

# HP Network Node Manager i Software Smart Plug-in Performance for Traffic

for the Windows<sup>®</sup> and Linux operating systems

Software Version: 9.01

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## Installation Guide

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# Contents

<b>1</b>	<b>Introduction</b> .....	<b>9</b>
	NNM iSPI Performance for Traffic Components .....	10
	NNM iSPI Performance for Traffic Leaf Collector .....	11
	NNM iSPI Performance for Traffic Master Collector .....	11
	NNM iSPI Performance for Traffic Extension Pack .....	11
	Documentation Conventions .....	13
	Additional Sources of Information .....	14
<b>2</b>	<b>Prerequisites and Planning for Installation</b> .....	<b>15</b>
	Planning the Installation .....	15
	System Requirements .....	15
	Prerequisites Checklist .....	15
	Preparing to Install Master or Leaf Collector On a System Without NNMi .....	18
	Installing Microsoft Visual C++ Redistributable Package .....	18
<b>3</b>	<b>..... NNMi Extension for iSPI Performance for Traffic</b>	<b>19</b>
	Installing in the NNMi Application Failover Environment .....	19
	Installing the NNMi Extension for iSPI Performance for Traffic .....	19
	Uninstalling the NNMi Extension for iSPI Performance of Traffic .....	21
<b>4</b>	<b>Installing iSPI Performance for Traffic Master Collector</b> .....	<b>23</b>
	Installing Master Collector On a System with NNMi .....	23
	Run nnmenableperfspl.ovpl on NNMi system .....	23
	Installation .....	23
	Post Installation Task .....	26
	Starting iSPI Performance of Traffic Master Collector .....	26
	Verifying iSPI Performance of Traffic Master Collector Installation .....	26
	Stopping iSPI Performance of Traffic Master Collector .....	26
	Installing Master Collector On a System without NNMi .....	27
	Share for iSPI Performance data directory .....	27
	Windows Deployment .....	27
	Linux Deployment .....	28
	Verify Access to iSPI Performance shared data directory .....	28
	Installation .....	28
	Post Installation Task .....	31
	On Windows Management Server .....	31
	Starting iSPI Performance of Traffic Master Collector .....	31
	Verifying iSPI Performance of Traffic Master Collector Installation .....	31
	Stopping iSPI Performance of Traffic Master Collector .....	32
	Removing the Master Collector .....	32

Removing the Traffic Report extension pack from Network Performance Server . . . . .	32
<b>5 Installing iSPI Performance for Traffic Leaf Collector . . . . .</b>	<b>33</b>
Installation . . . . .	33
Starting the iSPI Performance for Traffic Leaf Collector . . . . .	35
Start iSPI Performance of Traffic Leaf Collector. . . . .	35
Verifying the Leaf Collector Installation . . . . .	35
Stopping iSPI Performance of Traffic Leaf Collector. . . . .	36
Removing the iSPI Performance for Traffic Leaf Collector . . . . .	36
<b>6 Post-Installation Tasks . . . . .</b>	<b>37</b>
Checking the Configuration Information . . . . .	37
Enabling the High Performance Top N Reports. . . . .	38
Licensing the NNM iSPI Performance for Traffic . . . . .	39
Enable Licenses for the NNM iSPI Performance for Traffic . . . . .	39
Before You Begin . . . . .	39
Run the nnmlicense.ovpl Command. . . . .	40
<b>7 Tuning Parameters . . . . .</b>	<b>43</b>
Setting the Number of Aggregated Flow Records the Master Collector Should Store . . . . .	43
Troubleshooting Tip. . . . .	43
File Name Used . . . . .	43
File Location . . . . .	43
Setting the Average Number of Records the Leaf Collector Should Export to the Master Collector. . . . .	43
File Name Used . . . . .	44
File Location . . . . .	44
Setting the Maximum Number of Incoming IP Flow Packets to the Leaf Collector. . . . .	44
File Name Used . . . . .	44
File Location . . . . .	44
<b>8 Starting the iSPI Performance for Traffic Software . . . . .</b>	<b>45</b>
Configuration of routers or switches for exporting IP flow data . . . . .	45
Accessing the iSPI Performance for Traffic Software Configuration. . . . .	45
Accessing the iSPI Performance for Traffic Software Documents . . . . .	46
<b>9 . . . . . Installing NNM iSPI for Traffic in a High-Availability Cluster Environment</b>	<b>47</b>
Prerequisites . . . . .	47
Installing in an Application Failover Environment . . . . .	47
<b>10 Upgrade NNM iSPI Performance for Traffic 8.13 to 9.00 . . . . .</b>	<b>49</b>
<b>11 Troubleshooting Installation . . . . .</b>	<b>51</b>
Installing the iSPI Performance for Traffic. . . . .	51
Problem Statement: An error occurs during iSPI Performance for Traffic Master Collector or Leaf Collector installation. . . . .	51
Problem Statement: A warning message appears during the copying of Interface_Traffic.tar.gz file to the target directory during the iSPI Performance for Traffic Master Collector installation. . . . .	51
Starting the iSPI Performance for Traffic. . . . .	52
Problem Statement: Not able to start nmsdbmgr on Windows Management Server . . . . .	52
Problem Statement: The iSPI Performance for Traffic Leaf Collector does not start. . . . .	52

Problem Statement: The iSPI Performance for Traffic Master Collector does not start. . . . .	52
Problem Statement: The iSPI Performance for Traffic Configuration UI application link does not launch. . . . .	53
Working with iSPI Performance for Traffic. . . . .	54
Problem Statement: How do I verify the iSPI Performance for Traffic Leaf Collector is receiving flow records from the defined router or switch. . . . .	54
Problem Statement: How do I verify if the iSPI Performance for Traffic Master Collector is receiving data from the iSPI Performance for Traffic Leaf Collector. . . . .	54
Problem Statement: I do not remember the password I gave during the iSPI Performance for Traffic Leaf Collector or iSPI Performance for Traffic Master Collector installation. Can I retrieve it? . . . . .	55
Problem Statement: The system on which iSPI Performance for Traffic Leaf Collector is installed gets rebooted. Do I need to reconfigure the iSPI Performance for Traffic Leaf Collector to receive and process flow records. . . . .	56
Problem Statement: I am not seeing an Traffic Map populated with data - blank window comes with the message 'No data in DB'. . . . .	56
Problem Statement: I am not seeing an Traffic Map populated with data - blank window comes with the message 'Unable to contact application server'. . . . .	56
Problem Statement: For the Traffic Path Map view I am not seeing any path or any traffic for the map. . . . .	56
Problem Statement: Bridge creation fails in iSPI Performance for Traffic when the Master Collector and the Leaf Container are Co-Located . . . . .	56
Problem Statement: Bridge creation fails in iSPI Performance for Traffic when the Master Collector and the Leaf Container are Not Co-Located . . . . .	57
Change of hostname or IP address of machine hosting Traffic SPI components . . . . .	58
Problem Statement: Reconfiguration of hostname or IP address of machine where iSPI Performance for Traffic Leaf Collector is installed: . . . . .	58
Problem Statement: Reconfiguration of hostname or IP address of the system where iSPI Performance of Traffic Master Collector is installed. . . . .	58
Reports . . . . .	58
Problem Statement: I am not able to launch iSPI Performance for Traffic reports from the Action menu in the NNMi Console. . . . .	58
Problem Statement: The iSPI Performance for Traffic interface report does not show any data. . . . .	58
Problem Statement: The iSPI Performance for Traffic interface report shows data only for sometime. . . . .	59
Problem Statement: When an iSPI Performance for Traffic report is filtered by using Application ID, a major portion of data appears under the undefined group. . . . .	59
Problem Statement: The iSPI Performance for Traffic reports do not show data for one of the interfaces. . . . .	59
<b>A Appendix: Configuring NNM iSPI Performance for Traffic for High Availability (HA). . . . .</b>	<b>61</b>
Supported HA Products . . . . .	61
Prerequisites to Configuring NNM iSPI Performance for Traffic for HA. . . . .	62
Configuring NNM iSPI Performance for Traffic on the Primary Cluster Node . . . . .	62
Configuring NNM iSPI Performance for Traffic on the Secondary Cluster Nodes . . . . .	65
Unconfiguring NNM iSPI Performance for Traffic from an HA Cluster . . . . .	65
Installing Add-On Traffic Master Collector after NNMi HA Configuration . . . . .	68
Configuring an Installed NNM iSPI Performance for Traffic Master Collector as Add-On NNM iSPI . . . . .	71
Procedure . . . . .	72
Un-configuring an Installed NNM iSPI Performance for Traffic Master Collector as Add-On NNM iSPI	72

Index ..... 75



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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-suite Software (NNMi) to monitor the performance of the network.

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

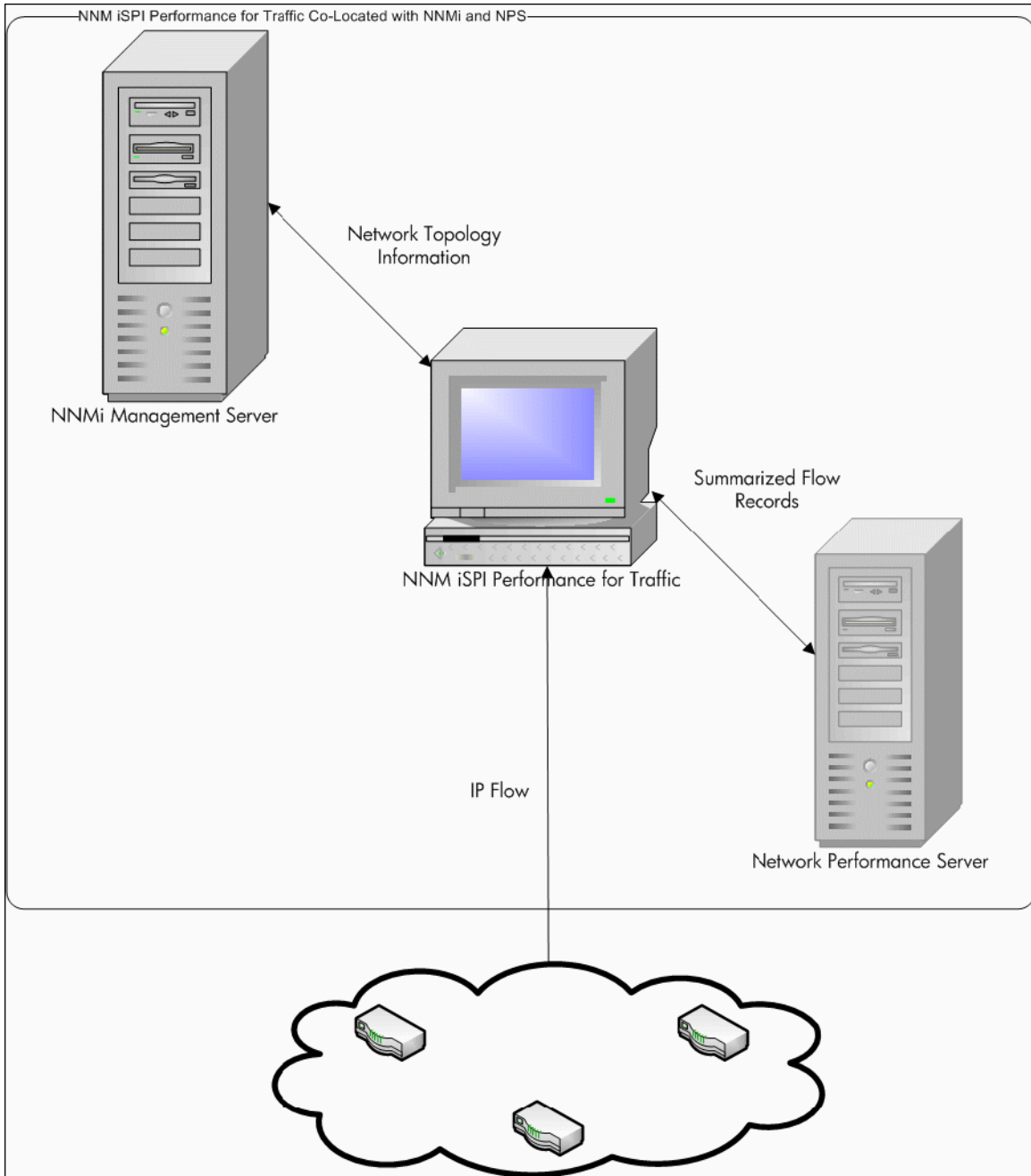
The NNM iSPI Performance for Traffic performs the following tasks:

- 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.
- 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.

