a graph along with the baseline data. The baseline event count is the weighted average. The summary displays the Event Count as Baseline data versus number of days of forecast.



Hot Spots Report: Top 20

This is a General report available under the Events directory. The **Hot Spots** report is similar to this report.

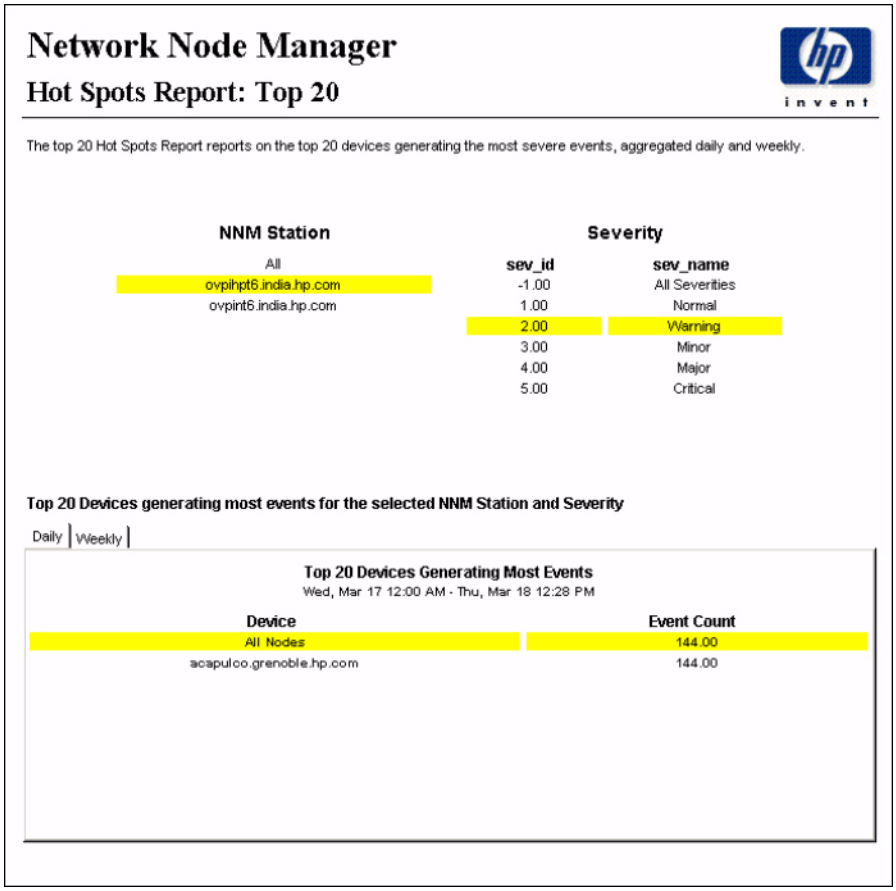
You can use the **Hot Spots Report: Top 20** report to view the list of top 20 devices generating the most severe events. These events are aggregated on a daily and weekly basis.

To view the summary for a specific device:

1. Open the **Hot Spots Report: Top 20** report.
2. Select a device listed under NNM station.
3. Select the severity type.

The report shows the Top 20 devices that generate most events in the following time ranges:

- `Daily`: This shows the daily statistics for the previous day
- `Weekly`: This shows the weekly statistics for the previous week



