

HP Network Node Manager iSPI Performance for Traffic Software

for the Windows[®] operating system

Software Version: 9.10

Installation Guide

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The title page of this document contains the following identifying information:

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1 Introduction

The HP Network Node Manager iSPI Performance for Traffic Software (NNM iSPI Performance for Traffic) extends the capability of HP Network Node Manager i Software (NNMi) to monitor the performance of the network.

The NNM iSPI Performance for Traffic enriches of the obtained data from the IP flow records that are exported by the routers in your NNMi network.

The NNM iSPI Performance for Traffic performs the following tasks:

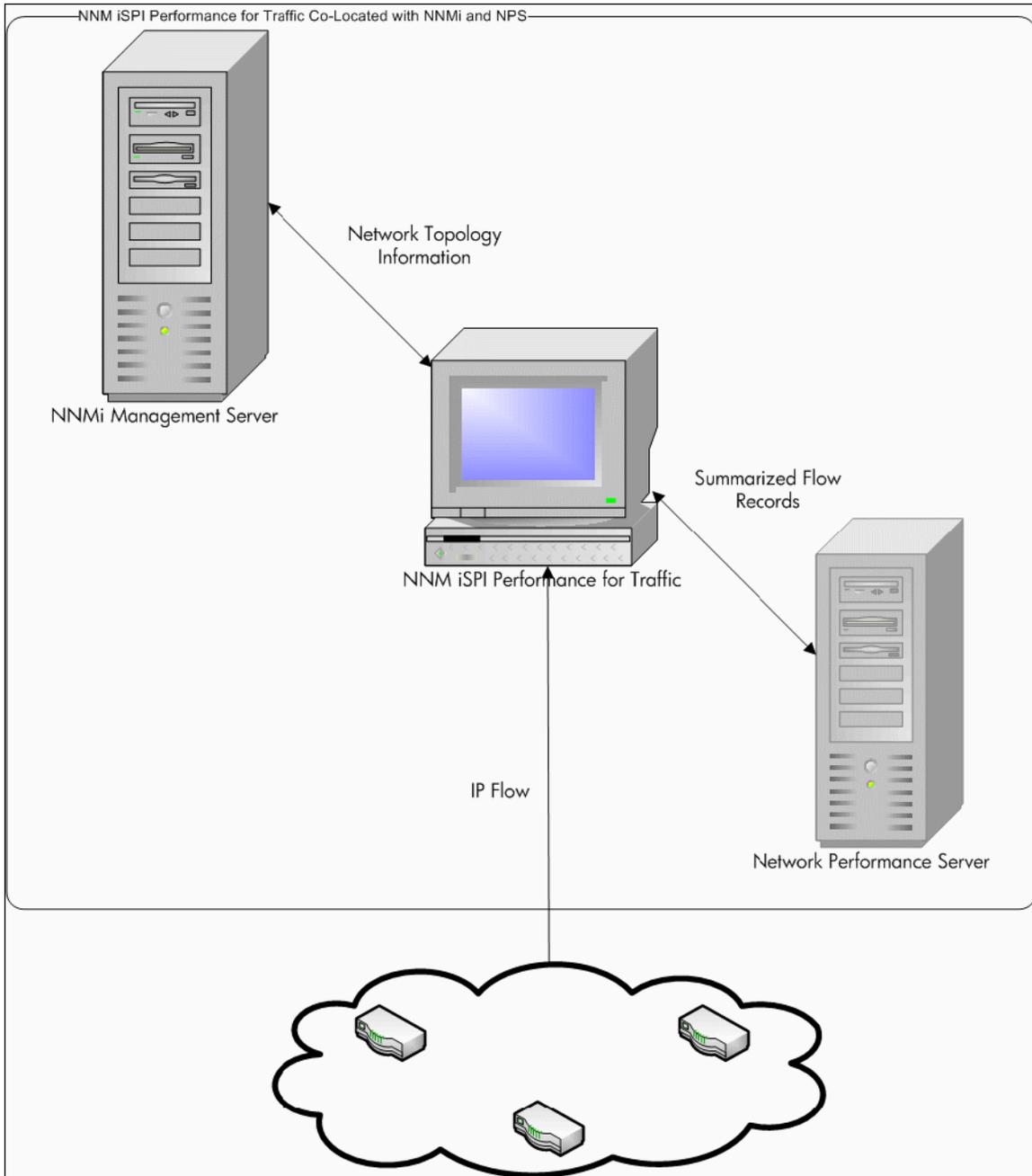
- Aggregates the IP flow records
- Enriches the IP flow records by enabling you to add or update the available fields in the flow records
- Correlates the IP flow records with NNMi for context based analysis.
- Enables you to configure deployment-specific enrichment attributes like site and applications
- Generates performance reports by exporting data to the Network Performance Server (NPS)

You must have NPS installed to generate the traffic reports. Ensure that you install NPS before installing NNM iSPI Performance for Traffic

Provides traffic-related information in the NNMi console

- Generates maps to view the traffic flow information on your network

Figure 1 Integration of NNMi with NNM iSPI Performance for Traffic

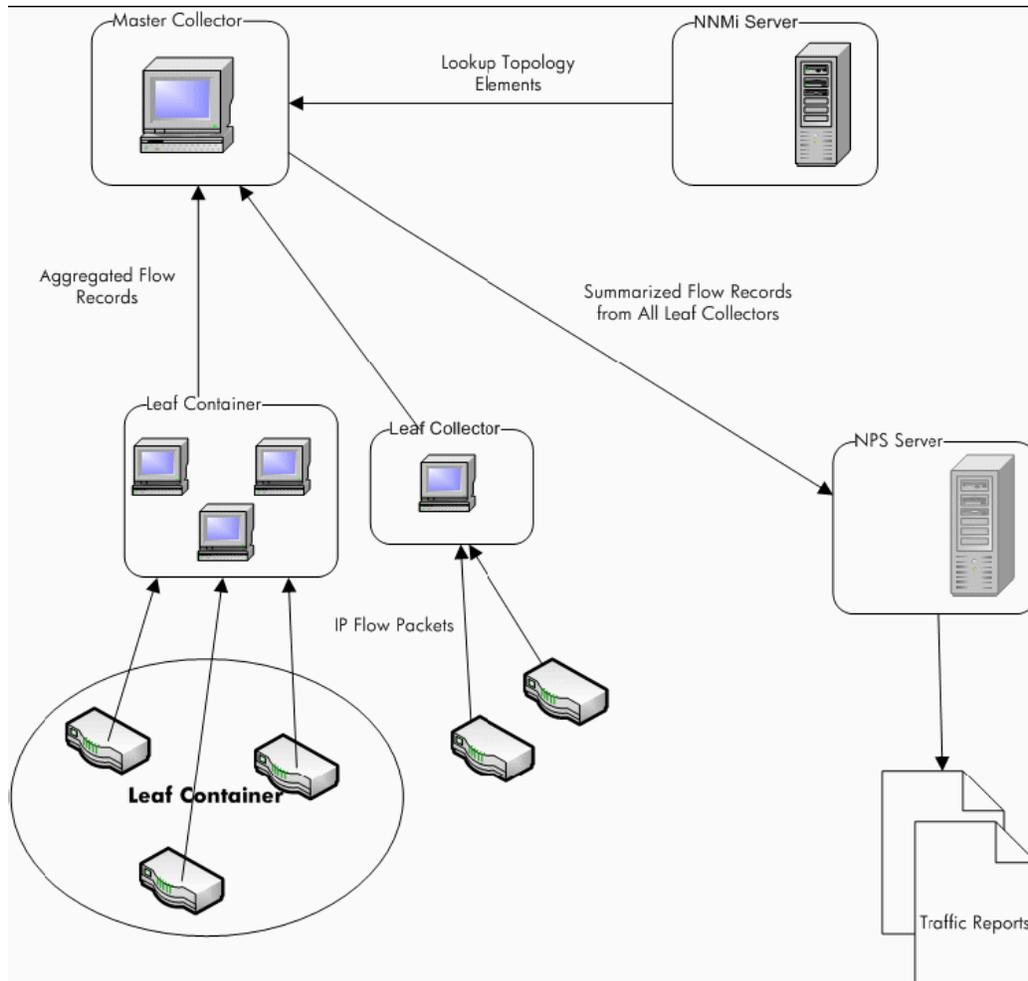


NNM iSPI Performance for Traffic Components

NNM iSPI Performance for Traffic collects and processes traffic data in a two-level architecture.

The following figure explains the product architecture of NNM iSPI Performance for Traffic.

Figure 2 Product architecture of NNM iSPI Performance for Traffic



The following components enable the iSPI to generate summarized traffic flow records from the IP flows received from the routers:

NNM iSPI Performance for Traffic Leaf Collector

The Leaf Collector performs the following tasks:

- Receives the IP flow packets exported by the routers.
- Parses these IP flow packets into flow records.
- Filters the IP flow packets to process based on filter group rules that you defined.
- Performs application mapping based on the application mapping rules that you defined.
- Performs DNS lookup for source and destination IP addresses based on your configuration.
- Performs site mapping analysis (if configured)
- Aggregates the flow records before sending them to the Master Collector.

- Sends the aggregated the flow records to the Master Collector. This operation is called flushing the records from the leaf collectors to the Master Collectors. You can configure the flush period to specify the interval between two flush operations.
- The Leaf Collector also performs top N analysis at 1 minute and 15 minute time intervals to preserve information about the top contributors to traffic and filters out the rest. After the filtering action is performed, the less significant contributors are grouped together and shown with the `Anonymous` label on reports.

A Master Collector can be connected to multiple Leaf Collectors but a Leaf Collector can be connected to only one Master Collector.

NNM iSPI Performance for Traffic Master Collector

The Master Collector is the centralized processing component for a deployment; the Master Collector receives data from all Leaf Collectors. The Master Collector can also connect and receive data from other regional Master Collectors as well as Leaf Collectors configured in the Global Network Management (GNM) setup. The Master Collector performs the following tasks:

- Synchronizes with the NNMi topology information and adds the topology information to the flow records.
- Delivers the summarized flow data and the topology files to NPS for reporting. NPS in turn, aggregates the reports provided by the Master Collector and generates the network traffic performance reports.
- Forwards the flow records to a global Master Collector in a GNM setup.

NNM iSPI Performance for Traffic Extension Pack

The NNM iSPI Performance for Traffic extension pack provides rules and definitions to generate reports from the data generated by the Master Collectors.

By default, each extension pack is installed with different retention periods for the summarized and granular data. The default retention period can be changed by editing the following file on the NPS system:

On Windows:

```
<NPS_Install_Dir>/NNMPerformanceSPI/rconfig/<extension pack>/
customConfig.cfg
```

On Linux:

```
/opt/OV/NNMPerformanceSPI/rconfig/<extension pack>/customConfig.cfg
```

The file provides one entry for the retention period of the archived data and another entry for the retention period of the aggregated data. Changes the configuration in this file takes effect only when you restart the ETL process on the NPS.

For example, The 15-minute extension pack is installed with the following defaults:

- The data aggregated at every hour is stored for 400 days
- The data aggregated at 15 minutes is stored for 30 days

If you change the retention period for the aggregated data to 300 days, the detailed data will be preserved for that length of time. Changing retention periods may have significant impacts on the disk usage.

Additional Sources of Information

- *HP Network Node Manager iSPI Performance for Traffic Software 9.10 Release Notes*
- *HP Network Node Manager iSPI Performance for Traffic Software 9.10 System and Device Support Matrix*
- *HP Network Node Manager i Software 9.10 Installation Guide*
- *HP Network Node Manager i Software 9.10 Deployment Reference*
- *HP Network Node Manager i Software 9.10 Release Notes*
- *HP Network Node Manager i Software 9.10 System and Device Support Matrix*
- *HP Network Node Manager iSPI Performance for Metric Software / Network Performance Server 9.10 Installation Guide*

2 Installation Overview

Depending on the scale of your network, you can install a single Master Collector with a single Leaf Collectors or multiple instances Leaf Collectors with a single instance of the Master Collector. The HP NNMi Extension for iSPI Performance for Traffic must always be installed on the NNMi management server.