- 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 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:

- Performs DNS lookup for source and destination IP addresses based on your configuration.
- Receives the IP flow packets exported by the routers.
- 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.
- Parses these IP flow packets into flow records.
- 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.

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 performs the following tasks:

- Adds contextual fields to the summarized flow records received from the leaf collectors to provide clarity to the data received.
- Enables you to select the contextual fields based on your requirements.
- 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. The Master Collector shares system resources with NPS. NPS in turn, aggregates the reports provided by the Master Collector and generates the network traffic performance reports.

## NNM iSPI Performance for Traffic Leaf Container

NNM iSPI Performance for Traffic leaf containers contain multiple leaf collectors. This component allows you to perform the following tasks:

- Enables you to consolidate and configure multiple leaf collector instances into one Leaf Container based on similar attributes or geographic location.
- Hosts multiple leaf collector instances and send the consolidated IP flow records to the master collector.

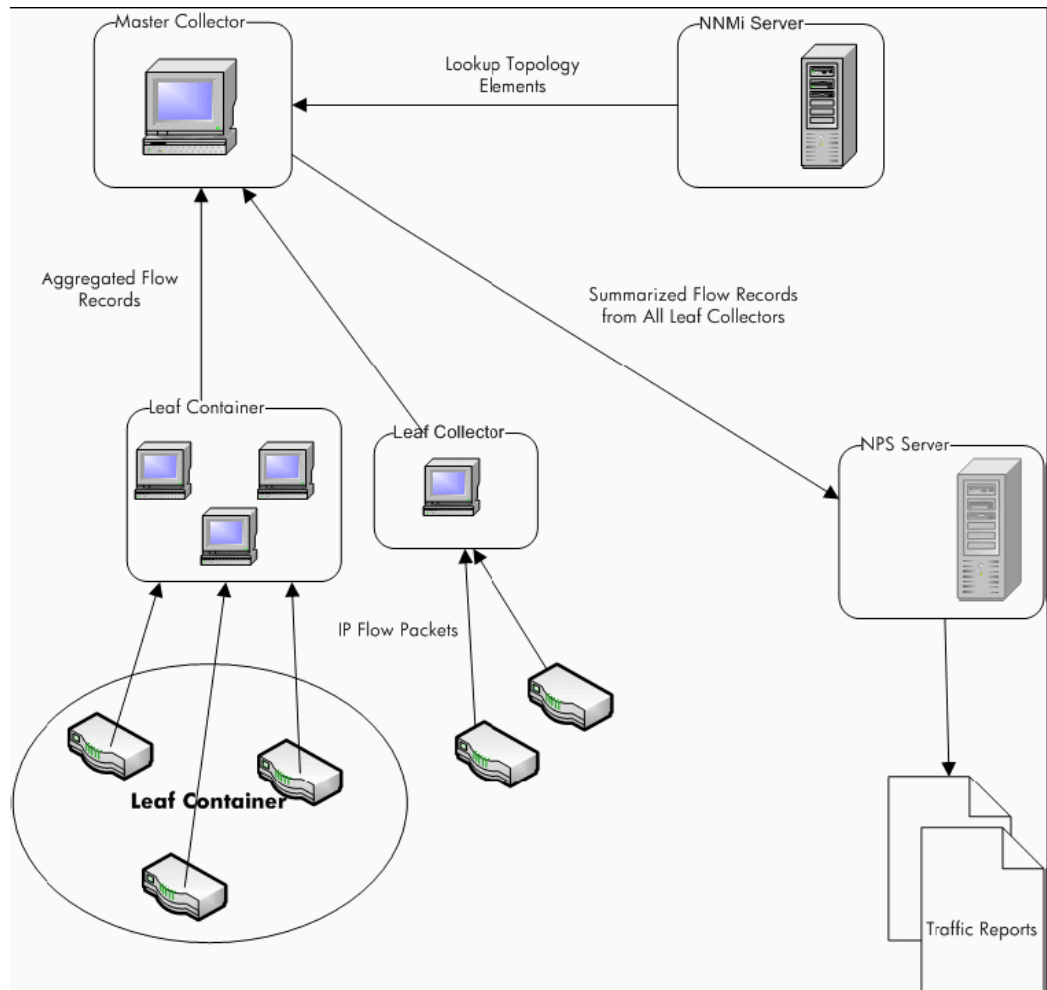
## NNM iSPI Performance for Traffic Extension Pack

The NNM iSPI Performance for Traffic extension pack provides rules and definitions to generate reports from the data generated by the master collectors. The master collector stores the data in the following location for NPS to retrieve the data and generate traffic performance reports:

`<%nnmiDataDir%>/shared/perfSpi/datafiles`

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

**Figure 2 Product architecture of NNM iSPI Performance for Traffic**



## Documentation Conventions

The NNM iSPI Performance for Traffic documentation uses the following conventions:

**Table 1 NNM iSPI Performance for Traffic Documentation Conventions**

<b>Symbol</b>	<b>Description</b>
<code>%nnmInstallDir%</code>	<i>Windows only.</i> The environment variable for the NNMi application directory. This variable is automatically created by the NNMi installer. All application files of the NNM iSPI Performance for Traffic are placed here.
<code>%nnmiDataDir%</code>	<i>Windows only.</i> The environment variable for the NNMi data directory. This variable is automatically created by the NNMi installer.
<code>%trafficInstallDir%</code>	<i>Windows only.</i> The NNM iSPI Performance for Traffic application directory. NNM iSPI Performance for Traffic installer uses <code>%nnminstalldir%</code> as the application directory.
<code>%trafficDataDir%</code>	<i>Windows only.</i> The NNM iSPI Performance for Traffic data directory.  This directory contains all the configuration and data files used by the NNM iSPI Performance for Traffic.  NNM iSPI Performance for Traffic installer uses <code>%nnmdatadir%</code> as the data directory.

On Linux, the NNM iSPI Performance for Traffic installer directly installs the necessary files into the following directories:

- Application files: `/opt/OV`
- Data and configuration files: `/var/opt/OV`

A directory name specified in `<>` (Angular Brackets) specifies that the directory is available for both Windows and Linux.

## Additional Sources of Information

- HP Network Node Manager iSPI Performance for Traffic Software 9.00 Release Notes
- HP Network Node Manager iSPI Performance for Traffic Software 9.00 System and Device Support Matrix
- HP Network Node Manager i Software 9.00 Installation Guide
- HP Network Node Manager i Software 9.00 Deployment Reference
- HP Network Node Manager i Software 9.00 Release Notes
- HP Network Node Manager i Software 9.00 System and Device Support Matrix
- HP Network Node Manager i Software Smart Plug-in Performance for Metric / Network Performance Server 9.00 Installation Guide

## 2 Prerequisites and Planning for Installation

Before you begin the installation, ensure the following:

- Plan the installation based on all the components based on your deployment requirement and the supported environments for those components. For more information on different deployment scenarios, see *HP Network Node Manager i Software Smart Plug-in Performance for Traffic Deployment Reference*.
- Perform all the tasks required to complete the Prerequisite Checklist.

### Planning the Installation

An installation plan prepares you for the installation process and helps you gather all the information required to complete the installation. After reviewing your requirements and finalizing the installation option (components to install based on your deployment scenario), create a plan for the installation.

### System Requirements

Before installing the NNM iSPI Performance for Traffic 9.00, verify that your computer meets the hardware and software requirements, and that the prerequisite software has been set up properly.

Make sure that NNMi management server meets the minimum hardware and software requirements, mentioned in the following table.

### Prerequisites Checklist

**Table 2 Hardware and Software Requirement Checklist Apply the latest patch**

<b>Hardware and Software Requirements</b>	<b>Minimum Requirement</b>	<b>Completed?</b>
Disk space	10 GB	
RAM	8 GB	

**Table 2 Hardware and Software Requirement Checklist Apply the latest patch**

<b>Hardware and Software Requirements</b>	<b>Minimum Requirement</b>	<b>Completed?</b>
CPU	4 core	
Operating System	<ul style="list-style-type: none"><li>• Windows<ul style="list-style-type: none"><li>— Windows Server 2003 x64 with Service Pack 2</li><li>— Windows Server 2003 x64 R2 with Service Pack 2</li><li>— Windows Server 2008 x64 Datacenter Edition with Service Pack 2</li><li>— Windows Server 2008 R2 x64 Datacenter Edition</li><li>— Windows Server 2008 x64 Enterprise Edition with Service Pack 2</li><li>— Windows Server 2008 R2 x64 Enterprise Edition</li></ul></li><li>• Linux<ul style="list-style-type: none"><li>— Red Hat Enterprise Server AS 5.2 (or newer minor version.</li><li>— Red Hat Enterprise Server ES 5.2 (or newer minor version.</li></ul></li></ul>	
Browser	Microsoft Internet Explorer 8.0, Mozilla Firefox 3.6	

Ensure that the following tasks are completed before you start installing the NNM iSPI Performance for Traffic



**Table 3 Pre-Installation Task List**

<b>Task Type</b>	<b>Task Name</b>	<b>Reference</b>	<b>Completed?</b>
Products to Install	<ul style="list-style-type: none"> <li>• NNMi 9.00</li> <li>• Download the latest patch of NNMi from <a href="http://support.openview.hp.com/selfsolve/patches">http://support.openview.hp.com/selfsolve/patches</a></li> </ul>	<i>HP Network Node Manager i Software 9.00 Installation Guide</i>	
	NPS	HP Network Node Manager i Software Smart Plug-in Performance for Metrics/Network Performance Server Installation Guide	
Gather Information about NNMi	Gather the following NNMi port numbers: <ul style="list-style-type: none"> <li>• HTTP port number</li> <li>• Java Naming and Directory Interface (JNDI) port number</li> </ul>	Verify the following properties in the <code>&lt;NnmDataDir&gt;\Shared\nnm\conf\nnm.ports.properties</code> file on the management server: <ul style="list-style-type: none"> <li>• <code>jboss.http.port</code> property for the HTTP port number</li> <li>• <code>jboss.jnp.port</code> property for the JNDI port number</li> </ul>	
Create NNMi system user	Verify the NNMi system user password. Provide the same password while installing the NNMi extension for NNM iSPI Performance for Traffic.	<i>HP Network Node Manager i Software 9.00 Installation Guide</i>	
	Create a NNMi Web Service Client user. Use this username and password while installing the master collector.		
	If you already have Web Service Client privileges, use that user name and password while installing the master collector.		