NNM Events Summary by Category and Device

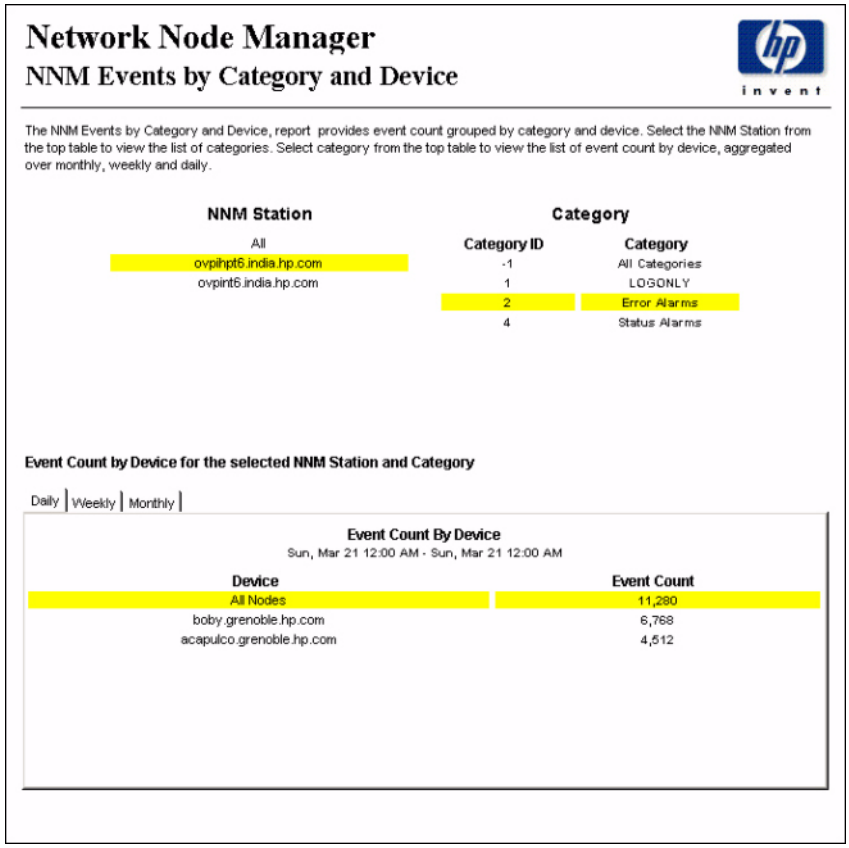
This report is available under the **Category** directory. Other reports located in the directory are:

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

You can use the **NNM Events by Category and Device** report to view the Event Count based on category and device.

To view the Event Count by Device for a specific NNM station and Category:

1. Open the **NNM Events by Category and Device** report.
2. Select the NNM station and Category from the table located at the top of the report. The summary displays the Event Count as follows:
   - `Daily`: This provides the daily statistics for the previous day.
   - `Weekly`: This provides the weekly statistics for the previous week.
   - `Monthly`: This provides the monthly statistics for the previous month.



NNM Events by Severity and Device

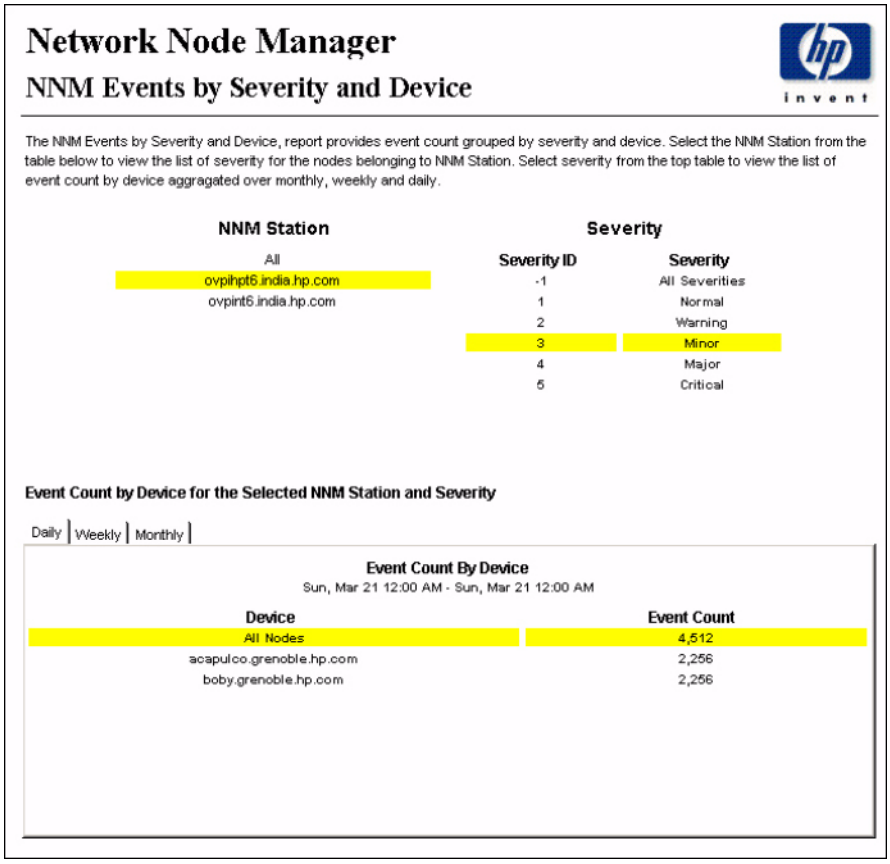
This report is available under the **Severity** directory. Other reports located in the directory are:

