

HP Network Node Manager iSPI Performance for Quality Assurance Software

for the Windows[®], HP-UX, Linux, and Solaris operating systems

Software Version: 9.10

Installation Guide

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

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1 Introducing the Network Node Manager iSPI Performance for Quality Assurance Software

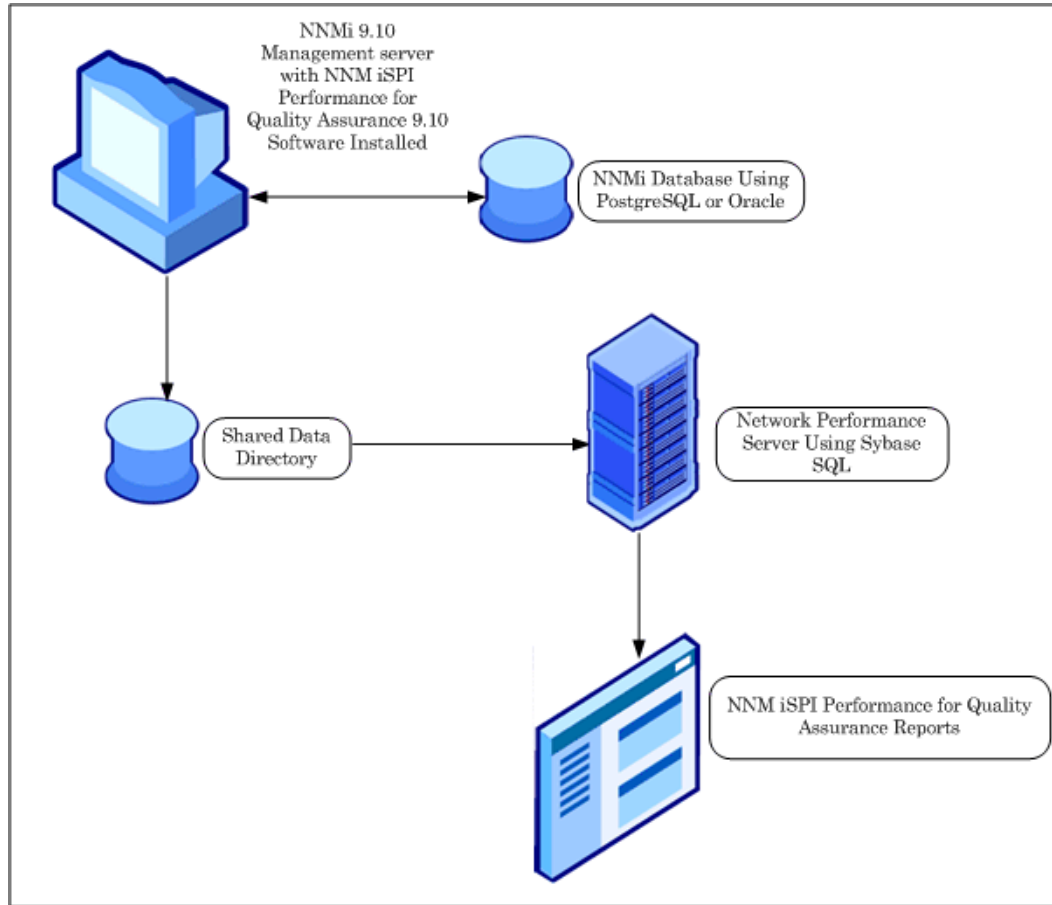
The Network Node Manager iSPI Performance for Quality Assurance Software 9.10 is referred to as NNM iSPI Performance for QA in this document.

NNM iSPI Performance for QA works in conjunction with NNMi, and Network Performance Server (NPS) to perform the following tasks:

- Configure the QA probes or tests for the network elements. NNM iSPI Performance for QA supports the following vendor-specific technologies:
 - CISCO IPSLA, JUNIPER RPM, and other vendors supporting DISMAN Ping implementing RFC 4560
- Discover the configured QA probes for various network elements. NNM iSPI Performance for QA discovers the QA probes of services like UDP Echo, ICMP Echo, UDP, TCP Connect, and VoIP
- Configure the QA probes on the network elements to ascertain any performance inconsistency
- Monitor the network performance and displays the threshold state of the metric in the NNMi console. NNM iSPI Performance for QA supports the following metrics:
 - Round Trip Time
 - Jitter
 - Packet Loss
 - Mean Opinion Scores
- View the QA probe metric measures on the NNM iSPI Performance for QA probe views.
- Sends the metric measurement details to the Network Performance Server for generating reports. NNM iSPI Performance for QA interacts with NNMi and Network Performance Server to display the Quality Assurance reports.

Deployment Scenario

The following illustration represents a scenario where the NNM iSPI Performance for QA, and Network Performance Server share information through a shared data repository.



2 Before Installing NNM iSPI Performance for QA

Before you start installing NNM iSPI Performance for QA, you must plan the installation based on your deployment requirements. You must identify the ideal deployment scenario among the supported configurations and make sure that all the prerequisites are met before you begin the installation process. See *HP Network Node Manager iSPI Performance for Quality Assurance Software Deployment Reference* guide for more information.

Documentation References

See the following documents before you start the NNM iSPI Performance for QA installation process:

Document Name	Document Path
<i>HP Network Node Manager iSPI Performance for Quality Assurance Software Deployment Reference</i>	http:// h20230.www2.hp.com/ selfsolve/manuals
<i>HP Network Node Manager iSPI Performance for Quality Assurance Software Installation Guide</i>	File name: nmQASPI_InstallGuide_en.pdf
	Windows Media: DVD main drive (root)
	UNIX Media: Root directory
	NNM iSPI Performance for QA console: Help > NNM iSPI Documentation Library > iSPI Performance for QA Install Guide

Document Name	Document Path
<i>HP Network Node Manager iSPI Performance for Quality Assurance Software Release Notes</i>	File name: nmQAispi_releasenotes_ en.html
	Windows Media: DVD main drive (root)
	UNIX Media: Root directory
	NNM iSPI Performance for QA console: Help > NNM iSPI Documentation Library > iSPI Performance for QA Release Notes
<i>HP Network Node Manager iSPI Performance for Quality Assurance Software System and Device Support Matrix</i>	File name: nmQAispi_supportmatrix _en.html
	Windows Media: DVD main drive (root)
	UNIX Media: Root directory



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Environment Variables

Environment variables enable you to refer to file and directory locations. The environment variables used in NNMi are used in NNM iSPI Performance for QA as well. The default values are listed here. Actual values depend on the selections made during NNMi installation.