**Table 3 Pre-Installation Task List**

Task Type	Task Name	Reference	Completed?
Install NNM iSPI Performance for Traffic Components	Install NNMi Extension for Traffic on the NNMi 9.00 management server.	NNMi Extension for iSPI Performance for Traffic	
	Install iSPI Performance for Traffic Master Collector.	Installing iSPI Performance for Traffic Master Collector	
	Install iSPI Performance for Traffic Leaf Collector	Installing iSPI Performance for Traffic Leaf Collector	

## Preparing to Install Master or Leaf Collector On a System Without NNMi

If you are installing the Master Collector or Leaf Collector on a system where NNMi not installed, perform the following tasks:

- 1 Install Microsoft Visual C++ Redistributable Package
- 2 Set up Windows Local Security Policy (Performed by NNM iSPI Performance for Traffic Master Collector installer)
- 3 Start Secondary Logon Service (Performed by NNM iSPI Performance for Traffic Master Collector installer)

### Installing Microsoft Visual C++ Redistributable Package

Install **vc redistrib\_x64.exe** manually following the steps as listed below. You can locate this program in the root directory where NNM iSPI Performance for Traffic is installed.

- 1 Double-click **vc redistrib\_x64.exe**.
- 2 Double-click **vc redistrib\_x64.exe**.
- 3 The Installation Wizard opens. Follow the instructions of the Wizard to complete the installation.

# 3 NNMi Extension for iSPI Performance for Traffic

The NNMi extension for iSPI Performance for Traffic facilitates the configuration of iSPI Performance for Traffic by launching iSPI Performance for Traffic Configuration form from NNMi Configuration Workspace. It also provides launch points for traffic maps and licensing information.

## Installing in the NNMi Application Failover Environment

In the NNMi Application failover environment, make sure you install NNMi Extension for iSPI Performance for Traffic on both Primary and Secondary NNMi systems.

Ensure that the iSPI for Performance for Traffic licenses are installed on both the systems

► NNMi Extension for iSPI is always installed on the system where *HP Network Node Manager i Software 9.00* is installed

## Installing the NNMi Extension for iSPI Performance for Traffic

To install NNMi Extension for iSPI Performance for Traffic, follow these steps:

- 1 Log on to the Windows Management Server with administrative privileges.
- 2 Insert the iSPI Performance for Traffic DVD.
  - If you are installing on a Windows management server, go to `Traffic_NNM_Extension/WinNT` folder inside the DVD and double-click the `setup.bat` file.
  - If you are installing on a Linux management server, go to `Traffic_NNM_Extension/Linux` folder inside the DVD and double-click the `setup` file.
  - If you are installing on a HP-UX management server, go to `Traffic_NNM_Extension/HPUX` folder inside the DVD and double-click the `setup.bin` file.
  - If you are installing on a Solaris management server, go to `Traffic_NNM_Extension/SunOS` folder inside the DVD and double-click the `setup.bin` file.
- 3 The installation Wizard screen opens.

Click **Next**, as appropriate during the installation process.
- 4 The Application Requirements Warning screen opens. The Installer checks and lists the non-compatible applications pre-installed in the system.
- 5 Click **Continue**. The Welcome screen opens.
- 6 In the License Agreement screen, select the **I accept** option.
- 7 The Feature selection screen opens. All the listed features are selected by default.

- 8 The Installer checks for the minimum disk space during installation.
- 9 After the check is complete, click **Next**. The Pre-installation summary screen opens.
- 10 Review the options, and click **Install**. The Configuration dialog box opens.
- 11 You must specify the information required by the Installer.


In the dialog box, specify the values:

- NNMi Password: specify the password for `system` user of NNMi.
- Retype Password: retype the password for confirmation.
- NNMi FQDN: specify the fully-qualified domain name of the NNMi management server. You can find out the fully-qualified domain name of the NNMi server in the *Management Server* section of the *About HP Node Manager i-suite window*. Launch the *About HP Network Node Manager* window by clicking **Help> About HP Network Node Manager i-suite** from the NNMi console.
- NNMi JNDI Port: specify the Java Naming and Directory Interface (JNDI) port configured with NNMi. (Default: 1099). To verify the NNMi JNDI port number, open the `nmm.ports.properties` file from the `%NnmDataDir%\shared\nnm\conf` directory, and then see the value specified for `jboss.jnp.port`.
- Traffic Master FQDN: specify the fully qualified domain name of the system where you install the iSPI Performance for Traffic Master Collector.

- 12 Click **OK**.

The Install Complete Screen opens.

- 13 Click **Done**.

 You must restart NNMi jboss process after installing the NNMi extension for iSPI Performance for Traffic. Ensure that no traffic processes are running while performing this operation.

You can restart NNMi's jboss process by running the following commands:

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

### Installation Log File

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

- *On Windows*  
`%temp%`
- *On Linux or Solaris*  
`/tmp`

### 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`

## Uninstalling the NNMi Extension for iSPI Performance of Traffic

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

- 1 In the root directory, go to the %TrafficInstallDir%\Uninstall\HPOvTENM folder.
- 2 Click `Setup.exe`. The Application Maintenance screen opens. Select Un-install option.
- 3 Click **Next**. The Pre-uninstall summary screen opens.
- 4 Click **Un-install**. The Maintenance Selection window opens.
- 5 The Configuration dialog box opens. You must specify the following information:
  - NNMi User Password: Specify the password for `system` user of NNMi.
  - Retype Password: retype the password for confirmation.
  - NNMi FQDN: specify the fully-qualified domain name of the NNMi management server. You can find out the fully-qualified domain name of the NNMi server in the *Management Server* section of the *About HP Node Manager i-suite* window. Launch the *About HP Network Node Manager* window by clicking **Help> About HP Network Node Manager i-suite Software** from the NNMi console.
  - NNMi JNDI Port: specify the Java Naming and Directory Interface (JNDI) port configured with NNMi. (Default: 1099). To verify the NNMi JNDI port number, open the `nnm.ports.properties` file from the %NnmDataDir%\shared\nnm\conf directory, and then see the value specified for `jboss.jnp.port`.
- 6 The un-installation screen opens, and the un-installation process starts.
- 7 Click **Done**, when the un-installation is complete.



## 4 Installing iSPI Performance for Traffic Master Collector

The iSPI Performance for Traffic Master Collector adds contextual fields to the IP flow records to provide clarity to the obtained data. The iSPI Performance for Traffic Master Collector can be installed in either one of the following scenarios:

- Installing Master Collector on a system with NNMi installed
- Installing Master Collector on a system without NNMi installed

► There can be only one instance of a Master Collector in a deployment of iSPI Performance for Traffic.

### Installing Master Collector On a System with NNMi

Skip this if you are planning to install the Master Collector on a system different from the NNMi system. The following section applies to installations on all the supported platforms. Platform specific information is provided in the same section.

Run the following script prior to installing the iSPI Performance for Traffic Master Collector:

#### Run `nnmenableperfspi.ovpl` on NNMi system

If iSPI Performance for Metrics and NNMi are not installed on the same system, you must ensure that the `%NNMInstallDir%\bin\nnmenableperfspi.ovpl` command is run on the NNMi system.

For more information on `nnmenableperfspi.ovpl` command, see *HP NNM iSPI Performance for Metrics / Network Performance Server Installation Guide*.

► If you have set up NNMi application failover environment, you must run `%NNMInstallDir%\bin\nnmenableperfspi.ovpl` command on both primary and secondary NNMi systems.

#### Installation

► You can install the NNM iSPI Performance for Traffic Master Collector on Windows or Linux systems.

To install NNM iSPI Performance for Traffic Master Collector on a NNMi installed system, follow these steps:

- 1 Log on to the required Management Server with administrative privileges.
- 2 Insert the iSPI Performance for Traffic installation DVD.

- 3 In the Traffic\_Master root directory:
  - If you are installing on a Windows management system, go to Traffic\_Master folder inside the DVD and double-click the `setup.bat` file
  - If you are installing on a Linux management system, go to Traffic\_Master folder inside the DVD and double-click the `setup` file.

The Welcome screen opens.

- 4 Click **Next** as appropriate during the installation process in the installation wizard screen
- 5 In the License Agreement screen, select the **I accept** option.
- 6 The Application Requirements Warning screen opens. The Installer checks and lists the non-compatible applications pre-installed in the system.

The Feature selection screen opens. All the listed features are selected by default.

The Installer checks for the minimum disk space during installation.

- 7 After the check is complete, click **Next**. The Pre-installation summary screen opens.
- 8 Review the options, and click **Install**. The Database Selection dialog box opens.



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

- 9 Select the required options from the Database selection dialog box. Possible values are:
  - **Yes:** To use an embedded database.
  - **No:** To use the Oracle database





Applicable for Oracle only.

You must note down the following details of the NNMi database:

- **Type:** The default embedded database or Oracle.
- **Port:** Only for Oracle. The port used by the Oracle database.
- **Hostname:** Only for Oracle. This is applicable when you use an Oracle database residing on a remote server. Note down the fully-qualified domain name of the database server.
- **Database name:** Only for Oracle. Name of the Oracle database instance.
- **User name:** Only for Oracle. The Oracle user name created to access NNMi data.
- **Password:** Only for Oracle. Password of the above user.

With the iSPI for Traffic Master Collector, you must use a unique Oracle instance, and not the Oracle instance configured with NNMi. Before you create a unique Oracle instance for the iSPI, refer to the Database Installation section in the HP Network Node Manager i-series Software Installation Guide for additional details. If you are using a unique Oracle instance, note down the aforementioned details for this instance as well.

Skip this step if you choose to use the embedded database. In the ORACLE DB Configuration for iSPI for Traffic dialog box, follow these steps:

- 1 Specify the following details:
  - Database server name: The fully-qualified domain name of the Oracle server.
  - Database port: The Oracle port number
  - Database name: Name of the Oracle instance that you want to use with the iSPI for IP Telephony.
  - Username: User name to access the Oracle database instance.
  - Password: Password for the above user.
- 2 Click **OK**.
- 10 You must specify the information related to the NNMi Server in your deployment.