Since the NNM iSPI Performance for Traffic uses the data management infrastructure provided by the NPS, you must install the NPS in your environment before installing the NNM iSPI Performance for Traffic. The type of installation of the NPS (single-server installation or dedicated server installation) has no effect on the installation procedure or performance of the NNM iSPI Performance for Traffic.

You can build one of the following monitoring environments after installing the NNM iSPI Performance for Traffic:

- [Single Collector Environment: Installing a Single Instance of Each Collector](#) on page 16
- [Distributed Collector Environment: Installing Multiple Instances of Collectors](#) on page 19

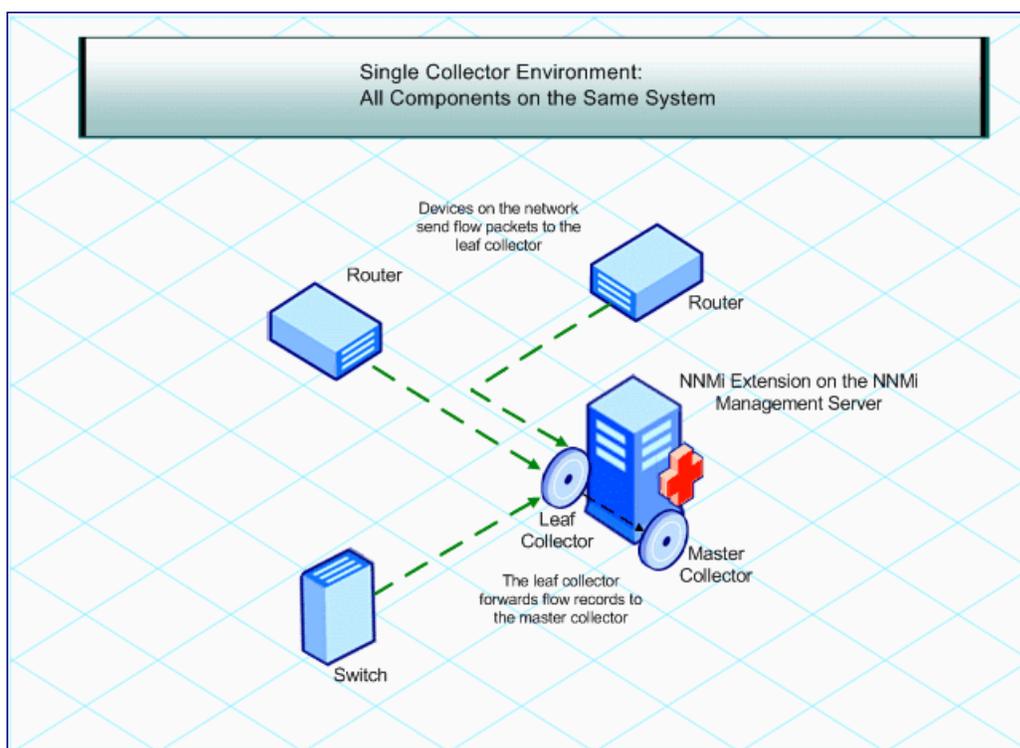
Single Collector Environment: Installing a Single Instance of Each Collector

You can choose this option for small networks. In this configuration, only one Leaf Collector is used for collecting all the flow information, which is processed by the Master Collector.

Install All the Components on the Same System

If your system meets all the requirements to support NNMi, the master and leaf collectors, and the HP NNMi Extension for iSPI Performance for Traffic, you can install all the three components of the NNM iSPI Performance for Traffic on a single system. In this configuration, you can use the Master Collector with only one Leaf Collector. You cannot choose an HP-UX or Solaris management server since the master and leaf collectors are not supported on those platforms.

Figure 3 All Components on the Same System

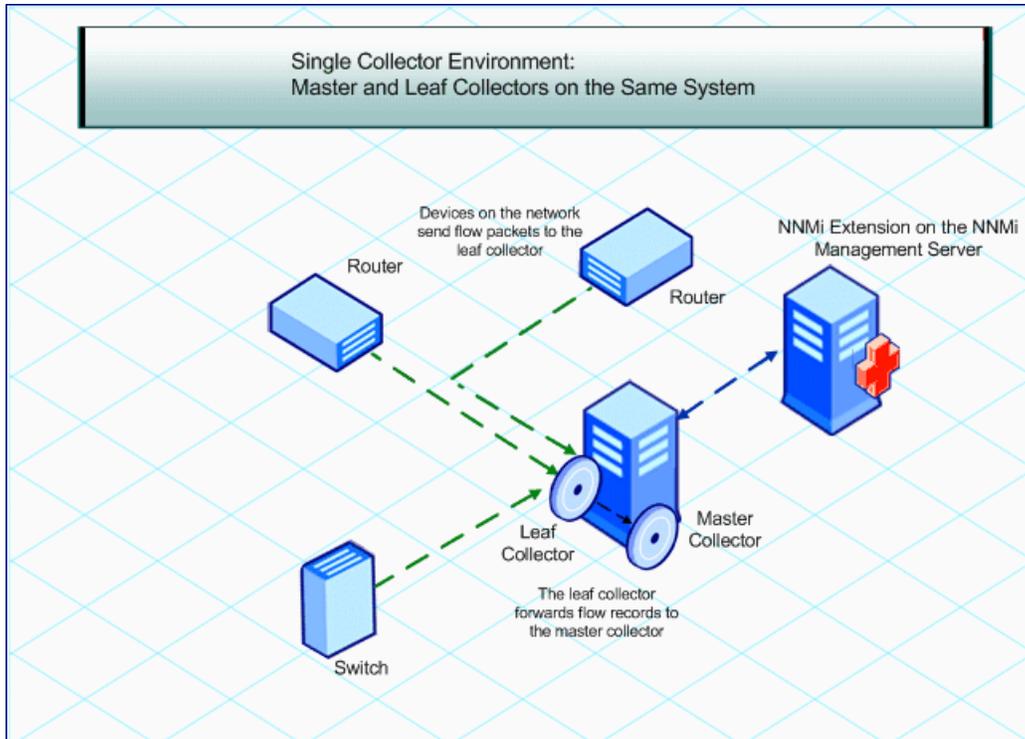


Install Collectors on Different Systems

If you like, you can install one or both the collectors on remote systems. However, you must always install the HP NNMi Extension for iSPI Performance for Traffic on the NNMi management server only. You can use one of the following combinations:

- **Both the collectors on the same remote standalone system:** In this configuration, you can use an NNMi management server running on an operating system different from the operating system running on the system where you install the master and leaf collectors.

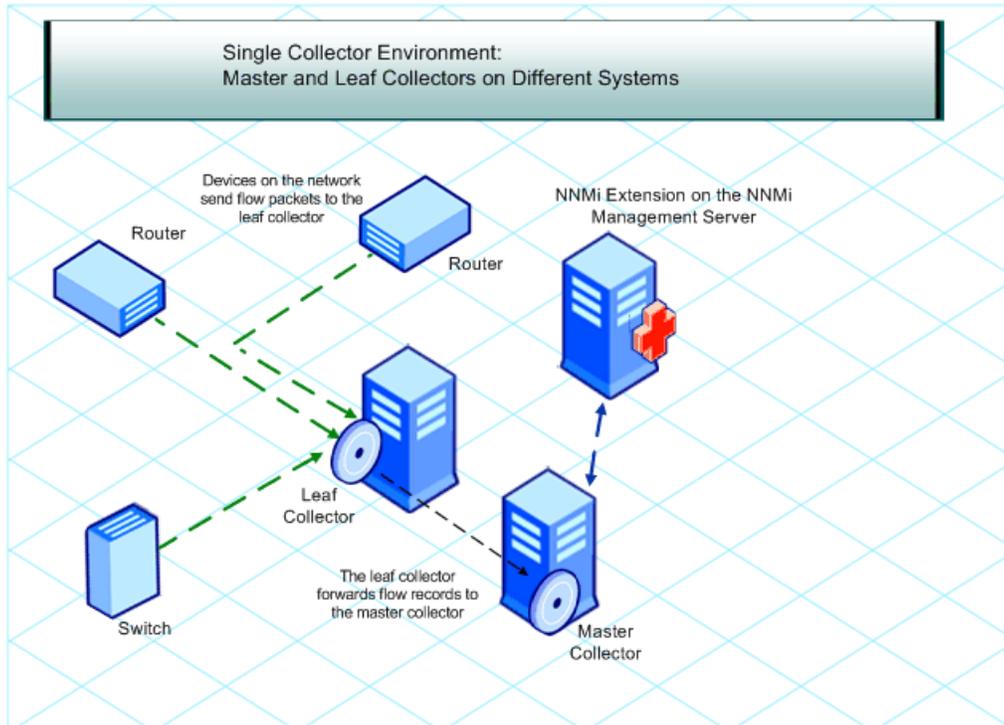
Figure 4 Both the Collectors on a Standalone System



- **Both collectors on different systems:** In this configuration, you can use an NNMi management server running on an operating system different from the operating system running on the system where you install the master and leaf collectors.

You must obtain the Collector Connection Software LTU to enable the communication between the master and leaf collectors. For more information, see [Licensing](#) on page 43.

Figure 5 Master and Leaf Collectors on Different Systems



- **One collector on the NNMi management server and the other collector on a remote system:** In this configuration, the NNMi management server and the collector system must run on the same operating system.

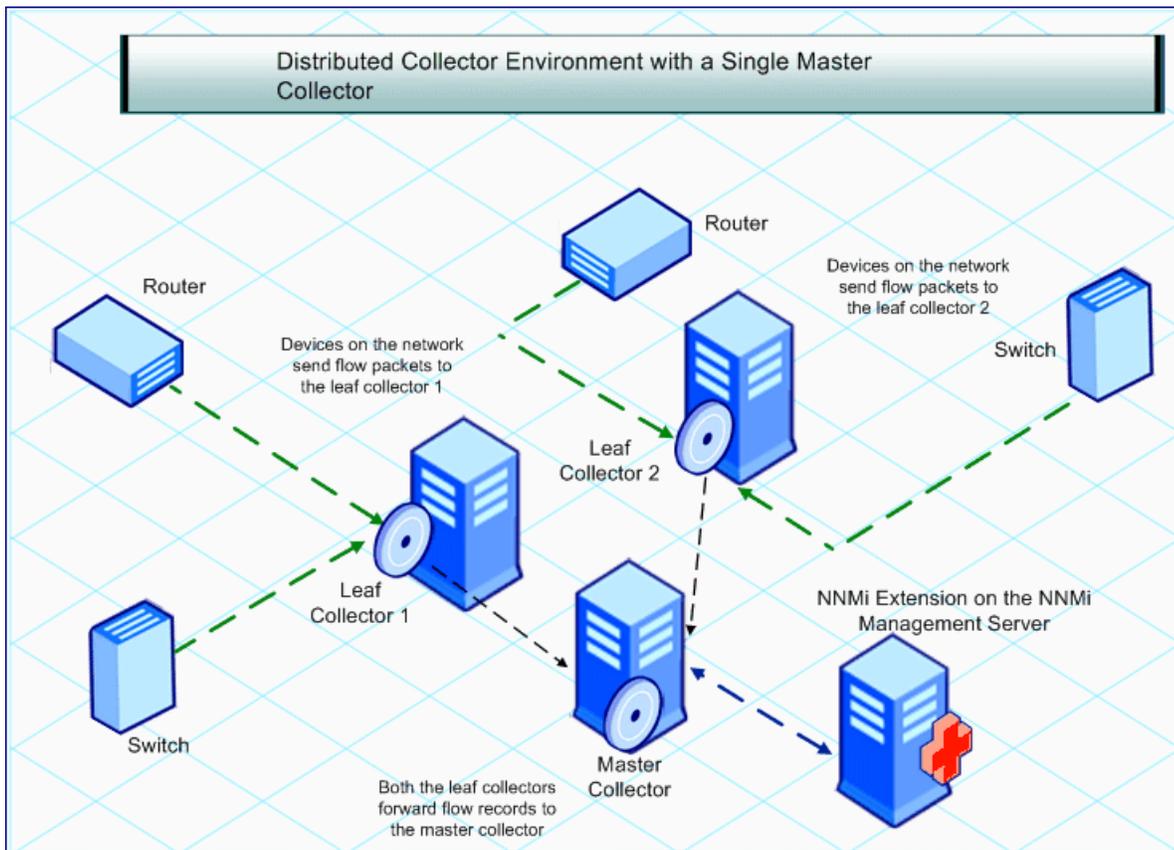
You must obtain the Collector Connection Software LTU to enable the communication between the master and leaf collectors. For more information, see [Licensing](#) on page 43.