Windows 2008

On Windows systems, the NNMi installation process creates the following environment variables:

`%NnmInstallDir%: <drive>\Program Files(x86)\HP\HP BTO Software`

`%NnmDataDir%: <drive>\ProgramData\HP\HP BTO Software`

UNIX

On UNIX systems, you must manually create the following environment variables:

`$NnmInstallDir: /opt/OV`

`$NnmDataDir: /var/opt/OV`

Before Installation on the NNMi Management Server

Before installing the NNM iSPI Performance for QA on the NNMi management server, you must make a note of the following configuration details used while installing NNMi:

NNMi Port Details

Note down the following port numbers of the NNMi installation:

- HTTP or HTTPS port of NNMi
- JNDI port of NNMi. You can get this value by referring to the `jnp` port value in the `nms-local.properties` file available in the following directory:

For Windows:

```
%Nnmdataadir%\conf\nnm\props\nms-local.properties
```

For UNIX:

```
$Nnmdataadir/conf/nnm/props/nms-local.properties
```

- Port number of jboss on the management server

Database Details

Before installing the HP Network Node Manager iSPI Performance for Quality Assurance Software (NNM iSPI Performance for QA), make sure to note down the database details if you are using Oracle database or embedded database.

NNM iSPI Performance for QA installer uses the default PostgreSQL database that is embedded with NNMi.

To achieve higher scalability, you can choose an external Oracle database instead of the PostgreSQL embedded database to store the NNMi data. The external Oracle database can reside either on the NNMi management server or on a remote server. You must note down the following details of the NNMi database:

- **Type:** The default PostgreSQL embedded database or Oracle database.

You must note down the following details of the NNMi database if you are intending to use the Oracle database:

- **Port:** The port used by the Oracle database.
- **Oracle Database server name:** The Fully Qualified Domain Name of the Oracle server.
- **Oracle Database name:** The Oracle database to be used at the time of Network Node Manager iSPI Performance for Quality Assurance Software (NNM iSPI Performance for QA) installation.
- **Oracle Database Username:** The Oracle database username to be used at the time of NNM iSPI Performance for QA installation.
- **Password:** Password for the above user. The password to be used at the time of NNM iSPI Performance for QA installation.

If you have chosen Oracle database, you must create a new Oracle instance before installing the Network Node Manager iSPI Performance for Quality Assurance Software (NNM iSPI Performance for QA). While installing and configuring the NNM iSPI Performance for QA, **do not** use the same Oracle instance that was configured with NNMi.

You must make sure that NNMi is installed and runs on the machine where you plan to install the NNM iSPI Performance for QA

System Requirements

Before you install the NNM iSPI Performance for QA, verify that your system meets the hardware and software requirements, and the prerequisite software is set.

Make sure the management server meets all the hardware and software requirements.

Refer to the *HP Network Node Manager iSPI Performance for Quality Assurance Software Support Matrix* and *HP Network Node Manager iSPI Performance for Quality Assurance Software Release Notes* documents for a complete information on hardware and software requirements and dependencies.

Table 1 System requirements check list to install Network Node Manager iSPI Performance for Quality Assurance Software

Requirement	Reference Document	Complete (YES/NO)
Disk Space	<i>HP Network Node Manager iSPI Performance for Quality Assurance Software System and Device Support Matrix</i>	Yes
Operating System	<i>HP Network Node Manager iSPI Performance for Quality Assurance Software System and Device Support Matrix</i>	Yes
Database	<i>HP Network Node Manager iSPI Performance for Quality Assurance Software System and Device Support Matrix</i>	Yes

Identify the Deployment Scenario

The following factors are considered while deploying NNM iSPI Performance for QA:

- Type of database configured with NNMi (embedded PostgreSQL or Oracle)
- Size of the network that you want to monitor
- Number of QA probes that you want to configure, monitor, and generate reports in the Network Performance Server (NPS)

To understand deploying of NNM iSPI Performance for QA with other iSPIs see the *HP Network Node Manager iSPI Performance for Quality Assurance Software Deployment Reference* guide.

Sequence of Installation

You must always follow the sequence below while installing NNM iSPI Performance for QA:

- 1 Install NNMi
- 2 Install NPS
- 3 Install NNM iSPI Performance for QA

Installation of Network Performance Server

You can install the Network Performance Server (NPS) on the same NNMi management server where the NNM iSPI Performance for QA is installed, or you can install NPS on a separate server. See the *HP Network Node Manager iSPI Performance for Metrics/Network Performance Server Software* Installation guide for installation details.

If you are installing NPS on a separate server, see the topic *Installing on a Dedicated Server* in the *HP Network Node Manager iSPI Performance for Metrics/Network Performance Server Software* Installation guide.

Tasks

Create a Web service client with the administrator privileges associated with it before installing NNM iSPI Performance for QA. Note that if you have multiple NNM iSPIs installed, you need to create a Web Service client for each iSPI. This user value needs to be entered during the course of the installation. Do not use the NNMi system account while installing the NNM iSPI Performance for QA. For more details, see the *NNMi Deployment Reference* guide.

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

If you are planning to install NPS on a separate server, make sure that the user has the read/write access to the following directory on the NNMi management server:

On the Windows management server:

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

On the UNIX/Linux management server:

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


3 Installing NNM iSPI Performance for QA

You can install or upgrade NNM iSPI Performance for QA on the Windows and UNIX management servers. See the *HP Network Node Manager iSPI Performance for Quality Assurance Software System and Device Support Matrix* for more information on the supported operating systems.


You can use the installation wizard to install or upgrade NNM iSPI Performance for QA. The installation wizard guides you through the installation process.