The values of the following fields gets inherited from the configuration details of NNMi:

  - NNMi FQDN
  - NNMi HTTP Port
  - NNMi HTTPS Port
  - NNMi JNDI Port
  - NNMi User name
  - NNMi User Password
  - Retype Password
  - Perf SPI data path: This should refer to the local directory `<NNMDataDir>/shared/perfSpi/datafiles`
  - Master collector User Password: Type the password for the master collector.
  - Re-type the password for confirmation
- 11 Select the **Is Secure?** check-box, if NNMi is configured using a secure port.
- 12 Select the **NNMi failover Configured?** check-box, if NNMi failover is configured in your deployment and specify the details of the secondary NNMi Server.
- 13 Specify the information of iSPI Performance for Traffic Master Collector:

Traffic FQDN: specify the fully qualified domain name of the system in which you are installing iSPI Performance for Traffic Master Collector.

- 14 Type the password, and re-type the password for confirmation. Click **OK**. The Post-installation screen opens.
- 15 Click **OK**. The Install Complete Screen opens.
- 16 Click **Done**.

### Installation Log File

The installation log file (postInstall\_traffic-master) is available in the following directory:

- *On Windows*  
%temp%
- *On Linux*  
/tmp

## Post Installation Task

If you are installing Master Collector with Network Performance Server in the same system, you must stop any running instance of Network Performance Server, before starting the Master Collector. After starting the Master Collector, you can initiate the Network Performance Server.



You can refer to Network Performance Server documentation to know how to stop and start the processes.

## Starting iSPI Performance of Traffic Master Collector

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

To start the Master Collector:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-master\bin\nmstrafficmasterstart.ovpl
```

This command initiates the Master Collector.

## Verifying iSPI Performance of Traffic Master Collector Installation

To verify the Master Collector installation, follow this step:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-master\bin\nmstrafficmasterstatus.ovpl
```

Ensure the Master Collector is in running status.

## Stopping iSPI Performance of Traffic Master Collector

To stop the Master Collector:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-master\bin\nmstrafficmasterstop.ovpl
```

This command stops the Master Collector.



If the Master Collector is installed on a system where NNMi is installed, ensure that the master collector is stopped before doing an ovstop -c.

## Installing Master Collector On a System without NNMi

Skip this step if you are planning to install the Master Collector on the NNMi system.

Perform the following prior to installing the iSPI Performance for Traffic Master Collector

### Share for iSPI Performance data directory

If you are installing iSPI Performance for Traffic Master Collector on a system that does not have NNMi installed, you must ensure that the <NNMDataDir>/shared/perfSpi/datafiles folder is available as a network share location. The section below details the steps to ensure this.

### Windows Deployment

#### iSPI Performance for Metrics is installed on a system where NNMi is not installed

Use the following command to enable the network share. Typically this will be done for the iSPI Performance for Metrics installation itself.

Run the %NNMInstallDir%\bin\nnmenableperfspi.ovpl command. You have to enter details about the iSPI Performance for Metrics system as well as a username/password which will be used to access the share. Please ensure that the user with the same username/password is present on the system where the Master collector is being installed. The share will be visible and writable on the master collector system as \\<NNMi host name>\PerfSpi

#### iSPI Performance for Metrics is installed on a system where NNMi is installed

If NNMi and iSPI Performance for Metrics are installed on the same system and the iSPI Performance for Traffic Master collector is installed on a different system, you must manually set up a share named PerfSpi for the following directory on the NNMi system:

```
%NnmDataDir%\shared\perfSpi\datafiles
```

Use Windows sharing procedure to network share this directory and provide the name of the share as PerfSpi. The share must be given write permission for a user of the Administrator group. Please ensure that the user with the same username/password is present on the machine where the Master collector is being installed. The share should be visible and writable on the master collector system as \\<NNMi host name>\PerfSpi.

## Linux Deployment

iSPI for Performance Metrics and iSPI for Performance Traffic are installed on the same system, but NNMi is installed on a different system

Use the following command to enable the network share. Typically this will be done for the iSPI for Performance Metrics installation itself.

Run the `%NNMInstallDir%\bin\nmenableperfspi.ovpl` command. You have to enter details about the iSPI for Performance Metrics machine as well as a username/password which will be used to access the share. The share should be visible and writable on the master collector system as a network shared

iSPI for Performance Metrics and iSPI for Performance Traffic are not installed on the same system, and NNMi is installed on a different system

Use Linux sharing procedure to export the directory on the NNMi system as a network share. This is typically done by adding an entry in the `/etc/exports` file as follows:

```
/$NNMDataDir/shared/perfSpi/datafiles <your IP address> (rw, sync) and then  
doing an export fs -a. For more information, see Linux sharing documentation.
```

The share should be visible and writable on the master collector system as a network shared drive.



If you have set up NNMi application failover environment on both primary and secondary NNMi systems or you are installing the Master collector to work with an NNMi system in HA environment, you must set up a Windows shared folder named PerfSPI in the following directory location:

```
%NnmDataDir%\shared\perfSPI\datafiles
```

## Verify Access to iSPI Performance shared data directory

Ensure that the shared PerfSpi directory is available as a network share on the system where iSPI for Traffic Master collector is installed. Verify that the user performing the install has write access to that shared directory.



- You can run the `%NNMInstallDir%\bin\nnmdisableperfspi.ovpl` command on NNMi system, only when you want to remove both Network Performance Server as well as iSPI Performance for Traffic from the deployment.
- You must not run un-installer software for Network Performance Server on NNMi system if iSPI Performance for Traffic is still installed on the system in your deployment environment.

## Installation

To install NNM iSPI Performance for Traffic Master Collector on a NNMi installed system, follow these steps:

- 1 Log on to the required Management Server with administrative privileges.
- 2 Insert the iSPI Performance for Traffic installation DVD.
- 3 In the Traffic\_Master root directory:

- If you are installing on a Windows management system, go to Traffic\_Master folder inside the DVD and double-click the setup.bat file
- If you are installing on a Linux management system, go to Traffic\_Master folder inside the DVD and double-click the setup file.

The Welcome screen opens.

- 4 Click **Next**, as appropriate during the installation process in the installation wizard screen.
- 5 In the License Agreement screen, select the **I accept** option.
- 6 The Application Requirements Warning screen opens. The Installer checks and lists the non-compatible applications pre-installed in the system.
- 7 The Feature selection screen opens. All the listed features are selected by default. The Installer checks for the minimum disk space during installation.
- 8 After the check is complete, click **Next**. The Pre-installation summary screen opens.
- 9 Review the options, and click **Install**. The Database Selection dialog box opens.

▶ You can select **Force repair...**, if the previous installation process was not successful. All the packages are re-installed again.

- 10 Select the required options from the Database selection dialog box. Possible values are:
  - **Yes:** To use an embedded database.
  - **No:** To use the Oracle database.

▶ Applicable for Oracle only.

You must note down the following details of the NNMi database:

- **Type:** The default embedded database or Oracle.
- **Port:** Only for Oracle. The port used by the Oracle database.
- **Hostname:** Only for Oracle. This is applicable when you use an Oracle database residing on a remote server. Note down the fully-qualified domain name of the database server.
- **Database name:** Only for Oracle. Name of the Oracle database instance.
- **User name:** Only for Oracle. The Oracle user name created to access NNMi data.
- **Password:** Only for Oracle. Password of the above user.

With the iSPI for Traffic Master Collector, you must use a unique Oracle instance, and not the Oracle instance configured with NNMi. Before you create a unique Oracle instance for the iSPI, refer to the Database Installation section in the HP Network Node Manager i-series Software Installation Guide for additional details. If you are using a unique Oracle instance, note down the aforementioned details for this instance as well.

Skip this step if you choose to use the embedded database. In the ORACLE DB Configuration for iSPI for Traffic dialog box, follow these steps:

- 1 Specify the following details:
  - **Database server name:** The fully-qualified domain name of the Oracle server.
  - **Database port:** The Oracle port number
  - **Database name:** Name of the Oracle instance that you want to use with the iSPI for IP Telephony.
  - **Username:** User name to access the Oracle database instance.
  - **Password:** Password for the above user.
- 2 Click **OK**.

- 11 You must specify the information related to the NNMI Server in your deployment.

In the dialog box, specify the values configured with NNMI:

- NNMI FQDN: Type the fully-qualified domain name of the NNMI management server. You can find out the fully-qualified domain name of the NNMI server in the Management Server section of the About HP Node Manager i-suite window. Launch the About HP Network Node Manager window by clicking Help> About HP Network Node Manager i-suite Software from the NNMI console.
  - NNMI HTTP Port: Type the port configured with NNMI, (default:80). To verify the NNMI HTTP port number, open the nnm.ports.properties file from the %NnmDataDir%/shared\nnm\conf directory, and then specify the values for jboss.http.port.
  - NNMI HTTPS Port: Type the port configured with NNMI,
  - NNMI JNDI Port: Type the Java Naming and Directory Interface (JNDI) port configured with NNMI. (Default: 1099). To verify the NNMI JNDI port number, open the nnm.ports.properties file from the %NnmDataDir%\shared\nnm\conf directory, and then see the value specified for jboss.jnp.port.
  - NNMI User name: Type the NNMI Web service Client username.
  - NNMI User Password: Type the password for the above user.
  - Retype Password: Retype the password.
  - Perf SPI data path: Type the path of the network share drive that has been configured on the NNMI system for the <NNMDataDir>/shared/perfSpi/datafiles folder
  - Type the password for the master collector.
  - Re-type the password, for confirmation.
- 12 Select the **Is Secure?** check-box, if NNMI is configured using a secure port. If this is set to run in secure mode the following step needs to be performed:
  - 13 Only if Is Secure is set to true: Create a directory%OvDataDir%/shared/nnm/certificates. Copy the keystore files from the NNMI machine that are located in %OvDataDir%/shared/nnm/certificates to the %OvDataDir%/shared/nnm/certificates location in the master collector machine.
  - 14 Select the **NNMI failover Configured?** check-box, if NNMI failover is configured in your deployment and specify the details of the secondary NNMI Server.
  - 15 Specify the information of iSPI Performance for Traffic Master Collector:
  - 16 Traffic FQDN: specify the fully qualified domain name of the system in which you are installing iSPI Performance for Traffic Master Collector.
  - 17 Type the password, and re-type the password again for confirmation. Click OK. The Post-installation screen opens.
  - 18 Click **OK**. The Install Complete Screen opens.
  - 19 Click **Done**.

#### Installation Log File

The installation log file (postInstall\_traffic-master) is available in the following directory:

- *On Windows*  
%temp%

- *On Linux*

/tmp

## Post Installation Task

### On Windows Management Server

When Traffic Master is installed on a system where NNMi is not installed, the user must mandatorily run the script `nmstrafficmastersetuser.ovpl`. Master startup fails if the script is not run.

The script performs the following:

- 1 Create a user (if required)
- 2 Set password to never expire
- 3 Add user to the Administrators group
- 4 Add user name to the local policy ServiceLogonRight

Following mandatory options must be:

- Username: An existing user or the new user on whose logon the NNM iSPI Performance for Traffic Master is started
- Password: Password of the existing user or new user.



Ensure that the name and password of the user matches exactly with those given while doing the network share for the PerfSpi folder on the NNMi system.

If you are installing Master Collector with Network Performance Server in the same system, you must stop any running instance of Network Performance Server, before starting the Master Collector. After starting the Master Collector, you can initiate the Network Performance Server. For more information on how to start and stop network Performance Server, refer the Network Performance Server documentation.

## Starting iSPI Performance of Traffic Master Collector

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

To start the Master Collector:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-master\bin\nmstrafficmasterstart.ovpl
```

This command initiates the Master Collector.