Distributed Collector Environment: Installing Multiple Instances of Collectors

On a large network, a high volume of the traffic data can affect the performance of the Master and Leaf Collectors. To avoid performance problems, you can install multiple leaf collectors to share the computational load to retain the desired level of performance of the solution.

You can install multiple Leaf Collectors in the environment with a single instance of the Master Collector. The Master Collector, which you can install on the NNMi management server or on a dedicated remote server, receives flow records from different Leaf Collector instances that exist on the network.

Figure 6 Installation with Multiple Leaf Collectors



Multiple leaf collectors in your monitoring environment share the load with one another and enhance the performance of solution.

You must obtain the Collector Connection Software LTU to enable the communication between the master and leaf collectors. For more information, see [Licensing](#) on page 43.

3 Planning for Installation

Before you begin the installation, ensure that you:

- Complete all preinstallation tasks on the NNMi management server.
- Complete all the tasks listed in the Preinstallation Checklist.

Preinstallation Tasks on the NNMi Management Server

Create a New User with the Web Service Client Role

Create a user from the NNMi console with the Web Service Client role. This user will be used during the installation of the Master Collector. See *Network Node Manager i Software Help for Administrators* for more information on creating a new user with the Web Service Client role.

Enable the Read/Write Access to the Data Files on the Management Server

If you are planning to install the Master Collector on a system other than the NNMi management server, make sure that the user that runs the Master Collector has the read/write access to the following directory on the management server:

On the Windows management server

`%NnmDataDir%\shared\perfSpi\datafiles`

On the UNIX/Linux management server

`/var/opt/OV/shared/perfSpi/datafiles` directory.

You must start the Master Collector with the user that is created by the `nmstrafficmasteruser.ovpl` script (see [Configuring a User for the Master Collector System](#) on page 39). While creating the share, make sure the same user can have the read/write access to the shared from the Master Collector system.

Preinstallation Checklist

Table 1 Preinstallation Checklist

Task	Reference Document/Topic	Complete (y/n)
Identify the deployment type: Master Collector on NNMi, both Master and Leaf collectors on NNMi, Master and Leaf Collectors on standalone systems, multiple Leaf Collectors, and so on.	<i>NNM iSPI Performance for Traffic Systems and Devices Support Matrix</i>	
Verify that the systems (where you want to install different components of the product) meet the prerequisites.	<i>NNM iSPI Performance for Traffic Systems and Devices Support Matrix</i>	
Verify that the NNMi version is 9.10.		
Verify that the NPS is installed in the environment.	<i>NNM iSPI Performance for Metrics / NPS Installation Guide</i>	

You must always use the following sequence while installing the NNM iSPI Performance for Traffic:

- 1 Install the HP NNMi Extension for iSPI Performance for Traffic ([Installing the HP NNMi Extension for iSPI Performance for Traffic](#) on page 23).
- 2 Install the Master Collector ([Installing the Master Collector](#) on page 29).
- 3 Install the Leaf Collector ([Installing the Leaf Collector](#) on page 35).

4 Installing the HP NNMi Extension for iSPI Performance for Traffic

The HP NNMi Extension for iSPI Performance for Traffic adds the **NNM iSPI Performance for Traffic Configuration** form into the NNMi workspace and provides launch points for traffic maps.

- ▶ You must always install the HP NNMi Extension for iSPI Performance for Traffic on the NNMi management server. In the NNMi Application failover environment, make sure you install the HP NNMi Extension for iSPI Performance for Traffic on the primary and secondary NNMi systems. Ensure that the NNM iSPI Performance for Traffic licenses are installed on both the system

Installing on the Windows Management Server

To install the HP NNMi Extension for iSPI Performance for Traffic on the Windows management server, follow these steps:

- 1 Log on to the management server with the administrative (for Windows) or root (for UNIX/Linux) privileges.
- 2 Insert the NNM iSPI Performance for Traffic installation media into the DVD drive.
- 3 Go to the `Traffic_NNM_Extension\WinNT` folder on the DVD, and then double-click the `setup.bat` file.

The installation initialization process prompts you to choose the language you want to use. Then the installer checks to make sure you are ready to proceed with the installation.

- 4 On the Introduction page, review the overview information, and then click **Next**. The License Agreement page opens.
- 5 Click **I accept..**, and then click **Next**. The Select Features page opens.
- 6 Click **Next**. The Install Checks page shows the progress of the installation requirement check. When the installer completes the check successfully, click **Next**. The Pre-Install Summary page opens.
- 7 Click **Install**. The installation process begins. During installation, the NNMi Extension for iSPI Performance for Traffic dialog box opens. In this dialog box, specify the following details:
 - NNMi User Password: Type the password of the NNMi **system** account
 - ▶ The system account is a special administrator account that NNMi creates during installation (see the *Installing NNMi* section in the *HP Network Node Manager i Software Installation Guide*).
 - Retype Password: Type the above password again

- Traffic Master FQDN: Fully qualified domain name of the Master Collector system.
- ▶ If you plan to install the Master Collector in a high availability (HA) cluster environment, you must specify the virtual IP address or virtual FQDN of the cluster.

The following details are automatically detected by the installer:

- NNMi User Name: The NNMi system user.
 - NNMi FQDN
 - NNMi JNDI Port
 - Traffic Master http Port
- 8 When the installer completes installing extension packs, a pop-up window appears displaying the status of the extension pack installation. Click **OK**.
 - 9 Click **Done**.
- ▶ You must restart the NNMi processes after installing the NNMi Extension for the NNM iSPI Performance for Traffic. Ensure that no traffic processes are running while performing this operation.

Restart NNMi's processes by running the following commands:

- `ovstop -c`
- `ovstart -c`

Installation Log File

The installation log file (`postInstall_traffic-nnm`) is available in the `%temp%` directory.

Installing on the UNIX/Linux Management Server

To install the HP NNMi Extension for iSPI Performance for Traffic on the UNIX/Linux management server, follow these steps:

- 1 Log on to the UNIX/Linux management server with root privileges.
- 2 Insert the NNM iSPI Performance for Traffic installation media into the DVD drive.
- 3 Make sure that the DVD drive is mounted, and then use the `cd` command to change to the `/cdrom` directory.
- 4 Do one of the following:
 - If you are installing on a Linux management server, go to the `Traffic_NNM_Extension/Linux` directory on the DVD, and then run the `setup` file.
 - If you are installing on a HP-UX management server, go to `Traffic_NNM_Extension/HPUX` folder on the DVD and then run the `setup` file.
 - If you are installing on a Solaris management server, go to `Traffic_NNM_Extension/SunOS` folder on the DVD and then run the `setup` file.

The installation initialization process prompts you to choose the language you want to use. Then the installer checks to make sure you are ready to proceed with the installation.

- 5 On the Introduction page, review the overview information, and then click **Next**. The License Agreement page opens.
- 6 Click **I accept..**, and then click **Next**. The Select Features page opens.
- 7 Click **Next**. The Install Checks page shows the progress of the installation requirement check. When the installer completes the check successfully, click **Next**. The Pre-Install Summary page opens.
- 8 Click **Install**. The installation process begins. During installation, the NNMi Extension for iSPI Performance for Traffic dialog box opens. In this dialog box, specify the following details:
 - NNMi User Password: Type the password of the NNMi system user
 - Retype Password: Type the above password again
 - Traffic Master FQDN: Fully qualified domain name of the Master Collector system.

▶ If you plan to install the Master Collector in a high availability (HA) cluster environment, you must specify the virtual IP address or virtual FQDN of the cluster.

The following details are automatically detected by the installer:

- NNMi User Name: The NNMi system user.
 - NNMi FQDN
 - NNMi JNDI Port
 - Traffic Master http Port
- 9 When the installer completes installing extension packs, a pop-up window appears displaying the status of the extension pack installation. Click **OK**.
 - 10 Click **Done**.

- ▶ You must restart the NNMi processes after installing the NNMi Extension for the NNMi iSPI Performance for Traffic.

Restart NNMi processes by running the following commands:

- **ovstop -c ovjboss**
- **ovstart -c ovjboss**

The installation log file (`postInstall_traffic-nnm`) is available in the `/tmp` directory on Linux and Solaris.

Installation Log File on HP-UX

On the NNMi management server on HP-UX, the installer does not create the `postInstall_traffic-nnm` file. Instead, you can see the `swinstall.log` file for more details on the installation process, which is available in the following location:

`/var/adm/sw`

Removing the HP NNMi Extension for iSPI Performance for Traffic

From the Windows Management Server

To remove the HP NNMi Extension for iSPI Performance for Traffic, follow these steps:

- 1 On the NNMi management server, go to the %NnmInstallDir%\Uninstall\HPOvTENM directory.
- 2 Double-click the Setup file. The uninstallation initialization process prompts you to choose the language you want to use. Then the setup program checks to make sure you are ready to proceed with the uninstallation
- 3 The Application Maintenance page opens. Select **Uninstall**.
- 4 Click **Next**. The Pre-Uninstall Summary page opens.
- 5 Click **Uninstall**. The Maintenance Selection window opens.
- 6 Click **Done**.

Alternatively, you can use the Add or Remove Programs (Uninstall a program) feature of the Windows system to remove the NNMi iSPI Performance for Traffic. Choose the **HP NNMi Extension for iSPI Performance for Traffic** entry while using the Programs and Features window.

Uninstallation Log File

The setup program creates the following log files in the %temp% folder:

- preRemove_traffic-nnm
- postRemove_traffic-nnm

From the UNIX/Linux Management Server

To remove the HP NNMi Extension for iSPI Performance for Traffic, follow these steps:

- 1 On the NNMi management server, go to the /opt/OV/Uninstall/HPOvTENM directory.
- 2 Run the following command:

```
./setup
```

The uninstallation initialization process prompts you to choose the language you want to use. Then the setup program checks to make sure you are ready to proceed with the uninstallation

- 3 The Application Maintenance page opens. Select **Uninstall**.
- 4 Click **Next**. The Pre-Uninstall Summary page opens.
- 5 Click **Uninstall**. The Maintenance Selection window opens.
- 6 Click **Done**.

Uninstallation Log File

The setup program creates the following log files in the /tmp directory on Linux and Solaris:

- preRemove_traffic-nnm
- postRemove_traffic-nnm

Uninstallation Log File on HP-UX

On the NNMi management server on HP-UX, the setup program does not create the `preRemove_traffic-nnm` and `podtRemove_traffic-nnm` files. Instead, you can see the `swinstall.log` file for more details on the uninstallation process, which is available in the following location:

```
/var/adm/sw
```


5 Installing the Master Collector

The Master Collector can be installed either on the NNMi management server or on a standalone, remote server.



You can install only one Master Collector in your environment. In a Global Network Management (GNM) environment, you must install one Master Collector for every region.

Preinstallation Tasks

Create a New Oracle Instance

Skip this task if you choose to use the embedded database with NNMi.

If you configured NNMi to use an Oracle database, the NNM iSPI Performance for Traffic also must be configured to use Oracle as its database, but you must use a *different* Oracle instance for the Master Collector. Create a *new* Oracle database instance for use with the Master Collector.

Note Down the Details of the Oracle Server

Skip this task if you choose to use the embedded database with NNMi.

Note down the following details of the Oracle database that you want to use with the NNM iSPI Performance for Traffic Master Collector.

- Port: The port used by the Oracle database.
- Hostname: Note down the fully-qualified domain name of the database server.
- Database name: Name of the Oracle database instance for the Master Collector.
- User name: The Oracle user name created to access the above instance.
- Password: Password of the above user.

Note Down the Details of the NNMi Management Server

Skip this task if you choose to install the Master Collector on the NNMi management server and NNMi is not installed in an HA or Application Failover environment.

- 1 Go to the following location:

Windows

`%nnmdatadir%\conf\nnm\props`

HP-UX, Linux, or Solaris

`/var/opt/OV/conf/nnm/props`

2 Open the `nms-local.properties` file with a text editor.

3 Note down the following properties:

- `com.hp.ov.nms.fqdn`: The FQDN of the NNMi management server.
- `jboss-http-port`: The HTTP port used by NNMi.
- `jboss-https-port`: The HTTPS port used by NNMi.
- `jboss-jnp-port`: The JNDI port of NNMi. If this property is commented out (with the `#!` characters) in the file, NNMi uses the default JNDI port, which is 1099.