Installing on a Windows or UNIX Management Server

To install the NNM iSPI Performance for QA on a Windows or UNIX management server, follow these steps:


- 1 Log on to the management server with Administrator privileges.
- 2 Insert the NNM iSPI Performance for QA installation media into the DVD drive.
- 3 Depending on the management server, do the following to run the installation process:
 - *For Windows Management Server:* Double-click the `setup.exe` file available in the root directory. The HP Software Installer wizard for NNM iSPI Performance for QA opens.
 - *For UNIX Management Server:* Run the following command in the root directory:
`./setup.bin`
- 4 If the Application requirement check warnings dialog box opens, click and review each warning and take appropriate actions.
- 5 The **Initialization** page opens. You can select the language from the list, and click **OK**. By default, `English` is selected.
- 6 The **Introduction** (Install) page appears. Click **Next**.
- 7 The **License Agreement** page appears. Review the NNM iSPI Performance for QA license terms. If you agree with the terms of the license agreement, select the option **I accept the terms of the License Agreement**, and then click **Next**.
- 8 **Select the Installation Type** page appears. Select **Typical**, and then click **Next**.
- 9 **Choose the database type** page appears, and you can select any one of the following options:
 - Select the option **HP Software Embedded Database** if you want the NNM iSPI Performance for QA to use the embedded PostgreSQL database, and then click **Next**. Skip step 10 and step 11 if you have selected this option.
 - Select the option **Oracle** if you want the NNM iSPI Performance for QA to use the Oracle database, and then click **Next**.


- 10 If you selected the Oracle database in the previous step, **Choose Database Initialization Preferences** page appears, and you can select any one of the following options:
 - Select the option **Primary Server Installation** to initialize the database using the previously defined database accounts, and then click **Next**
 - Select the option **Secondary Server Installation** to connect to an existing database that is initialized using the Primary Server Installation, and then click **Next**
- 11 If you selected **Oracle** database, **Enter your database server information** page appears, and you must enter the following details, and then click **Next**:
 - **Host:** The hostname can be Fully Qualified Domain Name (FQDN) of the Oracle database server.
 - **Port:** The port number used by the Oracle database server. The default Oracle port number (1521) appears in the dialog box.
 - **Instance:** The name of the Oracle instance that you want to use with the NNM iSPI Performance for QA.

 You must create an Oracle instance apart from the instance configured for NNMi. Do not use the same Oracle instance that was configured with NNMi.
- 12 The HP Software Installer verifies the free disk space required to complete installation. The **Install Checks** page appears. This page displays the required disk space and available disk space on the system.

Review the indicated values, and then click **Next**.
- 13 The **Pre-Install Summary** page appears. Review the options, and then click **Install**.

The installation process begins.

 Perform a forced reinstallation of the already installed components if you previously attempted an unsuccessful installation of the NNM iSPI Performance for QA, and you did not manually remove the components that were already placed by the installer
- 14 Specify the following **QA iSPI Configuration** details:
 - **Specify NNMi Server Information required by NNM iSPI Performance for QA to communicate with NNMi:**
 - **NNMi FQDN/IP Address:** The Fully Qualified Domain Name (FQDN) of the NNMi management server or partial hostname or IP Address

 The various cases for the (Fully Qualified Domain Name (FQDN) configuration parameters are listed below:

The NNMi and NNM iSPI Performance for QA should use the same FQDN. If the NNMi server is having more than one domain name, installation process chooses one and Network Node Manager iSPI Performance for Quality Assurance Software (NNM iSPI Performance for QA) installation also chooses the same domain name.

During the NNMi installation, if you are using the partial domain name as <people> or the IP Address as <xx.xx.xx.xx> and not the FQDN, NNM iSPI Performance for QA also contains the same partial domain name or the IP Address. In this case, the Single Sign-on is disabled.

- **NNMi HTTP Port:** Type the same NNMi port number which you have entered while doing the NNMi installation. The default port number is 80.
- **NNMi HTTPS Port:** Type the same NNMi port number which you have entered while doing the NNMi installation. The default port number is 443.
- **NNMi JNDI Port:** Port number used by the jboss application server for internal communication. Type the NNMi port number. The default port number is 1099.

- ▶ • The NNM iSPI Performance for QA installer detects the values listed above based on the values currently used by NNMi.
- If the values listed above are modified by the NNMi administrator after the installation of the NNM iSPI Performance for QA, you must reconfigure the NNM iSPI Performance for QA to use these updated values. See section [Configuring NNM iSPI Performance for QA to Use Modified NNMi Ports](#) on page 29 for detailed instructions.

- **NNMi Web Service Client Username:** Type the Web Service client username for NNM iSPI Performance for QA.
- **NNMi Web Service Client Password:** Type the Web Service client password.
- **Retype Password:** Retype the password to confirm the password.

- ▶ If you want to use a different user name or if you change the password after installation of the NNM iSPI Performance for QA you must reconfigure the NNM iSPI Performance for QA to use these updated values. See section [Configuring NNM iSPI Performance for QA to Use Modified NNMi Web Services Client User Name, Password](#) on page 30 for detailed instructions.

- **isSecure:** This option specifies that NNMi should use secured mode of transmission. By default the mode of transmission is not secure, that is HTTP. Select this option to support secure communication; that is to use HTTPS instead of HTTP. Note that you must select this option for NNM iSPI Performance for QA only if you have selected this option while installing NNMi.

- ▶ If you want to change your mode of communication after installation of the NNM iSPI Performance for QA, see section [Updating the Security Mode \(HTTP to HTTPS\)](#) on page 29 for detailed instructions.

- **Specify QA iSPI Server details required by NNMi to communicate with NNM iSPI Performance for QA:**
 - **QA iSPI FQDN:** The FQDN of the server where NNM iSPI Performance for QA should be installed. By default this field contains the FQDN for the NNMi management server.
 - **QA iSPI HTTP Port:** The default NNM iSPI Performance for QA HTTP port number is 54040. Note that you must not change the default QA iSPI HTTP Port.
 - **QA iSPI HTTPS Port:** The default NNM iSPI Performance for QA HTTPS port number is 54043. Note that you must not change the default QA iSPI HTTPS Port.
 - **QA iSPI JNDI Port:** The JNDI port number for NNM iSPI Performance for QA is 54046. This is the port number used by the jboss application server for internal communication.

- **isSecure:** This option specifies that NNM iSPI Performance for QA should use secured mode of transmission. By default the mode of transmission is not secure, that is HTTP. Select this option to support secure communication; that is to use HTTPS instead of HTTP. Note that you must select this option for NNM iSPI Performance for QA only if you have selected this option while installing NNMi.