## Verifying iSPI Performance of Traffic Master Collector Installation

To verify the Master Collector installation, follow this step:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-master\bin\nmstrafficmasterstatus.ovpl
```

Ensure the Master Collector is in running status.

## Stopping iSPI Performance of Traffic Master Collector

To stop the Master Collector:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-master\bin\nmstrafficmasterstop.ovpl
```

This command stops the Master Collector.



If the Master Collector is installed on a system where NNMi is installed, ensure that the master collector is stopped before doing an ovstop -c.

## Removing the Master Collector

To remove the Master Collector, follow these steps:

- 1 In the root directory, go to %TrafficInstallDir%\Uninstall\HPOvTRMiSPI folder.
- 2 Click the following file to open the Application Maintenance screen. Select **Un-install** option.
  - If you are uninstalling on a Windows management system, go to Traffic\_Master folder inside the DVD and double-click the setup.bat file
  - If you are uninstalling on a Linux management system, go to Traffic\_Master folder inside the DVD and double-click the setup file.
- 3 Click **Next**. The Pre-uninstall summary screen opens.
- 4 Click **Un-install**. The Maintenance Selection window opens.
- 5 Select **Un-install** option.

The Un-installation screen opens, and the un-installation process initiates.
- 6 After completing the un-installation, click **Done**.

## Removing the Traffic Report extension pack from Network Performance Server

The iSPI Performance for Traffic Report extension pack must be manually uninstalled when the master collector is uninstalled.

To manually uninstall the iSPI Performance for Traffic Report Extension Pack:

- 1 Log on to the system where Network Performance Server is running.
- 2 Go to the directory %InstallDir%/NNMPerformanceSPI/bin
- 3 Ensure that all processes are running by using the command statusALL.ovpl
- 4 Uninstall the iSPI Performance for Traffic Report extension pack by running the following command:

```
uninstallExtensionPack.ovpl -p Interface_Traffic
```



# 5 Installing iSPI Performance for Traffic Leaf Collector

The iSPI Performance for Traffic Configuration Form allows you to configure multiple Leaf Collector instances that are deployed on the NNMi network. The Leaf Collector reduces the network traffic by summarizing the IP flow records at smaller time resolution. The required IP flow attributes can be selected to aggregate the IP flow records.

The different deployment scenarios for NNMi iSPI Performance for Traffic Leaf Collector installation are:

- System with NNMi installed
- System without NNMi installed
- System with only iSPI Performance for Traffic Master collector installed
- System without NNMi or iSPI Performance for Traffic Master collector installed
- System with NNMi and iSPI Performance for Traffic Master collector installed



There can be multiple instances of Leaf Collectors in a deployment of iSPI Performance for Traffic. In this case all the instances must be installed on systems different from the system where iSPI Performance for Traffic Master collector is installed.

If you have installations of iSPI Performance for Traffic Leaf collectors on multiple systems then you should not install iSPI Performance for Traffic Leaf collector on the same system as iSPI Performance for Traffic Master collector.

If the iSPI Performance for Traffic Leaf Collector is installed on the same system as the iSPI Performance for Traffic Master collector, then only this instance can be used for operation.

## Installation



You can install the NNMi iSPI Performance for Traffic Leaf Collector on Windows or Linux systems.

To install iSPI Performance for Traffic Leaf Collector, follow these steps:

- 1 Log on to the Windows Management Server with administrative privileges.
- 2 Insert the iSPI Performance for Traffic installation DVD.
- 3 Perform the following:
  - If you are installing on a Windows management system, go to `Traffic_Leaf` folder inside the DVD and double-click the `setup.bat` file
  - If you are installing on a Linux management system, go to `Traffic_Leaf` folder inside the DVD and double-click the `setup` file.

The Welcome screen opens.

- 4 Click **Next**, as appropriate during the installation process in the installation wizard screen.

- 5 In the License Agreement screen, select the **I accept** option.
- 6 The Application Requirements Warning screen opens. The Installer checks and lists the non-compatible applications pre-installed in the system.
- 7 The Feature selection screen opens. All the listed features are selected by default.
- 8 The Installer checks for the minimum disk space during installation.
- 9 After the check is complete, click **Next**. The Pre-installation summary screen opens.
- 10 Review the options, and click **Install**. You can select **Force repair...** option, if there is failure in previous installation process.
- 11 The database selection dialog box appears.
- 12 Select the required options from the Database selection dialog box. Possible values are:
  - **Yes:** To use an embedded database.
  - **No:** To use the Oracle database



Applicable for Oracle only.

You must note down the following details of the NNMi database:

- **Type:** The default embedded database or Oracle.
- **Port:** Only for Oracle. The port used by the Oracle database.
- **Hostname:** Only for Oracle. This is applicable when you use an Oracle database residing on a remote server. Note down the fully-qualified domain name of the database server.
- **Database name:** Only for Oracle. Name of the Oracle database instance.
- **User name:** Only for Oracle. The Oracle user name created to access NNMi data.
- **Password:** Only for Oracle. Password of the above user.

With the iSPI for Traffic Master Collector, you must use a unique Oracle instance, and not the Oracle instance configured with NNMi. Before you create a unique Oracle instance for the iSPI, refer to the Database Installation section in the HP Network Node Manager i-series Software Installation Guide for additional details. If you are using a unique Oracle instance, note down the aforementioned details for this instance as well.

Skip this step if you choose to use the embedded database. In the ORACLE DB Configuration for iSPI for Traffic dialog box, follow these steps:

- Specify the following details:
  - **Database server name:** The fully-qualified domain name of the Oracle server.
  - **Database port:** The Oracle port number
  - **Database name:** Name of the Oracle instance that you want to use with the iSPI for IP Telephony.
  - **Username:** User name to access the Oracle database instance.
  - **Password:** Password for the above user.
- Click **OK**.

13 Type the Traffic Leaf Fully Qualified Domain name. .

- ▶ • If you are installing iSPI Performance for Traffic Leaf Collector on a NNMI installed system:
  - The Inform dialog box opens with a prompt message to check whether the nmsdbmngr service is up and running.
  - To check whether nmsdbmngr is running, type the following command in the command prompt:

```
%NnmInstallDir%\bin\ovstatus -c nmsdbmngr
```

14 Type the password for the iSPI Performance for Traffic Leaf collector system user, and re-type the password again for confirmation. Click **OK**. The Post-installation screen opens.

- ▶ You must provide the password of the 'system' user for iSPI Performance for Traffic Leaf installation. Note down this password as the same password must be entered while configuring a Leaf Container in order to add a Leaf Collector for this system.

15 Type the unique integer ID (2-255) for the Leaf Collector being installed.

16 Click **OK**. The Install Complete Screen opens.

17 Click **Done**.

#### Installation Log File

The installation log file (postInstall\_traffic-leaf) is available in the following directory:

- *On Windows*  
`%temp%`
- *On Linux*  
`/tmp`

### Starting the iSPI Performance for Traffic Leaf Collector

To start the iSPI Performance for Traffic Leaf Collector, follow this step:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-Leaf\bin\nmstrafficleafstart.ovpl
```

This command initiates the iSPI Performance for Traffic Leaf Collector.

### Start iSPI Performance of Traffic Leaf Collector

To start the iSPI Performance of Traffic Leaf Collector, type the following command in the command prompt:

```
%TrafficInstallDir%\nonOV\traffic-Leaf\bin\nmstrafficleafstart.ovpl
```

### Verifying the Leaf Collector Installation

To verify the Leaf Collector installation, follow this step:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-Leaf\bin\nmstrafficleafstatus.ovpl
```

Ensure the Leaf Collector is in running status.

## Stopping iSPI Performance of Traffic Leaf Collector

To stop the Leaf Collector:

In the command prompt, type the following command:

```
%TrafficInstallDir%\nonOV\traffic-leaf\bin\nmstrafficmasterstop.ovpl
```

This command stops the Leaf Collector.



If the Leaf Collector is installed on a system where NNMi is installed, ensure that the leaf collector is stopped before doing an ovstop -c.

## Removing the iSPI Performance for Traffic Leaf Collector

To remove the Leaf Collector, follow these steps:

- 1 In the root directory, go to %TrafficInstallDir%\Uninstall\HPOvTRLiSPI folder.
- 2 Click `Setup.exe`. The Application Maintenance screen opens. Select **Un-install** option.
- 3 Click **Next**. The Pre-uninstall summary screen opens.
- 4 Click **Un-install**. The Maintenance Selection window opens.
- 5 Select **Un-install** option.
  - ▶ If iSPI Performance for Traffic is installed on a system that does not have NNMi pre-installed on it, the Command prompt opens automatically.
    - Type the postgres user password, that is used during the installation of iSPI Performance for Traffic Leaf Collector.
- 6 The Un-installation screen opens, and the un-installation process initiates.
- 7 After completing the un-installation, click **Done**.

## 6 Post-Installation Tasks

The NNM iSPI Performance for Traffic interacts frequently with NNMi and the NPS. While installing the NNM iSPI Performance for Traffic, the installation wizard enables you to specify the configuration information required to interact 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.

### Checking the Configuration Information

After installing NNM iSPI Performance for Traffic, run the following command to check if the configuration information entered during the installation are correct:

```
nmstrafficinstallcheck.ovpl -username <system> -password <Master Collector password>
```

The command checks the validity for the following and displays error messages if any of the configurations is incorrect:

- 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 based on the following information:
  - FQDN of the NPS server
  - NPS server port number
  - NPS server user name
  - NPS server password
- If the shared drive between NPS and the Master Collector is configured correctly.
- If the Master Collector can store data in the shared drive and NPS and retrieve the same successfully.

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

Windows:

```
%TrafficDataDir%\log\traffic-master\TrafficDiagnosticLog.log
```

Linux:

```
$TrafficDataDir/log/traffic-master/TrafficDiagnosticLog.log
```

## Enabling the High Performance Top N Reports

In a large enterprise network, source and destination IP addresses and ports often have a very large number of unique IP addresses and ports. This may affect the hourly data aggregation performance and the data aggregation process may not be able to reduce the volume of data significantly. As a result, the volume of aggregated data in the NPS may grow drastically in such a scenario. If you need to generate reports for multiple days or weeks, the number of records in NPS may cause the report queries to perform poorly.

The metrics for which the records are discarded by the processing scheme i.e. those which do not fall into the top or bottom 100 category are summed up under a category called Aggregate. For example, for the top sources report, the metrics for all source hosts that fall outside the top and bottom 100 contributors are summed up under a source called Aggregate. This may appear in the Top Sources report also as the sum may be a considerable one even if the individual sources are contributing less.