If NNMi is installed and configured in the application failover mode, note down the following properties from the `nms-local.properties` file on the secondary NNMi management server:

- `com.hp.ov.nms.fqdn`: The FQDN of the secondary NNMi management server.
- `jboss-http-port`: The HTTP port used by the secondary NNMi.
- `jboss-https-port`: The HTTPS port used by the secondary NNMi.
- `jboss-jnp-port`: The JNDI port of the secondary NNMi.

Ensure the Availability of Necessary Ports

On the Master Collector system, make sure the following ports are available for use:

- 12099
- 12080
- 12458
- 12087

Install the Microsoft Visual C++ Redistributable Package

If you are installing the Master Collector on a system other than the NNMi management server, you must install the Microsoft Visual C++ Redistributable Package on the Master Collector system. The Microsoft Visual C++ Redistributable Package is available at the root location on the NNM iSPI Performance for Traffic media. Use one of the following files:

- `vcredist_X86`: For a 32-bit Master Collector system
- `vcredist_X64`: For a 64-bit Master Collector system

Installing the Master Collector

To install the Master Collector, follow these steps:



Use this procedure for all types of installation scenarios of the Master Collector: the Master Collector on the NNMi management server, the Master Collector on a standalone system, or the Master Collector on the NPS system.

- 1 Log on to the system where you want to install the collector with the administrative privileges.
- 2 Insert the NNM iSPI Performance for Traffic installation media into the DVD drive.
- 3 Go to the `Traffic_Master` directory on the DVD.
Double-click the `setup` file. The installation initialization process prompts you to choose the language you want to use. Then the installer checks to make sure you are ready to proceed with the installation.
- 4 A pop-up window appears notifying that you must restart the system after installation for the configuration changes to take effect. Click **Continue**. The Introduction page opens.
- 5 Review the overview information for the installation, and then click **Next**. The License Agreement page opens.
- 6 Click **I accept..**, and then click **Next**. The Select Features page opens.
- 7 Click **Next**. The Choose the Application and Data Folder page opens if no other HP Software products are installed on the system. Make your selection, and then click **Next**. The Server Configuration page opens.
- 8 On this page, select HP Software Embedded Database if NNMi was installed and configured to use the embedded database. Select Oracle if NNMi was configured to use the Oracle database.
- 9 Click **Next**. If you selected HP Software Embedded Database, go to [step 10](#). If you selected Oracle, the Choose Database Initialization Preferences screen appears on the page. On this page, follow these steps:
 - a Do one of the following:
 - If you want to initialize an Oracle database using previously defined database accounts, select Primary Server Installation, and then click **Next**.
 - If you want to connect to an existing database that is already initialized by another primary installation and use this installation in an application failover or HA configuration, select Secondary Server, and then click **Next**.The Enter Your Database Server Information screen appears on the page
 - b Specify the following details:
 - Host: The FQDN of the Oracle server
 - Port: The port used by Oracle.
 - Instance: The Oracle instance name (the Oracle instance that you created in [Create a New Oracle Instance](#) on page 29).
 - c Click **Next**. The Enter the Database Account User screen appears on the page.
 - d Type the user name and password to access the Oracle instance, and then click **Next**.

- 10 The Install Checks page shows the progress of the installation requirement check. When the installer completes the check successfully, click **Next**. The Pre-Install Summary page opens.
- 11 Click **Install**. The installation process begins. During installation, the Configuring Master dialog box opens. In this dialog box, specify the following details:

- **Primary NNMi server details**

- NNMi FQDN: FQDN of the NNMi management server
- NNMi HTTP Port: The HTTP port used by NNMi.
- NNMi HTTPS Port: The HTTPS port used by NNMi
- NNMi JNDI Port: The JNDI port used by NNMi
- Web Service Client User Name: The user created in [Create a New User with the Web Service Client Role](#) on page 21
- Web Service Client Password: The password of the above user
- Retype Password: The above password
- Perf SPI Data Path: The shared directory on the NNMi management server that was created by the `nnmenableperfspi.ovpl` script. The data in this field is automatically added by the installer when the Master Collector is installed on the NNMi management server.
- IsSecure: Select this option if you want the NNM iSPI Performance for Traffic to communicate with NNMi securely (using the HTTPS protocol).



To enable NNM iSPI Performance for Traffic to use HTTPS protocol, use NNMi's out-of-the-box https configuration that uses a self-signed certificate created during installation. See the *HP Network Node Manager i Software Deployment Reference* for more information about using a signed certificate from a Certificate Authority instead of the self-signed certificate.

- NNMi Failover Configured: Select this option if you configured NNMi to work in the application failover mode.

- **Secondary NNMi server details**



This section is enabled only if you select the NNMi Failover Configured option. Do not type anything in this section if NNMi is not configured to work in the application failover mode.

- NNMi FQDN: FQDN of the secondary NNMi management server
- NNMi HTTP Port: The HTTP port used by NNMi
- NNMi HTTPS Port: The HTTPS port used by secondary NNMi
- NNMi JNDI Port: The JNDI port used by secondary NNMi
- Web Service Client User Name: The user created in [Create a New User with the Web Service Client Role](#) on page 21
- Web Service Client Password: The password of the above user
- Retype Password: The above password
- Perf SPI Data Path: The shared directory on the secondary NNMi management server that was created by the `nnmenableperfspi.ovpl` script. The data in this field is automatically added by the installer when the Master Collector is installed on the NNMi management server.

- IsSecure: Select this option if you want the NNM iSPI Performance for Traffic to communicate with NNMi securely (using the HTTPS protocol).



To enable NNM iSPI Performance for Traffic to use HTTPS protocol, use NNMi's out-of-the-box https configuration that uses a self-signed certificate created during installation. See the *HP Network Node Manager i Software Deployment Reference* for more information about using a signed certificate from a Certificate Authority instead of the self-signed certificate.

- **NNM iSPI Performance for Traffic details**

In this section, you must provide the password for the **system** user for the Master Collector that the installer is going to create.

This user is *not* the NNMi system user that you used while installing the HP NNMi Extension for iSPI Performance for Traffic ([Installing the HP NNMi Extension for iSPI Performance for Traffic](#) on page 23). After you specify the password for this user, the Master Collector installer creates this user. This is not an operating system user profile; this user is provisioned inside the Master Collector application.



Note down this password. You need this password to log on to the NNM iSPI Performance for Traffic Configuration form ([step 4](#) on page 67).

For convenience, you can provide the same password here that was specified for the NNMi `system` account.

- Traffic Password: Type the password for the system user for the Master Collector.
- Retype Password: Type the above password again.
- IsSecure: Select this option if you want the NNM iSPI Performance for Traffic to communicate with NNMi securely (using the HTTPS protocol).



This section displays the ports for the Master Collector:

HTTP Port: 12080

HTTPS Port: 12043

JNDI Port: 12099

You cannot modify these ports.

- 12 Click **Submit**. The installation process continues and the Performance SPI Server Configuration dialog box opens.
- 13 In the Performance SPI Server Configuration dialog box, type the fully-qualified domain name of the NPS, and then click **OK**.



Do not specify any other parameters

- 14 When the installer completes installing the Master Collector, click **Done**.

Installation Log File

The installation log file (`postInstall_traffic-master`) is available in the following directory:

`%temp%`

Removing the Master Collector

To remove the Master Collector, follow these steps:

- 1 On the Master Collector system, go to the following location:

```
<Master_Install_Dir>\nonOV\traffic-master\Uninstall\HPOvTRMiSPI
```

In this instance, <Master_Install_Dir> is the installation directory for the Master Collector.

- 2 Double-click the setup file. Follow the on-screen instructions.

Alternatively, you can use the Add or Remove Programs (Uninstall a program) feature of the Windows system to remove the NNM iSPI Performance for Traffic. Choose the **Master Collector for iSPI Performance for Traffic** entry while using the Programs and Features window.

Removing the Traffic Report Extension Pack from the NPS

You must manually uninstall the NNM iSPI Performance for Traffic report extension pack when you uninstall the Master Collector.

To manually uninstall the NNM iSPI Performance for Traffic report extension pack:

- 1 Log on to the system where the NPS is running.
- 2 Go to the following directory:

- On Windows:

```
<NPS_Install_Dir>/NNMPerformanceSPI/bin
```

In this instance, <NPS_Install_Dir> is the installation directory of the NPS

- On Linux:

```
/opt/OV/NNMPerformanceSPI/bin
```

- 3 Ensure that all the processes are running by using the command **statusALL.ovpl**.
- 4 Uninstall the NNM iSPI Performance for Traffic report extension packs by running the following commands:
 - **uninstallExtensionPack.ovpl -p Interface_Traffic**
 - **uninstallExtensionPack.ovpl -p Interface_Traffic_1_min**
 - **uninstallExtensionPack.ovpl -p Interface_Traffic_15_min**

6 Installing the Leaf Collector

If you want to install multiple Leaf Collectors, you must install all instances of the Leaf Collector on systems where the Master Collector is not installed. The Master Collector and a Leaf Collector instance cannot coexist on the same system when multiple Leaf Collectors are installed on the network.

Preinstallation Tasks

Create New Oracle Instances

Skip this task if you choose to use the embedded database with NNMi.

If you configured NNMi to use an Oracle database, the NNM iSPI Performance for Traffic also must be configured to use Oracle as its database, but you must use a *different* Oracle instance for *every* instance of the Leaf Collector. Create new Oracle instances for use with Leaf Collectors. For example, if you want to install five instance of the Leaf Collector, create five different Oracle instances.

Note Down the Details of the Oracle Server

Skip this task if you choose to use the embedded database with NNMi.

Note down the following details of the Oracle database instance that you want to use with the NNM iSPI Performance for Traffic Leaf Collector.

- Port: The port used by the Oracle database.
- Hostname: Note down the fully-qualified domain name of the database server.
- Database name: Name of the Oracle database instance created for the Leaf Collector.
- User name: The Oracle user name created to access the above instance.
- Password: Password of the above user.

Ensure the Availability of Necessary Ports

On the Leaf Collector systems, make sure the following ports are available for use:

- 11099
- 11080
- 11458
- 11087

In addition, the ports on which the Leaf Collectors are listening to flow packets must be available.

Install the Microsoft Visual C++ Redistributable Package

If you are installing the Leaf Collector on a system other than the NNMi management server, you must install the Microsoft Visual C++ Redistributable Package on the Leaf Collector system. The Microsoft Visual C++ Redistributable Package is available at the root location on the NNM iSPI Performance for Traffic media. Use one of the following files:

- `vcredist_X86`: For a 32-bit Master Collector system
- `vcredist_X64`: For a 64-bit Master Collector system

Installing the Leaf Collector



Use this procedure for all types of installation scenarios of the Leaf Collector: the Leaf Collector on the NNMi management server, the Leaf Collector on a standalone system, or the Leaf Collector on the NPS system.

To install the Leaf Collector, follow these steps:

- 1 Log on to the system where you install the collector with the administrative privileges.
- 2 Insert the NNM iSPI Performance for Traffic installation media into the DVD drive. Go to the `Traffic_Leaf` directory on the DVD.

Double-click the `setup` file. The installation initialization process prompts you to choose the language you want to use. Then the installer checks to make sure you are ready to proceed with the installation.
- 3 A pop-up window appears notifying that you must restart the system after installation for the configuration changes to take effect. Click **Continue**. The Introduction page opens.
- 4 Review the overview information for the installation, and then click **Next**. The License Agreement page opens.
- 5 Click **I accept..**, and then click **Next**. The Select Features page opens.
- 6 Click **Next**. The Choose the Application and Data Folder page opens if no other HP Software products are installed on the system. Make your selection, and then click **Next**. The Server Configuration page opens.
- 7 On this page, select HP Software Embedded Database if NNMi was installed and configured to use the embedded database. Select Oracle if NNMi was configured to use the Oracle database.
- 8 Click **Next**. If you selected HP Software Embedded Database, go to [step 9](#). If you selected Oracle, the Choose Database Initialization Preferences screen appears on the page. On this page, follow these steps:
 - a Do one of the following:
 - If you want to initialize an Oracle database using previously defined database accounts, select Primary Server Installation, and then click **Next**.