HTTPS is a combination of the Hypertext Transfer Protocol with the Secure Sockets Layer (SSL) protocol to provide encryption and secure identification of the server. SSL uses a cryptographic system that encrypts data with two keys.

When a SSL Digital Certificate is installed on a web site, you can see a padlock icon at the bottom area of the navigator. When an Extended Validation Certificate is installed on a web site, users with the latest versions of some browsers (for example, Firefox, Internet Explorer or Opera) will see the green address bar at the URL area of the navigator.



- If you want to change your mode of communication after installation of the NNM iSPI Performance for QA, see section [Updating the Security Mode \(HTTP to HTTPS\)](#) on page 29 for detailed instructions.
- 15 Click **Submit** to continue the installation procedure, or click **Clear** to clear the configuration details.
 - 16 After you click **Submit**, a message appears to inform you to stop the NNMi processes (if required) after you install the product. Click **OK**.
The installation process takes a few minutes.
 - 17 After the installation is complete, a message appears to inform you that the installation process is complete, and you can manually start the QA iSPI processes. Click **OK**.
 - 18 You can click the `Summary` tab to check if the installation is successful, and you can click the `Details` tab to verify if the NNM iSPI Performance for QA packages are successfully installed. You can click on the `View log` file link in the window to check the log details, and errors if any.
 - 19 Click **Done**.

The NNM iSPI Performance for QA installation process is complete.

To manually start the QA iSPI processes, see the section [Start the NNM iSPI Performance for QA Processes](#) on page 23.

Upgrading on a Windows or UNIX Management Server

You can upgrade NNM iSPI Performance for QA on a Windows or UNIX management server. Note that after you upgrade, it is not possible to restore to the previous version.

To upgrade to NNM iSPI Performance for QA 9.10, you must follow the sequence below:

- 1 Follow the steps given in the section — [Before Upgrading to NNM iSPI Performance for QA 9.10 Version](#)
- 2 [Upgrade from NNMi 9.00 to NNMi 9.10 Version](#)
- 3 [Verify if NNMi Processes are Up and Running](#)
- 4 [Upgrade from Network Performance Server 9.00 to Network Performance Server 9.10 Version](#)
- 5 [Upgrade to NNM iSPI Performance for QA 9.10 on a Windows or UNIX Management Server](#)

- 6 Start the NNM iSPI Performance for QA Processes
- 7 Follow post upgrade steps to restore the configurations as given in the section - [Post Upgrade Tasks](#)

Before Upgrading to NNM iSPI Performance for QA 9.10 Version

The following points **must be noted** before you upgrade from NNM iSPI Performance for QA 9.00 to NNM iSPI Performance for QA 9.10 version:

- You cannot retain the operational data of NNM iSPI Performance for QA 9.00 version after you upgrade. However, you can restore the configuration data only if you export the configuration details to an XML file before you upgrade.



The configuration details are not automatically backed up while you upgrade, nor the configuration details are automatically restored. You must manually run the commands to backup and restore the configuration details. Alternatively, you can use the configuration user interfaces of NNM iSPI Performance for QA 9.00 to export or import the configuration details.

You can export the site, threshold and discovery filter configurations by following the procedure below:

— Export Site Configuration

If you need to take a backup of the sites configured, you must export sites. You can export the existing site configuration using the following command line utility:

For UNIX:

```
$NnmInstallDir/bin/nmsqasiteconfigutil.ovpl -u <username> -p  
<password> -export <filename>
```

For Windows:

```
%NnmInstallDir%\bin\nmsqasiteconfigutil.ovpl -u <username> -p  
<password> -export <filename>
```

See the topic *Exporting a Site Using Site Configuration Form* in the *HP Network Node Manager iSPI Performance for Quality Assurance Software Online Help* for more information.

— Export Threshold Configuration

If you need to take a backup of the thresholds configured, you must export thresholds. You can export the existing threshold configuration using the following command line utility:

For UNIX:

```
$NnmInstallDir/bin/nmsqathresholdconfigutil.ovpl -u <username> -p  
<password> -export <filename>
```

For Windows:

```
%NnmInstallDir%\bin\nmsqathresholdconfigutil.ovpl -u <username> -p  
<password> -export <filename>
```

See the topic *Exporting a Threshold Using the Threshold Configuration Form* in the *HP Network Node Manager iSPI Performance for Quality Assurance Software Online Help* for more information.

— Export Discovery Filter Configuration

If you need to take a backup of the discovery filters configured, you must export discovery filters. See the topic *Exporting a Discovery Filter Using Discovery Filter Configuration Form* in the *HP Network Node Manager iSPI Performance for Quality Assurance Software Online Help* for more information.

- By default the NNM iSPI Performance for QA 9.00 reporting data in Network Performance Server (NPS) is retained after you upgrade. However, you can remove the data from NPS if you do not want to retain the data after you upgrade. See the topic [Removing the NNM iSPI Performance for QA Reporting Data from NPS](#) on page 28 for more information.

Upgrade from NNMi 9.00 to NNMi 9.10 Version

See the steps in the *HP Network Node Manager i Software 9.10 Installation Guide* for information on upgrading from NNMi 9.00 to 9.10 version.

Verify if NNMi Processes are Up and Running

- Before upgrading to NNM iSPI Performance for QA 9.10 version, make sure the NNMi processes are up and running. You can run the following command to check the status:

```
ovstatus -c
```

- If the qa jboss process is running, stop it manually using the following command:

```
ovstop -c qajboss
```

If qa jboss process does not stop, run the following command:

```
nmsqahalt.ovpl
```

You must **not** run the **ovstop** commands to stop the NNM iSPI Performance for QA processes in an application fail-over environment. To stop the NNM iSPI Performance for QA manually in an application fail-over environment, run the following command:

```
nmcluster -disable -shutdown
```

Upgrade from Network Performance Server 9.00 to Network Performance Server 9.10 Version

See the steps in the *HP Network Node Manager iSPI Performance for Metrics/Network Performance Server 9.10 Installation Guide* for information on upgrading from *Network Performance Server 9.00* to *Network Performance Server 9.10* version.