The High Performance Top N reports enable you to generate the following performance reports faster than the conventional Top N reports:

- Top N Applications Report
- Top N Sources Report
- Top N Destinations Report

The High Performance Top N reports have the following advantages over the Top N reports:

- They display only the topology filters relevant to the type of the report; thus enabling you to group the records based on a reduced set of topology elements.
- The High Performance reports are generated quicker than the Top N reports.

Use the following command to enable the High Performance Top N reports:

Windows:

```
%TrafficInstallDir%\nonOV\traffic-master\bin\enableNewTrafficReports.ovp  
1
```

Linux:

```
$TrafficInstallDir/nonOV/traffic-master/bin/enableNewTrafficReports.ovpl
```

You can disable the High Performance reports at any point, using the following command:

Windows:

```
%TrafficInstallDir%\nonOV\traffic-master\bin\disableNewTrafficReports.ov  
p1
```

Linux:

```
$TrafficInstallDir/nonOV/traffic-master/bin/  
disableNewTrafficReports.ovpl
```

# Licensing the NNM iSPI Performance for Traffic

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.

## Enable 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

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\nmlicense.ovpl TRAFFICCOLLSPI -gui
```

*On UNIX/Linux*

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


*On UNIX/Linux*

```
/opt/OV/bin/nmlicense.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.



# 7 Tuning Parameters

NNM iSPI Performance for Traffic enables you to tune the following configurable parameters to make the software handle the scalability needs of your deployment:

## Setting the Number of Aggregated Flow Records the Master Collector Should Store

If the incoming rate of flow records from the Leaf collector becomes high for a short time, the Master Collector may drop the flow records.

The **nms.traffic.master.maxflowrecord.inqueue** parameter controls the number of aggregated flow records the Master Collector can keep in the memory space.

Increase the default value of the **nms.traffic.master.maxflowrecord.inqueue** parameter to increase the queue size of the Master Collector.

### Troubleshooting Tip

If the Master Collector fails to process the in-coming flow records, increase the memory space capacity of the **nms.traffic.master.maxflowrecord.inqueue** parameter.

### File Name Used

```
nms-traffic-master.adress.properties
```

### File Location

```
Windows: <%TrafficDataDir%\shared\traffic-master\conf >
```

```
Linux: <$TrafficDataDir/shared/traffic-master/conf>
```

## Setting the Average Number of Records the Leaf Collector Should Export to the Master Collector

The **flowrecord.pool.size** parameter controls the average number of flow records that the Leaf Collector exports to the Master Collector.

Set the value for this parameter to at least three times of the maximum number of flow records the Leaf Collector exports to the Master Collector during the flush interval.

This ensures that the Leaf Collector can process all the records correctly.

### Troubleshooting Tip

If the Leaf Collector fails to export the in-coming flow records to the Master Collector, increase the memory space capacity of the **flowrecord.pool.size** parameter.

## File Name Used

nms-traffic-leaf.adress.properties

## File Location

**Windows:** <%TrafficDataDir%\shared\traffic-leaf\conf >

**Linux:** <\${TrafficDataDir}/shared/traffic-leaf/conf>

## Setting the Maximum Number of Incoming IP Flow Packets to the Leaf Collector

The **datagram.pool.size** parameter controls the maximum number of IP flow packets that the Leaf Collector receives per second.

Set this parameter to atleast three times of the maximum number of incoming IP flow packets to the Leaf Collector. The default value for this parameter is 50,000 packets per second.

## File Name Used

nms-traffic-leaf.adress.properties

## File Location

**Windows:** <%TrafficDataDir%\shared\traffic-leaf\conf >

**Linux:** <\${TrafficDataDir}/shared/traffic-leaf/conf>

- ▶ Make sure that you allocate adequate memory space to accommodate the increased values for the configurable parameters.

# 8 Starting the iSPI Performance for Traffic Software

After you complete the installation of the iSPI Performance for Traffic software in your NNMi environment, you can start monitoring your network traffic with the combination of NNMi and Network Performance Server.

## Configuration of routers or switches for exporting IP flow data

Each iSPI Performance for Traffic Leaf Collector must be configured to listen on a certain IP address and port to receive the IP flow packets. Make sure that the routers or switches that export Netflow or Sflow data meets the following conditions:

- The routers or switches are seeded as nodes in the HP NNMi instance and are discovered correctly.
- The routers or switches are configured to export Netflow or Sflow packets to the IP address and port of configured iSPI Performance for Traffic Leaf Collectors.

You can also refer to the following link for more information about configuring export of flow data for Netflow :

**[http://www.cisco.com/en/US/docs/ios/12\\_1/switch/configuration/guide/xcdnfc.html](http://www.cisco.com/en/US/docs/ios/12_1/switch/configuration/guide/xcdnfc.html)**

You can refer to vendor documentation for configuration of Sflow and Netflow on specific routers and switches.

## Accessing the iSPI Performance for Traffic Software Configuration

To access the iSPI for Traffic Software Configuration UI application, follow these steps:

- 1 Launch the NNMi Console.
- 2 Log on to the NNMi Console with one of the following user roles:
  - Administrator
  - Operator Level 1
  - Operator Level 2
  - Guest
- 3 In the Configuration pane, click **Traffic iSPI Configuration**. The Traffic iSPI Configuration login window opens.
- 4 Type the username and the password, that was used during the Master Collector installation. The Traffic iSPI Configuration home page opens.

## Accessing the iSPI Performance for Traffic Software Documents

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

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

## 9 Installing NNM iSPI for Traffic in a High-Availability Cluster Environment

You can install NNMi in a high-availability (HA) environment to achieve redundancy in your monitoring setup. You can install the iSPI product in an HA environment where NNMi has been installed.

### Prerequisites

Before you begin the installation for the HA environment, read the *Configuring HP NNM i-series Software in a High Availability Cluster* in the NNMi Deployment and Migration Guide to understand the NNMi HA configuration.

iSPI for Traffic 9.0 does not support High Availability itself, i.e. it is not configured to support failover in an HA cluster. However, it can exist in an environment where NNMi and NPS are installed in HA mode. The deployment configuration supported in this case are:

#### Configuration 1

NNMi on Server A in an HA environment; NPS, Master, Leafs on separate system(s) not in an HA environment

#### Configuration 2

NNMi on Server A in an HA environment; NPS on Server B in an HA environment; Master, Leafs on separate systems not in an HA environment

#### Configuration 3

NNMi and NPS on Server A in an HA environment; Master, Leafs on separate systems not in an HA environment

In all the three cases the iSPI for Traffic Master and Leaf Collectors have to be non-co-located with the HA systems. Please refer to the Master Collector Installation Guide for details on non-co-located installs. The Traffic Master Extension for NNMi needs to be installed on both the HA systems. iSPI for Traffic Licenses must be installed on both the HA systems. Traffic Master configuration, the Master collector needs to be configured to point to the HA NNMi system for both the NNMi instance (the virtual hostname should be provided) and also the network share drive where the perfSpi datafiles folder on the HA system is shared.

### Installing in an Application Failover Environment

NNM iSPI Performance for Traffic 9.00 does not support High Availability itself, i.e. it is not configured to support failover in an application failover case. However, it can exist in an environment where NNMi and NPS are installed in HA mode. The deployment configuration supported in this case are:

NNMi in an application failover environment - installed as a primary and secondary instances on two separate systems. The iSPI for Traffic Master and Leaf collectors installed on separate non-co-located systems. Only one instance of a Master Collector will be running in this case. The Traffic Master Extension for NNMi needs to be installed on both the primary and secondary systems. iSPI for Traffic Licenses must be installed on both the systems.

Please refer to the Master Collector Installation Guide for details on non-co-located installs. Traffic Master configuration, the Master collector needs to be configured to point to the primary and secondary NNMi systems and also the network share drives where the perfSpi datafiles folder on the two NNMi systems. Please refer to the Master Collector Installation Guide for details on configuring secondary NNMi server.

For more information on how to configure NNM iSPI Performance for Traffic for high availability, see [Appendix: Configuring NNM iSPI Performance for Traffic for High Availability \(HA\)](#)



# 10 Upgrade NNM iSPI Performance for Traffic 8.13 to 9.00

You can upgrade the NNM iSPI Performance for Traffic 8.13 to version 9.00 as per your requirement. Upgrade scenario is valid only on Windows platform with Postgres.

To upgrade NNM iSPI Performance for Traffic 8.13 to 9.00, perform the following:

- 1 Stop all leaf collectors. Keep a record of all the machines which had leaf collectors installed.
- 2 Go to machine which hosts the master collector.
- 3 Stop the master collector.
- 4 Check that postgres is still running.
- 5 Create a backup directory for example `C:\backup`.
- 6 Run the script `premigration.bat <OvInstallDir> <OvDataDir> <BackupDir>` For example, `premigration.bat "C:\Program Files (x86)\HP\HP BTO Software" C:\NNMData C:\backup`
- 7 Uninstall all iSPI for Traffic 8.13 leaf collectors.
- 8 Uninstall iSPI for Traffic 8.13 master collector.
- 9 Uninstall the iSPI for Traffic NNM Extension.
- 10 Upgrade NNMi from 8.13 to 9.00.
- 11 Upgrade NPS from 8.13 to 9.00.
- 12 Install the iSPI for Traffic NNM Extension 9.00 on the upgraded NNMi machine
- 13 Install iSPI for Traffic Leaf Collector 9.0 on all the machines which had leaf collector installed.
- 14 Go to machine which hosted the Master Collector in 8.13.
- 15 Install iSPI for Traffic Master collector version 9.00.
- 16 Ensure that `nmsdbmgr` service is running on the machine where iSPI for Traffic Master collector version 9.0 is installed.
- 17 Run the script `postmigration.bat <OvInstallDir> <OvDataDir> <BackupDir>`



# 11 Troubleshooting Installation

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

## Installing the iSPI Performance for Traffic

### Problem Statement: An error occurs during iSPI Performance for Traffic Master Collector or Leaf Collector installation

Cause: A failure in any or all of the iSPI Performance for Traffic installer tasks can lead to the display of the error message. The iSPI Performance for Traffic installer performs the following tasks:

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

Solution:

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

### Problem Statement: A warning message appears during the copying of Interface\_Traffic.tar.gz file to the target directory during the iSPI Performance for Traffic Master Collector installation.

If you come across a warning message while installer copies the file from `%TrafficInstallDir%\conf\traffic-<master-leaf>\Interface_Traffic.tar.gz` to `%perfspidatapath%\extension\final\Interface_Traffic.tar.gz`, the copy operation fails.

Cause:

The target directory does not have adequate write access permissions for the user to copy the files.

Solution:

You must perform a manual copy of the `Interface_Traffic.tar.gz` file to the target directory.

## Starting the iSPI Performance for Traffic

### Problem Statement: Not able to start `nmsdbmgr` on 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 iSPI Performance for Traffic Leaf Collector does not start.