- If you want to connect to an existing database that is already initialized by another primary installation and use this installation in an application failover or HA configuration, select Secondary Server, and then click **Next**.

The Enter Your Database Server Information screen appears on the page

- Specify the following details:
 - Host: The FQDN of the Oracle server
 - Port: The port used by Oracle.
 - Instance: The Oracle instance name (the Oracle instance that you created in [Create New Oracle Instances](#) on page 35).
 - Click **Next**. The Enter the Database Account User screen appears on the page.
 - Type the user name and password to access the Oracle instance, and then click **Next**.
- 9 The Install Checks page shows the progress of the installation requirement check. When the installer completes the check successfully, click **Next**. The Pre-Install Summary page opens.

 You can select **Force repair...** if the previous installation process was not successful. All the packages are reinstalled again.

- Click **Install**. The installation process begins. During installation, the Configuring Leaf dialog box opens. In this dialog box, you must provide the password for the **system** user for the Leaf Collector that the installer is going to create.

This user is not the NNMi system user that you used while installing the HP NNMi Extension for iSPI Performance for Traffic ([Installing the HP NNMi Extension for iSPI Performance for Traffic](#) on page 23). After you specify the password for this user, the Leaf Collector installer creates this user. This is not an operating system user profile; this user is provisioned inside the Leaf Collector application.

 Note down this password. You need this password while configuring the Leaf Collector by using the NNM iSPI Performance for Traffic Configuration form. You can specify a different password for every Leaf Collector.

- Click **Next**, as appropriate during the installation process in the installation wizard screen.
- Click **Submit**. The Install Complete Screen opens.
- Click **Done**.

Installation Log File

The installation log file (postInstall_traffic-leaf) is available in the following directory:

%temp%

Removing the iSPI Performance for Traffic Leaf Collector

To remove the Leaf Collector, follow these steps:

- In the root directory, go to <Leaf_Install_Dir>\Uninstall\HPOvTRLiSPI directory. Double-click Setup. The Application Maintenance screen opens. Select Un-install option.

- 2 Click **Next**. The Pre-uninstall summary screen opens.
- 3 Click **Un-install**. The Maintenance Selection window opens.
- 4 Select **Un-install** option.
- 5 The Un-installation screen opens, and the un-installation process initiates.
- 6 After completing the un-installation, click **Done**.

Alternatively, you can use the Add or Remove Programs (Uninstall a program) feature of the Windows system to remove the NNM iSPI Performance for Traffic. Choose the **Leaf Collector for iSPI Performance for Traffic** entry while using the Programs and Features window.

7 Post-Installation Tasks

The NNM iSPI Performance for Traffic interacts frequently with NNMi and the NPS. After installing the NNM iSPI Performance for Traffic, you must ensure that the product is able to interact with both NNMi and the NPS.

Configuring a User for the Master Collector System

If the NPS is installed on a system other than the NNMi management server, run the following command after installation to create a user that can start the Master Collector processes:

```
C:\Program Files\HP\HP BTO  
Software\nonOV\traffic-master\bin\nmstrafficmastersetuser.ovpl
```

The command prompts you to provide credentials of a local user. If the NPS is installed on a Windows system, you must specify the user name and password of the user that was created by the `nnmenableperfspi.ovpl` command (See the *Running the Enablement Script* section in the *HP NNM iSPI Performance for Metrics Installation Guide*). After receiving the inputs, the `nmstrafficmastersetuser.ovpl` command performs the following tasks on the master collector system:

- Creates a new user
- Sets the password of the user to never expire
 - ▶ If the specified user already existed on the system, the script assigns a new password to the user (password that you specified).
- Adds the user to the Administrators group
- Adds user name to the local policy SeServiceLogonRight

Starting the Master Collector

Ensure that NNMi processes are started before starting the Master Collector.

To start the Master Collector, log on to the Master Collector system with the administrator privileges (user must be a member of the Administrators group; if the NPS and NNMi are not on the same server, use the user account created in [Configuring a User for the Master Collector System](#) on page 39), and then run the following command:

```
<Master_Install_Dir>\nonOV\traffic-master\bin\nmstrafficmasterstart.ovpl
```

In this instance, `<Master_Install_Dir>` is the installation directory of the Master Collector.

Check the Status of the Master Collector

To check the status of the Master Collector installation, run the following command on the Master Collector system:

```
<Master_Install_Dir>\nonOV\traffic-master\bin\nmstrafficmasterstatus.ovpl
```

In this instance, <Master_Install_Dir> is the installation directory of the Master Collector.

If you want to stop the Master Collector, run the following command:

```
<Master_Install_Dir>\nonOV\traffic-master\bin\nmstrafficmasterstop.ovpl
```

Starting the Leaf Collector

To start the Leaf Collector, log on to the Leaf Collector system with the administrator privileges, and then run the following command:

```
<Leaf_Install_Dir>\nonOV\traffic-leaf\bin\nmstrafficleafstart.ovpl
```

In this instance, <Leaf_Install_Dir> is the installation directory of the Leaf Collector.

Check the Status of the Leaf Collector

To check the status of the Leaf Collector installation, run the following command on the Leaf Collector system:

```
<Leaf_Install_Dir>\nonOV\leaf-master\bin\nmstrafficleafstatus.ovpl
```

In this instance, <Leaf_Install_Dir> is the installation directory of the Leaf Collector.

If you want to stop the Leaf Collector, run the following command:

```
<Leaf_Install_Dir>\nonOV\traffic-leaf\bin\nmstrafficleafstop.ovpl
```

Checking the Configuration Information

After installing the NNM iSPI Performance for Traffic, run the following command on the Master Collector system to check that the configuration information entered during the installation is correct:

```
<Master_Install_Dir>\nonOV\traffic-master\bin\nmstrafficinstallcheck.ovpl  
-username system -password <Master_Collector_System_password>
```

In this instance:

<Master_Install_Dir> is the installation directory of the Master Collector.

<Master_Collector_System_password> is the password of the system user for the Master Collector (the password that you specified in [NNM iSPI Performance for Traffic details](#) on page 33).

The command checks the validity for the following and displays error messages if it finds incorrect configuration information:

- If the NNMi system address is correctly provided and whether the system is reachable.

- If the password that you provided for the NNMi web-service client is encrypted correctly.
- If the NNM iSPI Performance for Traffic can invoke web-service calls based on the following information that you entered during the installation:
 - FQDN of the NNMi server
 - NNMi server port number
 - NNMi server user name
 - NNMi server password
- If the NPS system address is correctly provided and whether the system is reachable.
- If the NNM iSPI Performance for Traffic can contact the NPS database running on the NPS server
- If the shared drive between the NPS and the Master Collector is configured correctly.

If the utility encounters a problem in any of the above areas, it displays an error message. You can check the error messages in the following log file:

```
<Master_Data_Dir>\log\traffic-master\TrafficDiagnosticLog.log
```

In this instance, <Master_Data_Dir> is the data directory of the Master Collector.

8 Licensing

The NNM iSPI Performance for Traffic product includes a temporary Instant-On license key that is valid for 60 days after you install the iSPI. You must obtain and install a permanent license key as soon as possible.

The NNM iSPI Performance for Traffic may require two different types of licenses:

- **iSPI Points license:** The iSPI Points license is a points-based licensing scheme for all NNM iSPIs (other than the iSPI Performance for Metric). You can obtain iSPI points by purchasing iSPI Point Packs.

For the NNM iSPI Performance for Traffic, you need the following:

- For each sFlow interface: One iSPI point
- For each NetFlow interface: Five iSPI points

For example, if leaf collectors in your environment collect data from five sFlow interfaces and five NetFlow interfaces, you must allocate at least $(1 \times 5) + (5 \times 5) = 30$ iSPI points for your NNM iSPI Performance for Traffic deployment.

When sufficient iSPI points are not available for your deployment, a warning message appears in the NNMi console.

- **Collector Connection Software LTU:** If the Master Collectors and leaf collectors are not located on the same system, you must enable the Collector Connection Software LTU. Your Collector Connection Software LTU must have the capacity to enable monitoring of all the leaf collectors that are configured on servers other than the Master Collector system.

In a Global Network Management environment, you can monitor data from remote leaf collectors that belong to different regions (See the *NNM iSPI Performance for Traffic Deployment Reference* for more information). This configuration also requires you to enable the Collector Connection Software LTU.

When your Collector Connection Software LTU does not have sufficient capacity to enable the monitoring of the master-leaf connections for your deployment, a warning message appears in the NNMi console.

Enabling Licenses for the NNM iSPI Performance for Traffic

Irrespective of your choice of deployment, you must always enable licenses for iSPIs only on the NNMi management server. The `nnmlicense.ovpl` script, available with NNMi, helps you enable licenses by installing license keys on the NNMi management server.

Before You Begin

Before running the licensing script on the NNMi management server, follow these steps:

- 1 Count the number of traffic interfaces in your environment.
- 2 Determine the iSPI points required to monitor your environment.
$$\langle Total_iSPI_points \rangle = \langle Total_NetFlow_Interfaces \rangle \times 5 + \langle Total_sFlow_Interfaces \rangle$$
- 3 Based on the iSPI points calculation, choose and obtain an iSPI Points Pack that can enable the monitoring of traffic interfaces in your environment.
- 4 Identify the following items in your environment:
 - Number of leaf collectors on servers other than the Master Collector system.
 - *In a Global Network Management setup.* Number of leaf collectors that belong to another region.
- 5 Obtain the Collector Connection Software LTU for your environment. While obtaining the LTU, make sure the license has the capacity to enable the monitoring of all master-leaf connections in your environment.

Run the `nnmlicense.ovpl` Command on the Management Server

To enable the NNM iSPI Performance for Traffic licenses from the Autopass console, follow these steps on the NNMi management server:

- 1 Log on to the NNMi management server with the administrative or root privileges.
- 2 Enable the iSPI Points license.

At the command prompt, run the following command:

On Windows

```
%NnmInstallDir%\bin\nnmlicense.ovpl iSPI-Points -gui
```

On UNIX/Linux

```
/opt/OV/bin/nnmlicense.ovpl iSPI-Points -gui
```

The Autopass user interface opens.

Install the license key by following on-screen instructions.

Alternatively, to enable the NNM iSPI Performance for Traffic licenses from the command line, follow these steps:

- a Log on to the NNMi management server with the administrative or root privileges.
- b With the help of a text editor, create a text file that contains only the license key.
- c Save the file on the system.
- d At the command prompt, run the following command:

On Windows

```
%NnmInstallDir%\bin\nnmlicense.ovpl iSPI-Points -f <license_file>
```

On UNIX/Linux

```
/opt/OV/bin/nnmlicense.ovpl iSPI-Points -f <license_file>
```

In this instance, *<license_file>* is the name of the file created in [step b](#).

 Specify the file name with the complete path to the file.

NNMi installs the license key present in *<license_file>*.

- 3 If the Master Collector and leaf collectors are not located on the same system, enable the Collector Connection Software LTU. If you install multiple leaf collectors in the environment (which requires you to install each leaf collectors on a system other than the Master Collector system), you must obtain a license key for each Leaf Collector and follow these steps for each Leaf Collector.

At the command prompt, run the following command:

On Windows

```
%NnmInstallDir%\bin\nnmlicense.ovpl TRAFFICCOLLSPI -gui
```

On UNIX/Linux

```
/opt/OV/bin/nnmlicense.ovpl TRAFFICCOLLSPI -gui
```

The Autopass user interface opens.

Install the license key by following on-screen instructions.

Alternatively, to enable the NNM iSPI Performance for Traffic licenses from the command line, follow these steps:

- a Log on to the NNMi management server with the administrative or root privileges.
- b With the help of a text editor, create a text file that contains only the license key.
- c Save the file on the system.
- d At the command prompt, run the following command:

On Windows

```
%NnmInstallDir%\bin\nnmlicense.ovpl TRAFFICCOLLSPI -f <license_file>
```

On UNIX/Linux

```
/opt/OV/bin/nnmlicense.ovpl TRAFFICCOLLSPI -f <license_file>
```

In this instance, *<license_file>* is the name of the file created in [step b](#).