Upgrade to NNM iSPI Performance for QA 9.10 on a Windows or UNIX Management Server

To upgrade the NNM iSPI Performance for QA on a Windows or UNIX management server, follow these steps:

- ▶ While you upgrade, you cannot change the database configured for the previous version of NNM iSPI Performance for QA installed in your management server.

- 1 Log on to the management server with Administrator privileges.

- 2 Insert the NNM iSPI Performance for QA installation media into the DVD drive.
 - 3 Depending on the management server, do the following to run the installation process:
 - a *For Windows Management Server:* Double-click the `setup.exe` file available in the root directory. The HP Software Installer wizard for NNM iSPI Performance for QA opens.
 - b *For UNIX Management Server:* Run the following command in the root directory:


```
./setup.bin
```
 - 4 The **Initialization** page opens. You can select the language from the list, and click **OK**. By default, `English` is selected.
 - 5 The **Introduction(Upgrade)** page appears. Click **Next**
 - 6 The **License Agreement** page appears. Review the NNM iSPI Performance for QA license terms. If you agree with the terms of the license agreement, select the option **I accept the terms of the License Agreement**, and then click **Next**.
 - 7 **Select the Installation Type** page appears. Select **Typical**, and then click **Next**.
 - 8 The HP Software Installer verifies the free disk space required to complete installation. The **Install Checks** page appears. This page displays the required disk space and available disk space on the system. Review the indicated values, and then click **Next**.
 - 9 The **Pre-Install Summary** page appears. Review the options, and then click **Upgrade**.
The upgrade process begins.
 - 10 A message appears to inform you that you can take a backup before proceeding with the upgrade. After you confirm, click **OK** to proceed with the upgrade.
 - 11 A message appears to confirm if `qajboss` is **not** running. After you confirm, click **OK** to continue with the upgrade.
 - 12 If you upgrade in the embedded database, a message appears to inform you that the installer is attempting to start `nmsdbmgr` for creating the `iSPI PostGres` database, and you can stop the NNMi processes after the upgrade is complete. Click **OK**
 - 13 After the installation is complete, a message appears to inform you that the installation process is complete, and you can manually start the QA iSPI processes. Click **OK**.
 - 14 The Upgrade is complete. You can click the `Summary` tab to check if the installation is successful, and you can click the `Details` tab to verify if the NNM iSPI Performance for QA packages are successfully installed. You can click on the `View log` file link in the window to check the log details, and errors if any.
 - 15 Click **Done**.
- The upgrade of NNM iSPI Performance for QA is complete.

Start the NNM iSPI Performance for QA Processes

To start the NNM iSPI Performance for QA and view the QA probes configured on the managed NNMi nodes, follow the steps as discussed below:

- 1 Check if the NNMi processes are running using the following command:


```
ovstatus -c
```

 - If the processes are not running, start them manually using the following command:


```
ovstart -c ovjboss
```

- 2 Run the following command to start the NNM iSPI Performance for QA processes:

```
ovstart -c qajboss
```

You must **not** run the **ovstart** commands to start the NNM iSPI Performance for QA processes in an application fail-over environment. To start the NNM iSPI Performance for QA manually in an application fail-over environment, run the following command:

```
nnmcluster -daemon
```

Post Upgrade Tasks

You can import the configurations.

Import Configurations

This is not a mandatory post upgrade task. The configuration details are not restored automatically after you upgrade. You can retrieve or import the configuration details that you saved as an XML file before you upgrade to NNM iSPI Performance for QA 9.10. You must manually run the commands to import or restore the configuration details. Alternatively, you can use the configuration user interfaces of NNM iSPI Performance for QA 9.10 to import the configuration details. You can import the site, threshold and discovery filter configurations by following the procedure below:

Import Site Configurations

You can import the sites that you exported to an XML file before you upgrade. You can import the existing site configuration using the following command line utility:

For UNIX:

```
$NnmInstallDir/bin/nmsqasiteconfigutil.ovpl -u <username> -p  
<password> -import <filename>
```

For Windows:

```
%NnmInstallDir%\bin\nmsqasiteconfigutil.ovpl -u <username> -p  
<password> -import <filename>
```

See the topic *Importing Sites Using Site Configuration Form* in the *HP Network Node Manager iSPI Performance for Quality Assurance Software Online Help* for more information.

Import Threshold Configuration

You can import the thresholds that you exported to an XML file before you upgrade. You can import the existing threshold configuration using the following command line utility:

For UNIX:

```
$NnmInstallDir/bin/nmsqathresholdconfigutil.ovpl -u <username> -p  
<password> -import <filename>
```

For Windows:

```
%NnmInstallDir%\bin\nmsqathresholdconfigutil.ovpl -u <username> -p  
<password> -import <filename>
```

See the topic *Importing Thresholds Using Threshold Configuration Form* in the *HP Network Node Manager iSPI Performance for Quality Assurance Software Online Help* for more information.

Import Discovery Filter Configuration

You can import the discovery filters that you exported to an XML file before you upgrade. See the topic *Importing Discovery Filters Using Discovery Filter Configuration Form* in the *HP Network Node Manager iSPI Performance for Quality Assurance Software Online Help* for more information.

License Related Information

The license related information for NNM iSPI Performance for QA are as follows:

Introduction to Instant-On license key and License to Use (LTU)

The NNM iSPI Performance for QA 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.

Introduction to iSPI Points License

The iSPI Points license is a points-based licensing scheme for all NNM iSPIs (other than the iSPI Performance for Metric). Every monitored object in the NNM iSPI consumes certain number of points. This number may vary from different objects monitored in the NNM iSPI. You can obtain iSPI points by purchasing iSPI Point Packs.

iSPI Point Consumption

NNM iSPI Performance for QA consumes one point for each QA probe and five points for each discovered CBQoS interface.

When sufficient iSPI points are not available for your deployment, a warning message appears in the NNMi console. You can view the Probes and Points Usage in Help > Help for NNM iSPIs > System Information for iSPI Performance for QA

Enable Licenses for the NNM iSPI Performance for QA

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 probes configured in your environment.
- 2 Determine the iSPI points required to monitor the probes configured in your environment.
- 3 The total iSPI points required is equivalent to number of probes configured.
- 4 Based on the iSPI points calculation, choose and obtain an iSPI Points Pack that can enable the monitoring of probes configured in your environment.