Cause can be any one of the following:

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

Solution:

- The default iSPI Performance for Traffic Leaf Collector ports are available in `%TRAFFIC_LEAF_CONF%\nms-traffic-leaf.ports.properties` file. You can check the file, and make sure the default ports are available.
- Check the `%TRAFFIC_LEAF_LOG%\jbossServer.log` to see if there was any problem in starting the iSPI Performance for Traffic 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 NNMI is not installed on the same system where the iSPI Performance for Traffic Leaf Collector is installed, check if postgres is running.

On Windows systems, 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.

On Linux systems you can run `'ps -aef | grep postgres'`. If no postgres install is running, follow the steps given.

- Shutdown traffic-leaf processes.
- Start postgres manually by running the command: `/etc/init.d/HPSwNnmiSPIPgSql start`
- Start traffic-leaf process
- If the Network Performance Server is installed on the same system where you have installed the iSPI Performance for Traffic Leaf Collector, stop any running instances of Network Performance Server. You can restart the Network Performance Server instances, after starting the iSPI Performance for Traffic 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 `%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 `%TRAFFIC_MASTER_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.

On Windows systems, 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.

On Linux systems you can run `'ps -aef | grep postgres'`. If no postgres install is running, follow the steps given.

- Shutdown traffic-master process.
- Start postgres manually by running the command: `/etc/init.d/HPSwNnmiSPIPgSql start`
- Start traffic-master process:
- If the Network Performance Server is installed on the same system where you have installed the iSPI Performance for Traffic Master Collector, stop any running instances of Network Performance Server. You can restart the Network Performance Server instances, after starting the iSPI Performance for Traffic Master Collector.

**Problem Statement: The iSPI Performance for Traffic Configuration UI application link does not launch.**

Solution:

- Check the status of iSPI Performance for Traffic Master Collector by running the `%TrafficInstallDir%\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 iSPI Performance for Traffic Master collector.
- Log on to the NNMi console again with new session in Microsoft Internet Explorer and launch the iSPI Performance for Traffic Configuration UI URL.
- Check the log files for the iSPI Performance for Traffic Master Collector in this location `%TRAFFIC_MASTER_LOG%` to see if there was any problem in starting the iSPI Performance for NNM iSPI Performance for Traffic Master Collector. Refer to troubleshooting section for resolution of start problems for master collector.
- Problem: The iSPI Performance for Traffic Configuration UI application is not opening in the web browser.

Solution:

- Make sure that you are using Microsoft Internet Explorer 7.0,8.0 or Mozilla Firefox 3.6 version web browser.

- Maximize all the working windows.

## Working with iSPI Performance for Traffic

**Problem Statement:** How do I verify the iSPI Performance for Traffic Leaf Collector is receiving flow records from the defined router or switch.

**Solution:**

- Make sure the iSPI Performance for Traffic Leaf Collector is up and running. You can run `%TrafficInstallDir%\nonOV\traffic-leaf\bin\nmstrafficleafstatus.ovpl` command and check the status of the iSPI Performance for Traffic Leaf Collector. It should display the status as RUNNING.
- If the status of the iSPI Performance for Traffic Leaf Collector does not display as RUNNING, make sure that correct values have been entered for iSPI Performance for Traffic Leaf Collector FQDN, IP Address, JNDI Port, HTTP Port and Password.
- If NNMi is installed on the same system where the iSPI Performance for Traffic Leaf Collector is installed, check whether `nmsdbmng` is running, by typing the following command in the command prompt: `%NnmInstallDir%\bin\ovstatus -c nmsdbmng` to verify the status.
- If NNMi is not installed on the same system where the iSPI Performance for Traffic Leaf Collector is installed, 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.
- Check if the router or switch is exporting Netflow (Version 5 and 9) or Sflow (Version 5) with the port number that matches with the port number provided during the iSPI Performance for Traffic Leaf Configuration.
- Check whether the iSPI Performance for Traffic Leaf Collector is configured appropriately for Netflow or Sflow.
- Check the Flush Period configured for the leaf collector. This is configured in minutes. Check that it is of the range 3-5.
- Check for the Thread = <Collector-Name>JmsFlusher : Time Taken to Publish message in any of the `%TRAFFIC_LEAF_LOG%\traffic_spi_leaf_0.log.*` files. If this message appears, then the iSPI Performance for Traffic Leaf Collector is receiving flow records from the defined router or switch. This message appears after the configured flush time of your iSPI Performance for Traffic Leaf Collector.

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

**Solution:**

You can perform any one of the following tasks to confirm that the iSPI Performance for Traffic Master Collector is receiving data from the iSPI Performance for Traffic Leaf Collector

- Make sure the iSPI Performance for Traffic Master Collector is up and running. You can run  
`%TrafficInstallDir%\nonOV\traffic-master\bin\nmstrafficmasterstatus.ovpl` command and check the status of the iSPI Performance for Traffic Leaf Collector. It should display the status as RUNNING.
- Make sure the `nmsdbmng` service is up and running:
- If NNMi is installed on the same system check whether `nmsdbmng` is running, type the following command in the command prompt: `%NnmInstallDir%\bin\ovstart -c nmsdbmng`
- If NNMi is not installed in the same system, check the Windows Task Manager and make sure the running process of 'postgres.exe' is present.
- If you do not find the running process of 'postgres.exe', you can start the iSPI Performance of Traffic Master Collector again.
- 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 `%TRAFFIC_MASTER_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.
- After an hour, check whether the files of `Interface_Traffic_Data_*.gz` are created in the `%TRAFFIC_DATA%\NNMPerformanceSPI\Interface_Traffic\archives\metric`.
- If the files are not created in the `%TRAFFIC_DATA%\NNMPerformanceSPI\Interface_Traffic\archives\metric` folder, make sure that you have write permission for this folder.
  - • The iSPI Performance for Traffic Master collector creates files every 10,000 records received by iSPI Performance for Traffic Leaf Collector. If the incoming flow record rate from the Leaf collector is low, it takes a long time to reach the limit and no data file will be created.
  - Tune the iSPI Performance for Traffic Master Collector Flush parameter to a more realistic value depending on the total incoming flow record rate.
  - Tune the iSPI Performance for Leaf Collector Flush rate - you can keep the Leaf Collector flush period to very low value if the flow data being exported by the router or switch is low.

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

**Solution:**

- Run the `encrypttrafficpasswd.ovpl` script present in the "bin" directory of either iSPI Performance for Traffic Leaf Collector or iSPI Performance for Traffic Master Collector to retrieve the password.

**Problem Statement:** The system on which iSPI Performance for Traffic Leaf Collector is installed gets rebooted. Do I need to reconfigure the iSPI Performance for Traffic Leaf Collector to receive and process flow records.

**Solution:** You may need start the postgres and iSPI Performance for Traffic Leaf Collector after restarting the system. After this, the iSPI Performance for Traffic Master Collector detects and connects to the iSPI Performance for Traffic Leaf Collector. You verify from the Configuration form if the iSPI Performance for Traffic Leaf Collector status is displayed as RUNNING as well as the leaf collector statistics tab for the leaf collector. This implies that iSPI Performance for Traffic Leaf Collector is receiving and processing the flow records.

**Problem Statement:** I am not seeing an Traffic Map populated with data - blank window comes with the message 'No data in DB'

**Solutions**

- Verify that traffic data is being received on the master collector. See verification section for details.
- Change time controls to search for greater time ranges
- If you are entering values for nodes in the maps (e.g. source node/destination node) - try with IP addresses and Fully Qualified Domain names instead of node names.

**Problem Statement:** I am not seeing an Traffic Map populated with data - blank window comes with the message 'Unable to contact application server'

**Solution:** Restart the master collector (after verifying that postgres is running - see troubleshooting section above) and verify that it is running correctly.

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

**Solutions:**

- If there is no path appearing, change the source and destination node entries to IP addresses/Fully Qualified Domain names and then retry the launch.
- Check NNM Path with the same entries as those given for the Traffic SPI Path View Map. Check if the path is coming correctly
- Check if there is a router in the path which has flow enabled.

**Problem Statement:** Bridge creation fails in iSPI Performance for Traffic when the Master Collector and the Leaf Container are Co-Located

**Cause:**

This problem occurs only if the localhost Fully Qualified Domain Name (FQDN) specified for the Leaf Container is different from the localhost FQDN specified for Master Collector, where the Master Collector and the Leaf Container are co-located.

**Solution:**

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



## Windows

```
%TrafficDataDir%\shared\traffic-master\conf\nnm.extended.properties
```

## Linux

```
$TrafficDataDir/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:

## Windows

```
%TrafficDataDir%\shared\traffic-leaf\conf\nms-traffic-leaf.address.properties
```

## Linux

```
$TrafficDataDir/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 `nnmsys1.x.y.com`, the Leaf Container FQDN also must be specified as `nnmsys1.x.y.com`.

This scenario is applicable only if the Master Collector and the Leaf Container are co-located.

## Problem Statement: Bridge creation fails in iSPI Performance for Traffic when the Master Collector and the Leaf Container are Not Co-Located

### 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:

## Windows

```
%TrafficDataDir%\log\traffic-master\jbossServer.log
```

## Linux

```
$TrafficDataDir/log/traffic-master/jbossServer.log
```

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

## Change of hostname or IP address of machine hosting Traffic SPI components

**Problem Statement:** Reconfiguration of hostname or IP address of machine where iSPI Performance for Traffic Leaf Collector is installed:

Solution:

- Remove the iSPI Performance of Traffic Leaf Collector configured using iSPI Performance for Traffic Configuration UI on iSPI Performance for Traffic Master Collector.
- Restart the iSPI Performance for Traffic Leaf Collector process on the system. Add the iSPI Performance of Traffic Leaf Collector again with the new node fully qualified domain name (FQDN) using the iSPI Performance for Traffic Configuration UI application.

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

Solution:

Stop the iSPI Performance for Traffic Master Collector. Change the entries for fully qualified domain name (FQDN) in the file `nsm.extended.properties` and `nms-traffic-master.address.properties` in `%TrafficDataDir%\shared\traffic-master\conf` directory. Restart the iSPI Performance for Traffic Master Collector.

## Reports

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

Solution:

- Make sure that `%NNM_BIN%\nnmenableperfspi.ovpl` is run on the system where NNMi is installed in your deployment environment.

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

Solution:

- You can refer to the sections under [Working with iSPI Performance for Traffic](#) on page 54. And make sure the iSPI Performance for Traffic Leaf Collector and iSPI Performance for Traffic Master Collector are working correctly.
- You can also verify if the Network Performance Server processes are running.

If the iSPI Performance for Traffic Leaf Collector and iSPI Performance for Traffic Master Collector are working correctly and if the Network Performance Server processes are running, you can wait for an hour of data processing to complete and then get the reports with the data.

**Problem Statement:** The iSPI Performance for Traffic interface report shows data only for sometime.

**Cause:**

Either iSPI Performance for Traffic Leaf Collector or iSPI Performance for Traffic Master Collector is not processing the data.