 Specify the file name with the complete path to the file.

NNMi installs the license key present in *<license_file>*.



If NNMi is installed in an HA cluster, enable licenses only on the active node.

9 Installing the NNM iSPI Performance for Traffic in a High Availability Cluster Environment

You can install the NNM iSPI Performance for Traffic in a high availability (HA) environment to achieve redundancy in your monitoring setup. Since the NNM iSPI Performance for Traffic consists of multiple components that can be installed on different systems, you can choose the HA implementation of the NNM iSPI Performance for Traffic from multiple deployment scenarios.

Supported HA Products

The HP Network Node Manager iSPI Performance for Traffic Software-provided commands for configuring and running NNM iSPI Performance for Traffic under HA work with the following HA products for the designated operating systems:

- Linux
 - Veritas Cluster Server (VCS) version 5.0
 - Veritas Cluster Server (VCS) version 5.1
- Windows
 - Microsoft Cluster Service for Windows 2008 and 2008 R2

While you can follow the procedures in this chapter to configure NNM iSPI Performance for Traffic to run under other HA products, HP does not provide support for cluster configuration issues for other configurations.

Prerequisites to Configuring the NNM iSPI Performance for Traffic for HA

Any system that you want to include as a node in an NNM iSPI Performance for Traffic HA cluster must meet the following requirements:

- Supports the use of a virtual IP address.
- Supports the use of a shared disk.
- Meets all requirements for NNM iSPI Performance for Traffic as described in the *HP Network Node Manager iSPI Performance for Traffic Software System and Device Support Matrix*.
- Meets all requirements described in the documentation for the HA product on which you plan to run NNM iSPI Performance for Traffic.

- Before you begin to configure the NNM iSPI Performance for Traffic for HA, use the commands for your HA product to configure and test an HA cluster. The HA cluster provides such functionality as checking the application heartbeat and initiating failover.
- Virtual IP address for the HA cluster that is DNS-resolvable
- Virtual hostname for the HA cluster that is DNS-resolvable

HA Installation Environments

You cannot install the Leaf Collector in an HA cluster.

Option 1: NNMi and the Master Collector in the Same HA

In this scenario, you can choose to install the Master Collector on the NNMi management server as an add-on product.

The NPS may or may not be installed in an HA. However, make sure the NPS is not installed on the NNMi management server. The NPS and Master Collector cannot both exist as HA products in the same HA cluster at the same time.

To install the NNM iSPI Performance for Traffic in this environment, follow these steps:

- 1 Install the HP NNMi Extension for iSPI Performance for Traffic on the NNMi management server. See [Installing the HP NNMi Extension for iSPI Performance for Traffic](#) on page 23.
- 2 Install the Master Collector. See [Installing Add-On Traffic Master Collector After NNMi HA Configuration](#) on page 52.
- 3 Configure the Master Collector. See [Configuring an Installed NNM iSPI Performance for Traffic Master Collector as Add-On NNM iSPI](#) on page 55.

Option 2: Only the Master Collector in HA

In this scenario, NNMi is not installed in an HA cluster. The NPS may or may not be installed in an HA. However, the NPS and Master Collector cannot both exist as HA products in the same HA cluster at the same time.

To install the NNM iSPI Performance for Traffic in this environment, follow these steps:

- 1 Install the HP NNMi Extension for iSPI Performance for Traffic on the NNMi management server. See [Installing the HP NNMi Extension for iSPI Performance for Traffic](#) on page 23.
- 2 Install and configure the Master Collector on the primary node. See [Configuring NNM iSPI Performance for Traffic on the Primary Cluster Node](#) on page 49.
- 3 Install and configure the Master Collector on secondary nodes. See [Configuring NNM iSPI Performance for Traffic on the Secondary Cluster Nodes](#) on page 50.

Configuring NNM iSPI Performance for Traffic on the Primary Cluster Node

Complete the following procedure on the primary cluster node:

- 1 Verify that the system meets all of the requirements specified in [Configuring NNM iSPI Performance for Traffic on the Primary Cluster Node](#) on page 49.
- 2 If you have not already done so, install NNM iSPI Performance for Traffic Master Collector (including the latest consolidated patch, if any), and then verify that NNM iSPI Performance for Traffic is working correctly.
- 3 Back up the NNM iSPI Performance for Traffic Master Collector license file by copying the following file to another location:

```
%AUTOPASS_HOME%\data\LicFile.txt
```

To determine the value of `%AUTOPASS_HOME%`, examine the system environment variables for the computer.

- 4 Define the disk device group (and logical volume), consisting of at least one shared disk for the NNM iSPI Performance for Traffic HA resource group. For example:

MSFC or MSCS: Use Disk Management to configure the disk mount point and format the disk.

- 5 Create the directory mount point for the shared disk (for example, `S:\` or `/trafficmount`):

Windows: Use Windows Explorer and Disk Management.

- 6 Mount the shared disk. For example:

Use Disk Management.

- 7 Stop the Master Collector:

```
nmstrafficmasterstop.ovpl
```

If NNM iSPI Performance for Traffic Master Collector is already installed on a node that you will include in this HA resource group, also run `nmstrafficmasterstop.ovpl` on that node at this time

- 8 Unmount the shared disk:

Use Windows Explorer and Disk Management.

- 9 Mount the shared disk. For example:

Use Disk Management.

- 10 Copy the NNM iSPI Performance for Traffic data disk to the shared disk:

```
<Master_Install_Dir>\misc\nnm\ha\nnmhadisk.ovpl TRAFFIC -to  
<HA_mount_point>
```



To prevent database corruption, run this command (with the `-to` option) only one time.

- 11 Verify that NNM iSPI Performance for Traffic Master Collector is not running:

```
nmstrafficmasterstop.ovpl
```

- 12 Configure the NNM iSPI Performance for Traffic HA resource group:


```
<Master_Install_Dir>\misc\nnm\ha\nnmhaconfigure.ovpl TRAFFIC
```
- 13 In the previous step, what value did you specify for the shared file system type?
 - For type disk, the nmshaconfigure.ovpl command configured the shared disk. Continue with the next step.
 - For type none, configure the shared disk; then continue with the next step.
- 14 Start the NNM iSPI Performance for Traffic HA resource group:


```
<Master_Install_Dir>\misc\nnm\ha\nnmhastartrg.ovpl TRAFFIC
<resource_group>
```

 Now that NNM iSPI Performance for Traffic is running under HA, do not use the nmstrafficmasterstart.ovpl and nmstrafficmasterstart.ovpl commands for the normal operation. Use these commands only for HA maintenance purposes.

Configuring NNM iSPI Performance for Traffic on the Secondary Cluster Nodes

Complete the following procedure on one secondary cluster node at a time.

- 1 If you have not already done so, complete the procedure for [Configuring NNM iSPI Performance for Traffic on the Primary Cluster Node](#) on page 49.
- 2 Verify that the system meets all of the requirements specified in [Configuring NNM iSPI Performance for Traffic on the Primary Cluster Node](#) on page 49.
- 3 If you have not already done so, install NNM iSPI Performance for Traffic Master Collector (including the latest consolidated patch, if any), and then verify that NNM iSPI Performance for Traffic Master Collector is working correctly.
- 4 Stop NNM iSPI Performance for Traffic:


```
nmstrafficmasterstop.ovpl
```
- 5 Create a mount point for the shared disk (for example, **S:** or **/trafficmount**).
- 6 Configure the NNM iSPI Performance for Traffic HA resource group:


```
<Master_Install_Dir>\misc\nnm\ha\nnmhaconfigure.ovpl TRAFFIC
```
- 7 Supply the HA resource group name when the command requests this information.
- 8 Verify that the configuration was successful:


```
<Master_Install_Dir>\misc\nnm\ha\nnmhaclusterinfo.ovpl -group
<resource_group> -nodes
```

The command output lists all configured nodes for the specified HA resource group.
- 9 Optionally, test the configuration by taking the resource group on the primary node offline and then bringing the resource group on the secondary node online.

Unconfiguring NNM iSPI Performance for Traffic from an HA Cluster

The process of removing an NNM iSPI Performance for Traffic node from an HA cluster involves undoing the HA configuration for that instance of NNM iSPI Performance for Traffic Master Collector. You can then run that instance of NNM iSPI Performance for Traffic Master Collector as a standalone system or you can uninstall NNM iSPI Performance for Traffic Master Collector from that node.

If you want to keep NNM iSPI Performance for Traffic configured for high availability, the HA cluster must contain one node that is actively running NNM iSPI Performance for Traffic Master Collector and at least one passive NNM iSPI Performance for Traffic Master Collector node.

If you want to completely remove NNM iSPI Performance for Traffic Master Collector from the HA cluster, unconfigure the HA functionality on all nodes in the cluster.

To completely unconfigure NNM iSPI Performance for Traffic from an HA cluster, follow these steps:

- 1 Determine which node in the HA cluster is active. On any node, run the following command:

```
<Master_Install_Dir>\misc\nnm\ha\nnmhaclusterinfo.ovpl -group  
<resource_group> -activeNode
```

- 2 On each passive node, unconfigure NNMi from the HA cluster:

```
<Master_Install_Dir>\misc\nnm\ha\nnmhaunconfigure.ovpl TRAFFIC  
<resource_group>
```

This command removes access to the shared disk but does not unconfigure the disk group or the volume group.

- 3 On each passive node, remove the resource group-specific files:

Delete all files in the `<Master_Install_Dir>\hacluster\<resource_group>` folder.

- 4 On the active node, disable HA resource group monitoring by creating the following maintenance file:

```
<Master_Install_Dir>\hacluster\<resource-group>\maintenance
```

The file can be empty.

- 5 Stop traffic Master Collector using the following command:

```
nmstrafficmasterstop.ovpl --HA
```

To prevent data corruption, make sure no instance of traffic Master Collector is running and accessing the shared disk.

- 6 Run the following command on the active node:

```
nnmhadisk.ovpl TRAFFIC -from <mount-point>
```

- 7 Remove all files from shared disk.

- 8 Delete the maintenance file.

```
del %NnmDataDir%\hacluster\<resource-group>\maintenance
```

- 9 On the active node, stop the NNM iSPI Performance for Traffic Master Collector HA resource group:

```
<Master_Install_Dir>\misc\nnm\ha\nnmhastoprg.ovpl TRAFFIC
<resource_group>
```

This command does not remove access to the shared disk. Nor does it unconfigure the disk group or the volume group.

- 10 On the active node, unconfigure NNM iSPI Performance for Traffic from the HA cluster:

```
<Master_Install_Dir>\misc\nnm\ha\nnmhaunconfigure.ovpl TRAFFIC
<resource_group>
```

This command removes access to the shared disk but does not unconfigure the disk group or the volume group.

- 11 On the active node, remove the resource group-specific files:

Delete all files in the `<Master_Install_Dir>\hacluster\<resource_group>` folder.

- 12 Unmount the shared disk.

- If you want to reconfigure the NNM iSPI Performance for Traffic HA cluster at some point, you can keep the disk in its current state.
- If you want to use the shared disk for another purpose, copy all data that you want to keep (as described in the next procedure), and then use the HA product commands to unconfigure the disk group and volume group.

- 13 After all the nodes are unconfigured from HA. Modify the following file and change the master host name from virtual IP to actual host name of the node:

```
<Master_Data_Dir>\shared\traffic-master\conf\nnm.extended.properties
```

- 14 For add-on Master Collector change these two parameters:

- `com.hp.ov.nms.spi.traffic-master.spi.hostname=<FQDN of the localhost>`
- `com.hp.ov.nms.spi.traffic-master.Nnm.hostname=<FQDN of the NNM server>`

For standalone Master Collector change the following parameter:

- `com.hp.ov.nms.spi.traffic-master.spi.hostname=<FQDN of the localhost>`

- 15 Start traffic Master Collector using the following command:

```
nmstrafficmasterstart.ovpl
```

Installing Add-On Traffic Master Collector After NNMi HA Configuration

The Master Collector for NNM iSPI Performance for Traffic cannot be installed while NNMi is running under HA.

To install the iSPI, temporarily unconfigure HA, install the iSPI on each node in the HA resource group, and then reconfigure HA as described here.