Run the `nnmlicense.ovpl` Command

To enable the NNM iSPI Performance for QA 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 QA 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>`.

Removing the NNM iSPI Performance for QA



If you remove NNM iSPI Performance for QA 9.10 version, the installer cannot restore the previous version. This implies that there will be no traces of NNM iSPI Performance for QA after uninstallation.

Sequence of Uninstallation

While uninstalling NNM iSPI Performance for QA, you must first uninstall NNM iSPI Performance for QA. Secondly, you can uninstall NPS or other NNM iSPIs (if required). Finally you can remove NNMi (if required).

Before Uninstallation of NNM iSPI Performance for QA

Before you start the uninstallation process, follow these steps to ensure that the NNM iSPI Performance for QA process (qajboss) is stopped but the NNMi process (ovjboss) is running:

- 1 Check the status of the NNMi and NNM iSPI Performance for QA process using the following command:

```
ovstatus -c
```

- 2 If the NNM iSPI Performance for QA process is running, stop it manually using the following command:

```
ovstop -c qajboss
```

➤ If this command does not function, you can see the troubleshooting section for the workaround.

Uninstallation Steps

To uninstall NNM iSPI Performance for QA from an NNMi management server, follow these steps:

- 1 Log on to the management server with the Administrator (for Windows) or root (for UNIX) privileges.

➤ The `HPOvQAiSPI` directory gets created under the `Uninstall` directory after the installation of NNM iSPI Performance for QA. The `HPOvQAiSPI` directory contains the executable for proceeding with the uninstallation process.

- 2 Depending on the management server, do the following to run the uninstallation process:

- *On Windows Management Server:*

Go to the following directory and double-click on `setup.exe`:

```
%NnmInstallDir%\Uninstall\HPOvQAiSPI\setup.exe
```

➤ Alternatively, on a Windows management server, you can remove the NNM iSPI Performance for QA in the `Uninstall a Program` window. You can traverse by selecting `Start → Control Panel → Programs → Uninstall a Program → NNM iSPI Performance for Quality Assurance`. Right-Click on `NNM iSPI Performance for Quality Assurance`, and select the `Uninstall` option. The HP Install wizard to uninstall NNM iSPI Performance for QA opens.

- *On UNIX Management Server:*

Run the following command:

```
$NnmInstallDir/Uninstall/HPOvQAiSPI/setup.bin
```

The HP Install wizard to uninstall NNM iSPI Performance for QA opens.

- 3 You can select the language, and click **OK**. By default, `English` is selected.
- 4 The **Application Maintenance** page appears

Select the option **Uninstall** to uninstall NNM iSPI Performance for QA, and click **Next**

- 5 The **Pre-Uninstall** page appears that shows the summary of the packages to be uninstalled. Click **Next**



Click **Cancel** to cancel the uninstallation process

- 6 An information appears to indicate that you can stop the NNMI processes if you do not want them to be running after uninstalling NNM iSPI Performance for QA. Click **OK**
- 7 You can click the `Summary` tab to check if the uninstallation is successful, and you can click the `Details` tab to verify if the NNM iSPI Performance for QA packages are successfully uninstalled. You can click on the `View log` file link in the window to check the log details, and errors if any.
- 8 Click **Done**.

See [Appendix A, Troubleshooting](#) to resolve any error generated during uninstallation.

Removing the NNM iSPI Performance for QA Reporting Data from NPS

NNM iSPI Performance for QA uninstillation process does not remove the reporting data from NPS. So, you must run the following command to manually remove the reporting data where NPS is installed:

On UNIX:

```
$NnmInstallDir/NNMPerformanceSPI/bin/uninstallExtensionPack -p  
Quality_Assurance
```

On Windows:

```
%NnmInstallDir%\NNMPerformanceSPI\bin\uninstallExtensionPack -p  
Quality_Assurance
```

Accessing Log Files

NNM iSPI Performance for QA stores all the installation related information into the following directory:

For Windows: %temp%

For UNIX: /tmp/

List of NNM iSPI Performance for QA log files

The log files are as follows:

- HPOVQASPI_9.10.000
- preInstall_qa.log
- postInstall_qa.log
- preRemove_qa.log
- postRemove_qa.log

Updating the Security Mode (HTTP to HTTPS)

After installing NNMi and NNM iSPI Performance for QA, if you want to modify the security mode from HTTPS or HTTP or from HTTP to HTTPS without installing the NNMi and iNNM iSPI Performance for QA again, follow these steps:

- 1 On the management server, open the `nnm.extended.properties` file from the `%NnmDataDir%\shared\qa\conf` or `$NnmdataDir/shared/qa/conf` directory (depending on the type of the management server) with a text editor.
- 2 Update the values to true or false from the following:
 - `com.hp.ov.nms.spi.qa.Nnm.isSecure=false`: To modify the mode of communication used by NNM iSPI Performance for QA to communicate with NNMi.
 - `com.hp.ov.nms.spi.qa.spi.isSecure=false`: To modify the mode of communication used by NNMi to communicate with the NNM iSPI Performance for QA.

The value true represents HTTPS mode of communication and the value false represents HTTP mode of communication.



Always select the same mode of transmission for NNMi and NNM iSPI Performance for QA.

- 3 Restart the NNM iSPI Performance for QA with the following commands:

- a `ovstop -c qajboss`
- b `ovstart -c qajboss`

Make sure that both NNMi and NNM iSPI Performance for QA use the same transmission mode. For example, if you prefer secured transmission mode, make sure both NNMi and NNM iSPI Performance for QA use HTTPS.