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

You can use the **NNM Events by Severity and Device** report to view monthly Event Count based on severity and device. The report provides the list of event count by device aggregated over monthly, weekly and daily statistics.

To view the Event Count by Device for a specific NNM station and Severity:

1. Open the NNM Events by Severity and Device report.
2. Select the NNM station and Severity from the respective table in the report. The summary displays the Event Count as follows:
   - `Daily`: This provides the daily statistics for the previous day
   - `Weekly`: This provides the weekly statistics for the last week
   - `Monthly`: This provides the monthly statistics for the last month



Network Node Manager

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 aggragated over monthly, weekly and daily.

NNM Station

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

Severity

Severity ID	Severity
-1	All Severities
1	Normal
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

Executive Summary by Severity

This report is available under the **Consolidated** directory. Other reports located in the directory are as follows:

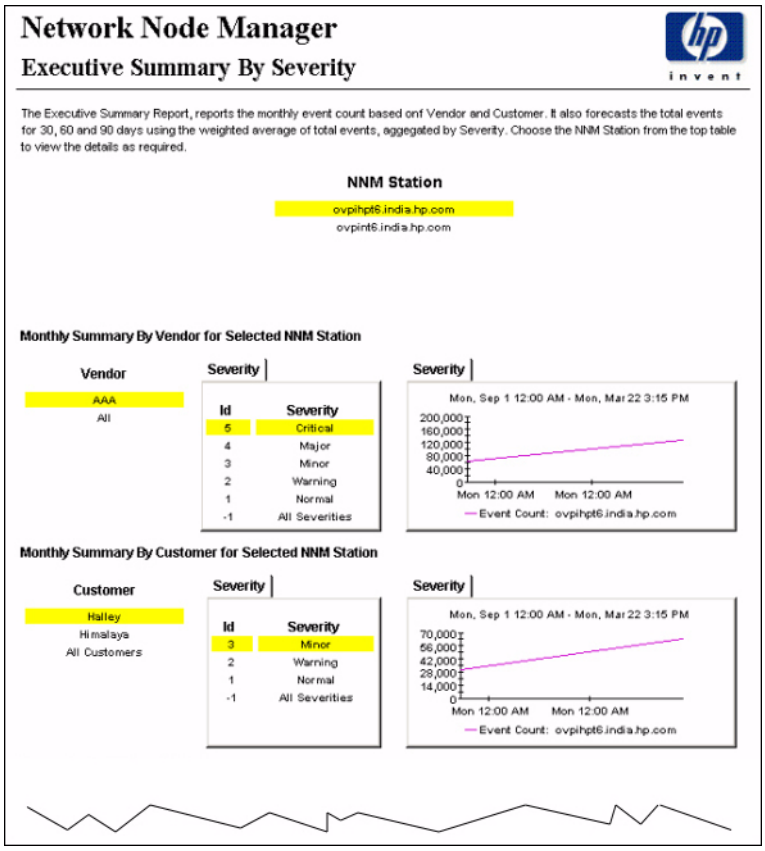
- Executive Summary by Category
- Executive Summary by Severity (see sample report)
- Hot Spot Report
- NNM Events by Category
- NNM Events by Severity

You can use the **Executive Summary By Severity** report to view monthly Event Count based on vendor and customer. The report provides 30, 60 and 90 days' forecast on the total events computed using the weighted average of total events aggregated by Severity.

To view the summary for a specific NNM station:

1. Open the **Executive Summary By Severity** report.
2. Select the NNM station from the table located at the top of the report. You can also select Vendor and Customer. The summary displays the Event Count as follows:
   - `Daily`: This provides the daily statistics for the previous day

- `Weekly`: This provides the weekly statistics for the previous week
- `Monthly`: This provides the monthly statistics for the last six month



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