- 1 Determine which node in the NNMi HA cluster is active. On any node, run the following command:

- `%NnmInstallDir%\misc\nnm\ha\nnmhaclusterinfo.ovpl -group
<resource_group> -state`
- 2 On each passive node, unconfigure any add-on NNM iSPI Performance for Traffic from the HA cluster using the following command:


```
%NnmInstallDir%\misc\nnm\ha\nnmhaunconfigure.ovpl NNM -addon  
<iSPI_PM_Name>
```

Where <iSPI_PM_Name> is the base name of the Perl module that NNM iSPI Performance for Traffic installs on the NNMi management server.
 - 3 On the active node, unconfigure the add-on NNM iSPI Performance for Traffic from the HA cluster using the following command:


```
%NnmInstallDir%\misc\nnm\ha\nnmhaunconfigure.ovpl NNM -addon  
<iSPI_PM_Name>
```
 - 4 On any node in the HA cluster, verify that the add-on NNM iSPI Performance for Traffic on all nodes have been unconfigured from the HA cluster:


```
%NnmInstallDir%\misc\nnm\ha\nnmhaclusterinfo.ovpl -config NNM -get  
NNM_ADD_ON_PRODUCTS
```

The command output lists the add-on iSPI configurations in the format <iSPI_PM_Name>[hostname_list]. For example:

```
TrafficSPIHA[hostname1, hostname2]
```

If any hostname appears in the output, repeat step 2 and step 3 until this command returns no results.
 - 5 On each passive node, unconfigure NNMi from the HA cluster:


```
%NnmInstallDir%\misc\nnm\ha\nnmhaunconfigure.ovpl NNM  
<resource_group>
```

This command removes access to the shared disk but does not unconfigure the disk group or the volume group.
 - 6 On each passive node, remove the resource group-specific files:

Delete all files in the `%NnmDataDir%\hacluster\<resource_group>` folder.
 - 7 On the active node, disable HA resource group monitoring by creating the following maintenance file:


```
%NnmDataDir%\hacluster\<resource_group>\maintenance
```

The file can be empty.
 - 8 Stop NNMi:


```
ovstop -c
```
 - 9 To prevent data corruption, accessing the shared disk.

Copy the NNMi files from the shared disk to the node:

```
%NnmInstallDir%\misc\nnm\ha\nnmhadisk.ovpl NNM -from <HA_mount_point>
```
 - 10 Start NNMi.


```
ovstart -c
```
 - 11 Remove the maintenance file. This maintenance file was added in Step 7.
 - 12 On the active node, stop the NNMi HA resource group:

```
%NnmInstallDir%\misc\nnm\ha\nnmhastoprg.ovpl NNM <resource_group>
```

This command does not remove access to the shared disk. Nor does it unconfigure the disk group or the volume group.

- 13 On the active node, unconfigure NNMi from the HA cluster:

```
%NnmInstallDir%\misc\nnm\ha\nnmhaunconfigure.ovpl NNM  
<resource_group>
```

This command removes access to the shared disk but does not unconfigure the disk group or the volume group.

- 14 Remove all NNMi files and directories from the shared disk:

Delete all files under the shared disk mount point (%HA_MOUNT_POINT%, which is, for example S:\).

- 15 On the active node, remove the resource group-specific files:

Delete all files in the %NnmDataDir%\hacluster\

- 16 Use the appropriate operating system commands to unmount the shared disk. For example:

Use Windows Explorer.

- 17 On the node that was active before unconfiguring NNMi from HA, start NNMi:

```
ovstart -c
```

- 18 On the node that was active before unconfiguring NNMi from HA, verify that NNMi started correctly:

```
ovstatus -c
```

All NNMi services should show the state RUNNING.

- 19 On the node that was active before unconfiguring NNMi from HA, install traffic-Master Collector add-on iSPI that you expect to run on this NNMi management server.

- 20 On the node that was active before unconfiguring NNMi from HA, configure NNMi to run as primary cluster node.

You do not need to do the following:

- Define a disk device group and logical volume.
- Create a mount point for the shared disk.
- Configure the shared disk.

- 21 On each node that was passive before unconfiguring NNMi from HA, install the NNM iSPI Performance for Traffic Master Collector.

- 22 On each node that was passive before unconfiguring NNMi from HA, configure NNMi to run as secondary cluster nodes.

You do not need to create a mount point for the shared disk.

Configuring an Installed NNM iSPI Performance for Traffic Master Collector as Add-On NNM iSPI

The information in this section applies to NNM iSPI Performance for Traffic Master Collector that meets the following requirements:

- The iSPI runs on the NNMi management server.
- The iSPI uses the same Postgres instance as NNMi (except for the NNM iSPI for Performance, which does not use Postgres).
- The iSPI was installed on the NNMi management server prior to HA configuration.

NNM iSPI Performance for Traffic configuration for HA is order independent. If you plan to run NNM iSPI Performance for Traffic Master Collector on the NNMi management server, then unconfigure NNMi from HA on the cluster nodes.

Procedure

To configure NNM iSPI Performance for Traffic Master Collector as an add-on NNM iSPI to run under the HA resource group, follow these steps:

- 1 Completely configure and start the NNMi HA resource group for all nodes in the NNMi HA cluster as described in *Configuring NNMi for HA or configuring NNMi for HA* in an Oracle Environment. Verify that the cluster is properly configured.
- 2 On the active node in the NNMi HA cluster, verify that the NNMi services are running:

```
ovstatus -c
```

All NNMi services should show the state RUNNING.
- 3 On the active node in the NNMi HA cluster, add the iSPI to the NNMi HA resource group:

```
%NnmInstallDir%\misc\nnm\ha\nnmhaconfigure.ovpl NNM -addon TRAFFIC
```
- 4 Configure the iSPI for HA on each passive node in the NNMi HA cluster, add the iSPI to the NNMi HA resource group:

```
%NnmInstallDir%\misc\nnm\ha\nnmhaconfigure.ovpl NNM -addon TRAFFIC
```
- 5 Verify the configuration:

```
%NnmInstallDir%\misc\nnm\ha\nnmhaclusterinfo.ovpl -config NNM -get NNM_ADD_ON_PRODUCTS
```

The command output lists the add-on iSPI configurations in the format TRAFFIC[hostname1, hostname2].

Un-configuring an Installed NNM iSPI Performance for Traffic Master Collector as Add-On NNM iSPI

- 1 On the primary node, NNMi standalone and traffic-master collector as add-on must be running under HA.
- 2 On the passive nodes unconfigure traffic-master collector add-on SPI from the HA cluster.

```
%NnmInstallDir%\misc\nnm\ha\nnmhaunconfigure.ovpl NNM -addon TRAFFIC
```

- 3 On the primary cluster node, where NNMi standalone and traffic-master collector as add-on are running under HA. Unconfigure traffic-master collector add-on SPI from the HA cluster.

```
%NnmInstallDir%\misc\nnm\ha\nnmhaunconfigure.ovpl NNM -addon TRAFFIC
```

- 4 Go to the NNMi iSPI Performance for Traffic Master Collector `conf` directory and edit the `nm.extended.properties` file manually.

Change the following two parameters in the `nm.extended.properties` file to their appropriate values:

- `com.hp.ov.nms.spi.traffic-master.spi.hostname=<local FQDN of traffic-Master Collector>`
- `com.hp.ov.nms.spi.traffic-master.Nnm.hostname=<FQDN of the NNMi server>`

- 5 Start traffic-master collector using the following command:

```
Nmstrafficmasterstart.ovpl
```


10 Upgrade the NNM iSPI Performance for Traffic

You can upgrade the NNM iSPI Performance for Traffic 9.01 to the version 9.10. If you have an older version of the NNM iSPI Performance for Traffic installed in your environment, you must first upgrade to 9.01, and then proceed with upgrading to 9.10.



The `SrcPort` attribute is removed as an aggregation key in the 9.10 and later versions. Filters or application mapping rules defined using `Src Port` are not used any more.

In this version, no manual configuration of the flush period is required for the Leaf Collector. The flush period is determined automatically.

The High Traffic Hosts report is no longer available. You can use the existing reports and select multiple metrics with top sources as a option.

To upgrade the NNM iSPI Performance for Traffic 9.01 to 9.10, follow these steps:

- 1 Stop all Leaf Collector processes. Keep a record of all the systems that had Leaf Collectors installed.
- 2 Go to system that hosts the Master Collector.
- 3 Stop the Master Collector.
- 4 *Only on the systems where NNMi is not installed.* Stop the HP BTO Software NNM Embedded DB Manager service on all the systems where the Master and Leaf Collectors are installed.
- 5 Make sure that NNMi is upgraded to 9.10.
- 6 Make sure that the NPS is upgraded to 9.10.
- 7 Install the HP NNMi Extension for iSPI Performance for Traffic 9.10 on the upgraded NNMi system (see [Installing the HP NNMi Extension for iSPI Performance for Traffic](#) on page 23).
- 8 Go to the system that hosted the Master Collector 9.01.
- 9 Install the Master Collector version 9.10 ([Installing the Master Collector](#) on page 29).
- 10 Ensure that the `nmsdbmgr` service is running on the system where the Master Collector version 9.10 is installed.
- 11 Install the Leaf Collector 9.10 on all Leaf Collector systems (see [Installing the Leaf Collector](#) on page 35).
- 12 On every Leaf Collector system, follow these steps:
 - a Go to the directory `<Leaf_Data_Dir>\shared\traffic-leaf\conf`.
 - b Open the `nms-traffic-leaf.address` file with a text editor, and then add the following content to the file:

```
topn.longterm.data=true
max.dump.hours=1680
topn.flowrecord.pool.size=300000
```

- c Save the file, and then restart the Leaf Collector.

11 Troubleshooting Installation

This chapter lists the trouble scenarios that you may encounter during installation of the NNM iSPI Performance for Traffic and tips to resolve these issues.

Installing the NNM iSPI Performance for Traffic



Use the `nmstrafficinstallcheck.ovpl` script to check the status of the installation. See [Checking the Configuration Information](#) on page 40.

Problem Statement: An error occurs during the Leaf Collector installation

Cause: A failure in any or all of the NNM iSPI Performance for Traffic installer tasks can lead to unsuccessful installation. The NNM iSPI Performance for Traffic installer performs the following tasks:

- Encryption of user password
- Creating a postgres User
- Changing the permissions of `\nonOV\postgres\bin` and `\postgres` directories

Solution:

Make sure that you are running the NNM iSPI Performance for Traffic installer with administrative privileges. You must also ensure that the user account belongs to the group name Administrator.

Starting the NNM iSPI Performance for Traffic

Problem Statement: Not able to start nmsdbmgr on the Windows Management Server

Solution: This may happen occasionally if the traffic processes (Master or Leaf Collector) were running when `ovstop -c` was issued. Go to Task Manager, search for `nmsdbmgr.exe` and manually end the process. Ensure that traffic processes are not running. Restart NNMi after this operation.

Problem Statement: The NNM iSPI Performance for Traffic Leaf Collector does not start

Cause can be any one of the following:

- Starting NNM iSPI Performance for Traffic Leaf Collector with user account that does not belong to Administrator group.
- The NNM iSPI Performance for Traffic Leaf Collector ports have already been used

Solution:

- The default Leaf Collector ports are available in `<Leaf_Data_Dir>\shared\traffic-leaf\conf\nms-traffic-leaf.ports.properties` file. You can check the file, and make sure the default ports are available.
- Check the `<Leaf_Data_Dir>\log\traffic-leaf\jbossServer.log` to see if there was any problem in starting the Leaf Collector. You can also look for following message: Bind Exception: Port is in use in the log file to identify if the used port numbers are causing an issue.

If you use the embedded database, check the Windows Task Manager and make sure that 'postgres.exe' is running. If you do not find the running process of 'postgres.exe', you can start the iSPI Performance of Traffic Leaf Collector again. If you use Oracle, check that the Oracle database instance is configured for use by the Master Collector is available and the user configuration is correct
- If the NPS is installed on the same system where you have installed the Leaf Collector, stop any running instances of the NPS. You can restart the NPS instance after starting the Leaf Collector.