Configuring NNM iSPI Performance for QA to Use Modified NNMi Ports

After installing the NNM iSPI Performance for QA, you can modify the following configuration parameters: NNMi HTTP port, HTTPS port, and JNDI port

You can configure the NNM iSPI Performance for QA to use the modified NNMi ports by following the steps listed:

- 1 Open the `nms-local.properties` file available in the following directory:
 - For Windows:*
`%NnmdataDir%\conf\nnm\props\nms-local.properties`
 - For UNIX:*
`$NnmdataDir/conf/nnm/props/nms-local.properties`
- 2 Obtain the values of the following properties: `jboss.http.port`, `jboss.https.port`
- 3 Replace the value for `-Djboss.nnm.port` property with the value of the `jboss.http.port` obtained in the previous step in the `nms-qa.ports.properties` file available in the following directory:

For Windows:

```
%Nnmdatadir%\shared\qa\conf\
```

For UNIX:

```
$Nnmdatadir/shared/qa/conf/
```

- 4 Replace the value for `com.hp.ov.nms.spi.qa.Nnm.port` property with the value of the `jboss.http.port` obtained in the Step 2 in the `nmn.extended.properties` file present in the following directory:

For Windows:

```
%Nnmdatadir%\shared\qa\conf\
```

For UNIX:

```
$Nnmdatadir/shared/qa/conf/
```

- 5 Replace the value for `com.hp.ov.nms.spi.qa.Nnm.secureport` property with the value of the `jboss.https.port` obtained in the Step 2 in the `nmn.extended.properties` file present in following directory:

For Windows:

```
%Nnmdatadir%\shared\qa\conf\
```

For UNIX:

```
$Nnmdatadir/shared/qa/conf/
```

- 6 Restart the NNM iSPI Performance for QA with the following commands:

a **ovstop -c qajboss**

b **ovstart -c qajboss**

Configuring NNM iSPI Performance for QA to Use Modified NNMi Web Services Client User Name, Password

If you have changed the password for the NNMi Web Services client user specified during the installation of the NNM iSPI Performance for QA, do as follows:

- 1 Log on to the NNMi management server.
- 2 Run the following commands:



You must have root privileges to run this script.

To encrypt new password run the following command

```
nmsqaencryptpassword.ovpl -e qa <new_password>
```

To copy `nms-users.properties` from NNM jboss to SPI jboss, run the following command:

```
nmsqaencryptpassword.ovpl -c qa
```

- 3 Restart the NNM iSPI Performance for QA with the following commands:

a **ovstop -c qajboss**

```
b ovstart -c qajboss
```

If you want to configure the NNM iSPI Performance for QA to use an NNMi Web Service Client user name that is different from the user name specified during the installation of the NNM iSPI Performance for QA, do as follows:

- 1 Open the `nm.extended.properties` file available in the following directory:

For Windows:

```
%Nnmdatadir%\shared\qa\conf\
```

For UNIX:

```
$(Nnmdatadir)/shared/qa/conf/
```

- 2 Edit the value of the following property:

```
com.hp.ov.nms.spi.qa.Nm.username
```

- 3 Run the following commands:

To encrypt password for the new user run the following command

```
nmsqaencryptpassword.ovpl -e qa <password for the new user>
```

To copy `nms-users.properties` from NNM jboss to SPI jboss, run the following command:

```
nmsqaencryptpassword.ovpl -c qa
```

- 4 Restart the NNM iSPI Performance for QA with the following commands:

```
a ovstop -c qajboss
```

```
b ovstart -c qajboss
```



Do not install NNM iSPI Performance for QA 9.10 in silent mode, as NNM iSPI Performance for QA 9.10 installer does not support silent installation.

Default NNM iSPI Performance for QA Ports

The NNM iSPI Performance for QA jboss application server uses the following default ports unless you have modified them during the installation of the NNM iSPI Performance for QA:

- `-Djboss.http.port=54040`
- `-Djboss.jnp.port=54046`
- `-Djboss.https.port=54043`
- `-Djboss.rmi.port=54049`
- `-Djboss.jrmp.port=54044`
- `-Djboss.pooled.port=54048`
- `-Djboss.socket.port=54045`
- `-Djboss.bisocket.port=54047`
- `-Djboss.ws.port=54042`
- `-Djboss.ejb3.port=54041`

- -Djboss.nnm.port=80
- -Djboss.jmsControl.port=54458
- -Djboss.ssljmsControl.port=54091
- -Djboss.sslbisocket.port=54092



You must exclusively assign the port number for NNM iSPI Performance for QA. You must make sure that the ports assigned are not used in any other application in the NNMi management server where NNM iSPI Performance for QA is installed. Also, you cannot specify the port numbers that are already assigned to other ports.

Getting Started with NNM iSPI Performance for QA

Follow the steps as discussed below to start using Network Node Manager iSPI Performance for Quality Assurance Software (NNM iSPI Performance for QA) to test the performance consistency of your network:

- 1 Start the NNMi console. For more information on how to access the NNMi console, see *Getting Started with NNMi* in the *HP Network Node Manager i Software Installation Guide*.
- 2 In the Workspaces pane, click Quality Assurance.

Accessing the Online Help

The NNM iSPI Performance for QA Help provides the information on how to use this product. The detailed information in the NNM iSPI Performance for QA help is organized into the following sections:

- Help for Operators
- Help for Administrators

Follow the steps as discussed below to access the iSPI help:

- 1 Click Help on the NNMi console menu bar
- 2 Click Help for NNM iSPIs to select the Help for NNM iSPI Performance for QA.

The NNM iSPI Performance for QA help appears in the NNMi console only if the NNM iSPI Performance for QA installation is successful. The help provides you comprehensive information about the NNM iSPI Performance for QA views, forms, and troubleshooting.

4 Installing in a High-Availability Cluster or Application Failover Environment

If you are installing the NNM iSPI Performance for QA in an application fail-over environment, you must install the NNM iSPI Performance for QA on both the primary and secondary NNMi management servers. For deployment details, see the *HP Network Node Manager iSPI Performance for Quality Assurance Software Deployment Reference* guide.

You can install or upgrade the NNM iSPI Performance for QA in a high-availability (HA) Cluster environment or application fail-over environment to achieve redundancy in your monitoring setup. You can install the NNM iSPI Performance for QA product in an HA environment where NNMi is installed.

Prerequisites

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

Ensure to meet the following requirements before installing NNM iSPI Performance for QA in an HA environment.

- The NNM iSPI Performance for QA runs on the NNMi management server.
- The NNM iSPI Performance for QA uses the same embedded database (PostgreSQL) instance as NNMi.