**Solution:**

- You can also check whether the iSPI Performance for Traffic Leaf Collector is loaded with excess data.
- You can check the `%TRAFFIC_MASTER_LOG%\traffic_spi_master_0.log.*` file for any network failure between iSPI Performance for Traffic Leaf Collector and iSPI Performance for Traffic Master Collector. You must tune the configurable parameters of the iSPI Performance for Traffic for adequate size limit. You can see, [Chapter 7, Tuning Parameters](#) for any tuning parameters with inadequate size limit.

**Problem Statement:** When an iSPI Performance for Traffic report is filtered by using Application ID, a major portion of data appears under the `undefined` group.

**Cause:**

- All the network flow ports which are not mapped to any application mapping rules are categorized under the `undefined` group.

**Problem Statement:** The iSPI Performance for Traffic reports do not show data for one of the interfaces.

**Solution:**

- Check if the Flow export is turned ON.
- Check if the specified interface has been discovered by NNMI.



# A Appendix: Configuring NNM iSPI Performance for Traffic for High Availability (HA)

You can set up NNM iSPI Performance for Traffic for HA after you complete installing all the components of the product. You can configure a Master Collector for HA irrespective of whether it is co-located or not co-located with the NNMi server

You must also configure the following products for high availability, if you are configuring NNM iSPI Performance for Traffic for HA:

- NNMi: See *HP Network Node Manager i Software Deployment Reference*
- NPS: See *HP Network Node Manager i Software Smart Plug-in Performance for Metric / Network Performance Server 9.00 Installation Guide*

NNM iSPI Performance for Traffic enables you to configure HA for the following combinations of aster Collector, NNMi, and NPS:

**Table 1 Combinations for HA Configuration**

	<b>Traffic Master on Separate HA Cluster</b>	<b>Traffic Master as Add-on to NNMi on HA</b>
<b>NNMi on separate HA cluster</b>	Yes	Yes
<b>NPS on separate HA cluster</b>	Yes	No
<b>Standalone NNMi</b>	Yes	No
<b>Standalone NPS</b>	Yes	Yes
<b>Standalone Traffic Master Collector</b>	No	No

## 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
  - HP Serviceguard version 11.18
- Windows
  - Microsoft Failover Clustering for Windows Server 2008 (MSFC)

- Microsoft Cluster Service for Windows Server 2003 (MSCS)

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 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*.
- Includes the following additional patches:
  - Windows: Microsoft hotfix for Connecting to SMB share on a Windows 2000-based computer or a Windows Server 2003-based computer may not work with an alias name, which is available from <http://support.microsoft.com/?id=281308>
  - Linux: No known additional requirements.
- 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 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. The HA cluster configuration must, at a minimum, include the following items:
  - (Linux only) ssh
  - (Linux only) remsh
- Virtual IP address for the HA cluster that is DNS-resolvable
- Virtual hostname for the HA cluster that is DNS-resolvable

## 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 [Prerequisites to Configuring NNM iSPI Performance for Traffic for HA](#) on page 62.
- 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:
  - Windows: %AUTOPASS\_HOME%\data\LicFile.txt  
To determine the value of %AUTOPASS\_HOME%, examine the system environment variables for the computer.
  - Linux: /var/opt/OV/HPOvLIC/LicFile.txt
- 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.
  - Serviceguard: Use LVM commands such as pvcreate, vgcreate, and lvcreate to initialize the disk, create the volume group, and create the logical volume.
  - VCS: Use the Symantec Veritas Storage Foundation as described here:
    - Use **vxdiskadm** to add and initialize the disk.
    - Use **vxassist** make to allocate disks by space.

```
mkfs -F vxfs /dev/vx/dsk/<disk_group>/<logical_volume_group>
```
- 5 Create the directory mount point for the shared disk (for example, S:\ or /trafficmount):
  - Windows: Use Windows Explorer and Disk Management.
  - Linux: Verify that the shared disk directory mount point has been created with root as the user, sys as the group, and the permissions set to 555.  
For example:
 

```
ls -l /trafficmount
```
- 6 Mount the shared disk. For example:
  - Windows: Use Disk Management.
  - Linux for VCS:
 

```
#mount -t vxfs /dev/vx/dsk/<disk_group>/<volume_group> /trafficmount
```
- 7 Stop NNM iSPI Performance for Traffic 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:
  - Windows: Use Windows Explorer and Disk Management.
  - Linux: **umount** <HA\_mount\_point>
- 9 (HP ServiceGuard cluster) Deactivate the disk group (Linux only):
 

```
vgchange -a n <disk_group>
```
- 10 (HP ServiceGuard cluster) Activate the disk group (Linux only):
 


```
vgchange -a y <disk_group>
```
- 11 Mount the shared disk. For example:

- Windows: Use Disk Management.
  - Linux for VCS:
 


```
#mount -t vxfs /dev/vx/dsk/<disk_group>/<volume_group> /trafficmount
```
  - Linux for Service Guard:
 

```
#mount /dev/<disk-group>/<volume-group> /trafficmount
```
- 12 Copy the NNM iSPI Performance for Traffic data disk to the shared disk:
- Windows:
 

```
%NnmInstallDir%\misc\nnm\ha\nnmhadisk.ovpl TRAFFIC -to <HA_mount_point>
```
  - Linux:
 

```
$NnmInstallDir/misc/nnm/ha/nnmhadisk.ovpl TRAFFIC -to <HA_mount_point>
```
-  To prevent database corruption, run this command (with the -to option) only one time.
- 13 Verify that NNM iSPI Performance for Traffic Master Collector is not running:
- ```
nmstrafficmasterstop.ovpl
```
- 14 Configure the NNM iSPI Performance for Traffic HA resource group:
- Windows:
- ```
%NnmInstallDir%\misc\nnm\ha\nnmhaconfigure.ovpl TRAFFIC
```
- Linux:
- ```
$NnmInstallDir/misc/nnm/ha/nnmhaconfigure.ovpl TRAFFIC
```
- 15 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 step 16.
- 16 Start the NNM iSPI Performance for Traffic HA resource group:
- Windows:
 

```
%NnmInstallDir%\misc\nnm\ha\nnmhastartrg.ovpl TRAFFIC <resource_group>
```
  - Linux:
 

```
$NnmInstallDir/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 normal operation. Use these commands only when instructed to do so 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 62.
- 2 Verify that the system meets all of the requirements specified in [Prerequisites to Configuring NNM iSPI Performance for Traffic for HA](#) on page 62.
- 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:
  - Windows: `%NnmInstallDir%\misc\nnm\ha\nnmhaconfigure.ovpl TRAFFIC`
  - Linux: `$NnmInstallDir/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:
  - Windows:  

```
%NnmInstallDir%\misc\nnm\ha\nnmhaclusterinfo.ovpl -group  
<resource_group> -nodes
```
  - Linux:  

```
$NnmInstallDir/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:

— Windows:

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

— Linux:

```
$NnmInstallDir/misc/nnm/ha/nnmhaclusterinfo.ovpl -group  
<resource_group> -activeNode
```

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

— Windows:

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

— Linux:

```
$NnmInstallDir/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:

— MSFC or MSCS:

In Windows Explorer, delete all files in the

```
%NnmDataDir%\hacluster\  
<resource_group>\ folder.
```

— Serviceguard:

Linux:

```
rm -rf /var/opt/OV/hacluster/<resource_group>/*  
rm -rf /usr/local/cmcluster/conf/<resource_group>/*
```

VCS:

```
rm -rf /var/opt/OV/hacluster/<resource_group>/*
```

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

— Windows: %NnmDataDir%\hacluster\  
<resource-group>\maintenance

— UNIX: \$NnmDataDir/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:

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

- 7 Remove all files from shared disk.

- 8 Delete the maintenance file.

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

— UNIX: `rm -rf $NnmDataDir/hacluster/<resource-group>/maintenance`

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

— Windows:

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

— Linux:

```
%NnmInstallDir/misc/nnm/ha/nmhastoprg.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:

— Windows:

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

— Linux:

```
$NnmInstallDir/misc/nnm/ha/nmhaunconfigure.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:

— MSFC or MSCS:

In Windows Explorer, delete all files in the  
`%NnmDataDir%\hacluster\<<resource_group>\` folder.

— Serviceguard:

Linux:

```
rm -rf /var/opt/OV/hacluster/<resource_group>/*  
rm -rf /usr/local/cmcluster/conf/<resource_group>/*
```

VCS:

```
rm -rf /var/opt/OV/hacluster/<resource_group>/*
```

- 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:
- Windows:
- ```
%TrafficDataDir%\shared\traffic-master\conf\nnm.extended.properties
```
- UNIX:
- ```
$TrafficDataDir/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:
- Windows:
- ```
%NnmInstallDir%\misc\nnm\ha\nnmhaclusterinfo.ovpl -group <resource_group> -state
```
- UNIX:
- ```
$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:
- Windows:
- ```
%NnmInstallDir%\misc\nnm\ha\nnmhaunconfigure.ovpl NNM -addon <iSPI_PM_Name>
```
- UNIX:

```
$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:

Windows:

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

UNIX:

```
$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:

Windows:

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

UNIX:

```
$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:

Windows:

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

UNIX:

```
$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:

Windows:

In Windows Explorer, delete all files in the  
%NnmDataDir%\hacluster\<<resource\_group>\ folder.

Linux:

```
rm -rf $NnmDataDir/hacluster/<resource_group>/*
```

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

Windows:

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

UNIX:

```
$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:

Windows:

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

UNIX:

```
$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:

Windows:

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

UNIX:

```
$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:

Windows:

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

UNIX:

```
$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:

Windows:

Use Windows Explorer to delete all files under the shared disk mount point (%HA\_MOUNT\_POINT%, which is, for example S:\).

UNIX:

```
rm -rf $HA_MOUNT_POINT/*
```

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

Windows:

In Windows Explorer, delete all files in the  
`%NnmDataDir%\hacluster\<<resource_group>\` folder.

UNIX:

```
rm -rf $NnmDataDir/hacluster/<resource_group>/*
```

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

Windows: Use Windows Explorer.

UNIX: `umount /nmmount`

- 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:

Windows:

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

UNIX:

```
$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:

Windows:

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

UNIX:

```
$NnmInstallDir/misc/nnm/ha/nnmhaconfigure.ovpl NNM -addon TRAFFIC
```

- 5 Verify the configuration:

Windows:

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

UNIX:

```
$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.

Windows:

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



UNIX:

```
$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.

Windows:

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

UNIX:

```
$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 `nnm.extended.properties` file manually.

Change the following two parameters in the `nnm.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
```



---

# Index

## A

Architecture of iSPI Performance for Traffic, 11

## H

Hardware and Software Requirements, 15

## L

Leaf Collector, 11

## M

Master Collector, 11

## N

nnmdisableperfspi.ovpl, 28

NNMi application failover environment, 28  
primary and secondary NNMi systems, 28

NNMi jboss, 20  
restart, 20

## P

port details  
HTTP, 17  
JNDI, 17

Post Installation Tasks, 43

## R

requirements  
hardware, 15  
software, 15

## W

Web Service Client Role, 17



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