Problem Statement: The iSPI Performance for Traffic Master Collector does not start

Cause can be any one of the following:

- Starting iSPI Performance for Traffic Master Collector with user account that does not belong to Administrator group.
- The iSPI Performance for Traffic Master Collector ports have already been used
- Running instances of Network Performance Server on the system

Solution:

- The default iSPI Performance for Traffic Master Collector ports are available in `<Master_Data_Dir>\shared\traffic-master\conf\nms-traffic-master.ports.properties` file. You can check the file, and make sure if the default ports are available.
- Check the log files for the iSPI Performance for Traffic Master Collector `<Master_Data_Dir>\log\jbossServer.log` to see if there was any problem in starting the iSPI Performance for NNM iSPI Performance for Traffic Master Collector. You can also look for following message: Bind Exception: Port is in use in the log file to identify if the used port numbers are causing an issue.
- If NNMi is not installed on the same system where the iSPI Performance for Traffic Leaf Collector is installed, check if postgres is running.

If you use the embedded database, check the Windows Task Manager and make sure that 'postgres.exe' is running. If you do not find the running process of 'postgres.exe', you can start the iSPI Performance of Traffic Leaf Collector again.
- If the NPS is installed on the same system where you have installed the Master Collector, stop any running instances of the NPS. You can restart the NPS instance after starting the iSPI Performance for Traffic Master Collector.

Problem Statement: The NNM iSPI Performance for Traffic Configuration Form link does not launch the form

Solution:

- Check the status of the Master Collector by running the `<Master_Install_Dir>\nonOV\traffic-master\bin\nmstrafficmasterstatus.ovpl` command and ensure that the status of the Master Collector is RUNNING.
- Check the URL used to launch the Configuration UI. This URL must point to the Fully qualified Domain name of the Master Collector.
- Log on to the NNMi console again with new browser session and launch the NNM iSPI Performance for Traffic Configuration Form URL.
- Check that NNMi was restarted after the installation of the HP NNMi Extension for iSPI Performance for Traffic
- Check the log files for the Master Collector in the location `<Master_Data_Dir>\log` to see if there were any problems in starting the Master Collector.

Problem: The iSPI Performance for Traffic Configuration Form is not appearing in the web browser.

Solution:

- Make sure that you are using Microsoft Internet Explorer 8.0 or Mozilla Firefox 3.6.12 version web browser.
- Maximize all the working windows.

Problem Statement: During the Master Collector installation, the following warning message appears:
Failed to copy the *.gz file

Solution:

Check that the user installing the Master Collector has the write access to the following directory on the NPS system:

`%NPS_data_dir%\extension\final`

Working with the NNM iSPI Performance for Traffic

Problem Statement: How do I verify the Leaf Collector is receiving flow records from the defined router or switch?

Solution:

- Make sure that the Leaf Collector is up and running. You can run `<Leaf_Install_Dir>\nonOV\traffic-leaf\bin\nmstrafficleafstatus.ovpl` command and check the status of the Leaf Collector. It should display the status as RUNNING.
- If the status of the Leaf Collector does not display as RUNNING, make sure that correct values have been entered for the Leaf Collector FQDN, IP Address, JNDI Port, HTTP Port and Password.
- Check that the Leaf Collector instance has been created using the NNM iSPI Performance for Traffic Configuration form for this system

- Check if the router or switch is exporting flow packets with the port number that matches with the port number provided during the iSPI Performance for Traffic Leaf Configuration.
- Check for the Thread = <Collector-Name>JmsFlusher : Time Taken to Publish message in any of the <Leaf_Data_Dir>\log\traffic_spi_leaf_0.log.* files. If this message appears, the Leaf Collector is receiving flow records from the defined router or switch.

Problem Statement: How do I verify if the Master Collector is receiving data from the iSPI Performance for the Leaf Collector?

Solution:

You can perform any one of the following tasks to confirm that the Master Collector is receiving data from the Leaf Collector:

- Make sure the Master Collector is up and running. You can run the <Master_Install_Dir>\nonOV\traffic-master\bin\nmstrafficmasterstatus.ovpl command and check the status of the Master Collector. It should display the status as RUNNING.
- Make sure the nmsdbmngn service is up and running:
- Open the Traffic Configuration form. Select a Leaf Collector that is exporting data to the Traffic Master Collector. Open the Leaf collector details Go to the Collector Statistics tab - this should list the list of records flushed to the master by this leaf collectors. Verify the time for the flushes from the Leaf Collector
- Check for the Received traffic records from <Collector-Name> message in the <Master_Data_Dir>\log\traffic_spi_master_0.log.* file. If this message appears, then the iSPI Performance for Traffic Master Collector is receiving flow records from the iSPI Performance for Traffic Leaf Collector.
- Check the link Unresolved NNM IP in the Traffic configuration form to see if the master is not able to resolve the flow interface by querying the NNMi topology. Make sure that the router or switch sending the flow is seeded in NNMi.

Problem Statement: I do not remember the password I gave during the Leaf Collector or Master Collector installation. Can I retrieve it?

Solution:

Run the encrypttrafficpasswd.ovpl script present in the “bin” directory of either Leaf Collector or Master Collector to retrieve the password.

Problem Statement: I am not seeing a Traffic Map populated with data; a blank window opens with the message 'No data in DB.'

Solutions:

- Verify that the traffic data is being received on the Master Collector system.
- Change time controls to search for greater time ranges.
- If you are specifying values for nodes on the maps (for example, source node/ destination node), try with IP addresses and Fully Qualified Domain names instead of node names.

Problem Statement: I am not seeing a Traffic Map populated with data; a blank window opens with the message 'Unable to contact application server.'

Solution: Restart the Master Collector.

Problem Statement: For the Traffic Path Map view, I am not seeing any path or any traffic on the map

Solutions:

- If no path appears, change the source and destination node entries to IP addresses/ Fully Qualified Domain names, and then retry to launch the map.
- Check the NNMi path with the same entries as those given for the Traffic SPI Path View Map. Check if the path is appearing correctly
- Check that there is a router on the path that is capable of reporting the traffic flow data.

Problem Statement: Bridge creation fails when the Master and Leaf Collectors are located on the same system

Cause:

This problem occurs only if the fully qualified domain name (FQDN) specified for the Leaf Container is different from the FQDN specified for Master Collector.

Solution:

- 1 Check the entries for FQDN in the following file that stores the FQDN for the Master Collector:

```
<Master_Data_Dir>\shared\traffic-master\conf\nnm.extended.properties
```

- 2 Check the entries for FQDN in the following file that stores the FQDN for the Leaf Container:

```
<Leaf_Data_Dir>\shared\traffic-leaf\conf\nms-traffic-leaf.address.properties
```

- 3 If the FQDN information are different in the two files, update the FQDN specified in the nms-traffic-leaf.address.properties file to match the FQDN specified in the nnm.extended.properties file.

For example, if the Master Collector FQDN is specified as **system.example.domain.com**, the Leaf Container FQDN also must be specified as **system.example.domain.com**.

Problem Statement: Bridge creation fails when the Master Collector and Leaf Collector are not located on the same system

Cause:

This problem occurs if the Master Collector fails to resolve the hostname DNS for the Leaf Container, where the Leaf Container is not co-located with the Master Collector.

If the Master Collector cannot resolve the hostname DNS for the Leaf Container, the NNM iSPI Performance for Traffic creates the Leaf Container without displaying any error, but fails to create the bridge between the Master Collector and Leaf Container.

Solution

- 1 Check the hostname DNS for the Leaf Container in the following file on the Master Collector:

```
<Master_Data_Dir>\log\traffic-master\jbossServer.log
```

- 2 Ensure that the hostname DNS for the Leaf Container can be resolved.

The short name of the Leaf Collector system must also be resolvable on the Master Collector system. For example, if the Leaf Collector system is `example.domain.com`, the administrator should ensure that 'example' is resolvable to a reachable IP address

Change of hostname or IP address of the system hosting the NNM iSPI Performance for Traffic components

Problem Statement: Reconfiguration of hostname or IP address of the system where the Leaf Collector is installed

Solution:

- Remove the the Leaf Collector configured by using NNM iSPI Performance for Traffic Configuration form on iSPI Performance for the Master Collector.
- Restart the Leaf Collector process on the system. Add the Leaf Collector again with the new FQDN by using the NNM iSPI Performance for Traffic Configuration form.

Problem Statement: Reconfiguration of hostname or IP address of the system where the Master Collector is installed

Solution:

Stop the Master Collector. Change the entries for FQDN in the file `nnm.extended.properties` and `nms-traffic-master.address.properties` in `<Master_Data_Dir>\shared\traffic-master\conf` directory. Restart the Master Collector.

Reports

Problem Statement: I am not able to launch NNM iSPI Performance for Traffic reports from the Action menu in the NNMi Console.

Solution:

Make sure that the `nnmenableperfspi.ovpl` script is run on the system where NNMi is installed.

Problem Statement: The NNM iSPI Performance for Traffic interface report does not show any data

Solution:

- You can refer to the sections under [Working with the NNM iSPI Performance for Traffic](#) on page 61 and make sure the Leaf Collector and Master Collector are working correctly.

- You can also verify if the NPS processes are running.

Problem Statement: The NNM iSPI Performance for Traffic report shows data only for select time periods.

Cause:

Either the Leaf Collector or Master Collector is not processing the data.

Solution:

- You can also check whether the Leaf Collector is loaded with excess data.
- You can check the
<Master_Data_Dir>\log\traffic-master\traffic_spi_master_0.log.*
file. for network failures between the Leaf Collector and Master Collector.

Problem Statement: When a report is filtered by using the Application ID, a major portion of data appears under the undefined group.

Cause:

- All the network flow ports that are not mapped to any application mapping rules are categorized under the undefined group.
- Set a Topology filter for Application Name=Undefined. Launch the Top N report and choose Destination Port as the group-by option. You will see all the top destination ports contributing to traffic categorized as Undefined.

Problem Statement: Reports do not show data for one of the interfaces.

Solution:

- Check if the flow exporting is turned ON.
- Check if the specified interface has been discovered by NNMi.

12 Getting Started with the NNM iSPI Performance for Traffic

After you complete the installation of the NNM iSPI Performance for Traffic in your NNMi environment, you can start monitoring your network traffic with the help of reports generated by the NNM iSPI Performance for Traffic.

Configuration of Routers or Switches for Exporting the IP Flow Data

Make sure that the routers or switches that export the flow data meet the following conditions:

- The routers or switches are configured to export flow packets.
- The routers or switches are seeded as nodes in NNMi and are discovered correctly.

NNM iSPI Performance for Traffic server and NNMi server must be NTP (Network Time Protocol) synchronized. All routers exporting flow data should also be NTP synchronized.

See the documentation of the router or switch vendor for information on configuring interfaces that can report the traffic flow data.

Configuring the Collectors

You must configure all Leaf Collectors to listen to specific interfaces of routers or switches that are capable of and configured to report the traffic flow data. The NNM iSPI Performance for Traffic Configuration form, which you can launch from the NNMi console, enables you to perform those configuration tasks.

To access the NNM iSPI Performance for Traffic Configuration form, follow these steps:

- 1 Launch the NNMi Console.
- 2 Log on to the NNMi Console with one of the Administrator user roles:
- 3 In the Configuration workspace, double-click **NNM iSPI Performance for Traffic Configuration**. The NNM iSPI Performance for Traffic Configuration form opens.
- 4 Log on to the NNM iSPI Performance for Traffic Configuration form with the credentials of the `system` user for the Master Collector (created in [NNM iSPI Performance for Traffic details](#) on page 33).
- 5 Log on to the NNMi console with the administrator privileges.
- 6 In the Configuration workspace, click **NNM iSPI Performance for Traffic Configuration**. The NNM iSPI Performance for Traffic Configuration form opens.
- 7 In the NNM iSPI Performance for Traffic Configuration form, configure the following:
 - a Configure the Leaf Collector System.
 - b Configure the Leaf Collector instance.
 - c Configure the Master Collector.

- d Configure additional properties like sites, filters, application mapping groups, and Type of Service groups.

See the *HP Network Node Manager iSPI Performance for Traffic Software Deployment Reference* for more details on the above configuration tasks.

Accessing the NNM iSPI Performance for Traffic Documents

To access the NNM iSPI Performance for Traffic documents, follow these steps:

- 1 Launch the NNMi Console.
- 2 Log on to the NNMi Console.
- 3 Click **Help > NNM iSPI Documentation Library**.

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