Installing the NNM iSPI Performance for QA in an HA Environment

To install the NNM iSPI Performance for QA when NNMi is running in an HA environment, follow these steps:

- 1 If the NNMi management server is running in an HA mode, disable HA on the management server. For more information on enabling and disabling HA, see [Enabling and Disabling HA for NNMi and NNM iSPI Performance for QA](#) on page 34)
- 2 Start the NNM iSPI Performance for QA installation
- 3 Enable HA on the NNMi management server
- 4 Enable HA for the NNM iSPI Performance for QA



If NNMi is not installed in an HA environment, install NNMi and the NNM iSPI Performance for QA together.

Enabling and Disabling HA for NNMi and NNM iSPI Performance for QA

Before enabling HA for NNM iSPI Performance for QA, you must ensure NNMi is configured in HA. See the *NNMi Deployment Reference* guide for information.

To enable HA for NNM iSPI Performance for QA, first enable HA for the NNM iSPI Performance for QA in a primary node and then in the secondary node.

Use the following command to enable HA for NNM iSPI Performance for QA:

For Windows:

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

For UNIX:

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

To disable HA for NNM iSPI Performance for QA, first disable HA for the NNM iSPI Performance for QA from the secondary node and then from the primary node.

Use the following command to disable HA for NNM iSPI Performance for QA:

For Windows:

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

For UNIX:

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

Removing the NNM iSPI Performance for QA in an HA Environment

To remove the NNM iSPI Performance for QA in an HA environment, follow these steps:

- 1 If NNMi management server is running in HA mode, disable HA for the NNM iSPI Performance for QA. For more information on enabling and disabling HA, see [Enabling and Disabling HA for NNMi and NNM iSPI Performance for QA](#) on page 34)
- 2 Disable HA on the NNMi management server
- 3 Uninstall NNM iSPI Performance for QA
- 4 Enable HA on the NNMi management server

For steps to disable HA on the NNMi management server, see *Configuring HP NNM i-series Software in a High Availability Cluster* in the *NNMi Deployment and Migration Guide*.

A Troubleshooting

Uninstallation Process Starts but does not Complete

Stop the NNM iSPI Performance for QA process but NNMi processes must be running before you start the uninstallation process. You can use the following command to stop the NNM iSPI Performance for QA process:

```
ovstop -c qajboss
```

Check the status again and start the uninstallation process.

Low Memory after the NNM iSPI Performance for QA is Uninstalled

After the unistallation process, ensure that no java process is running with the NNM iSPI Performance for QA name. Stop these processes manually otherwise it increases the memory size.

Uninstallation Process is Complete, Status shows NNM iSPI Performance for QA

After the uninstallation process is complete, still iSPI for NNM iSPI Performance for QA process appears as failed while checking the status. Stop the process and start again using the following commands:

Stop the process: **ovstop -c**

Start the process: **ovstart -c**

Check the status again, iSPI does not appear in the status.

NNM iSPI Performance for QA Installation Process Stops and Exits

The NNM iSPI Performance for QA installation process stops and exits as the installation process is not able to create and copy the folders.

Check the error messages and check the available disk space, permission issues.

Process is in Failed state and not able to Restart again

Follow the procedure below:

- 1 Run the following command to stop the qajboss:

```
nmsqahalt.ovpl
```

- 2 Run the following command twice:

```
ovstatus -c qajboss
```

The status returns Not Running

- 3 Run the following command

```
ovstart -c qajboss
```

If the above workaround does not resolve the problem, follow the procedure below:

Stop and start ovspmd (all the processes) again if any of the processes (qajboss, nmsdbmgr) is in a FAILED state and you are unable to restart the process. Check `ovstatus -c` to verify if the process state is changed from FAILED state to RUNNING state.

Cannot connect http client invoker. Invalid HTTP server response [401] - Unauthorized. Response: Unauthorized/401

The NNM iSPI Performance for QA communication with NNMi is broken due to invalid username or password. You can change the Web Service Client password by referring to the section [Configuring NNM iSPI Performance for QA to Use Modified NNMi Web Services Client User Name, Password](#) on page 30

Multiple instances of qajboss running after NNM iSPI Performance for QA installation

You can follow these steps as a workaround:

- 1 Run the `$NnmInstallDir/bin/nmsqahalt.ovpl` script command
- 2 Check qajboss status with `ovstatus -c qajboss`
- 3 If qajboss is not running, run the `ovstart -c qajboss` command

Rediscovery of Probes Fail after Upgrading to NNM iSPI Performance for QA 9.10

If NNMi has already discovered the nodes, run the following command to rediscover the probes for the node:

```
nmmnoderediscover.ovpl -u <username> -p <password> -all
```

Alternatively, you can run the following command:

```
nmsqadiscover.ovpl -u <username> -p <password> -node <nodename>
```

You can run the commands from the following directory:

For UNIX: `$NnmInstallDir/bin`

For Windows: `%NnmInstallDir%\bin`

Jboss displays the following deployment exception after NNM iSPI Performance for QA completes installing

```
29,446 ERROR [org.jboss.messaging.util.ExceptionUtil] ServerPeer[0]
createTopic

org.jboss.deployment.DeploymentException: Trying to install an already
registered mbean:
jboss.messaging.destination:service=Topic,name=nms.spi.registration
at org.jboss.system.ServiceCreator.install(ServiceCreator.java:103)
at
org.jboss.jms.server.ServerPeer.deployDestinationInternal(ServerPeer.java:190
9)
```

```
at
org.jboss.jms.server.ServerPeer.deployDestinationDefault (ServerPeer.java:1845
)
at org.jboss.jms.server.ServerPeer.deployTopic (ServerPeer.java:895)
at sun.reflect.NativeMethodAccessorImpl.invoke0 (Native Method)
at
sun.reflect.NativeMethodAccessorImpl.invoke (NativeMethodAccessorImpl.java:39)
at
sun.reflect.DelegatingMethodAccessorImpl.invoke (DelegatingMethodAccessorImpl.
java:25)
at java.lang.reflect.Method.invoke (Method.java:597)
at
org.jboss.mx.interceptor.ReflectedDispatcher.invoke (ReflectedDispatcher.java:
155)
at org.jboss.mx.server.Invocation.dispatch (Invocation.java:94)
at
org.jboss.mx.interceptor.AbstractInterceptor.invoke (AbstractInterceptor.java:
133)
at org.jboss.mx.server.Invocation.invoke (Invocation.java:88)
```

To resolve the problem, run the following command to stop the qajboss process:

nmsqahalt.ovpl

