

HP Network Node Manager iSPI for MPLS

For the Linux operating systems

Software Version: 10.00

Upgrade Reference

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Chapter 1: About this Guide

This guide contains information for upgrading from the following NNM iSPI for MPLS versions to the NNM iSPI for MPLS 10.00:

- NNM iSPI for MPLS version 9.10
- NNM iSPI for MPLS version 9.20
- NNM iSPI for MPLS version 9.21

Environment Variables Used in the NNM iSPI for MPLS Documents

The NNM iSPI for MPLS documents use the following NNMi environment variables to refer to file and directory locations. The default values are listed here. Actual values depend upon the selections made during NNMi installation.

NNMi installation process creates the following system environment variables, so they are always available to all users:

`$NnmInstallDir: /opt/OV`

`$NnmDataDir: /var/opt/OV`

Chapter 2: Before you Upgrade

This chapter provides the steps to be followed before upgrading the NNM iSPI for MPLS from version 9.10 or 9.20 (with the patch 1) to 10.00.

Before Upgrading from NNM iSPI for MPLS 9.10 or 9.20 (with latest patch) to NNM iSPI for MPLS 10.00

Before you upgrade the NNM iSPI for MPLS 9.10 or 9.20 (with latest) to the NNM iSPI for MPLS 10.00, perform the following tasks:

Task 1: Move the NNMi and the NNM iSPI for MPLS from Red Hat Enterprise Linux version earlier than 6.4 to version 6.4.

For more information about moving to the Red Hat Enterprise Linux version 6.4, see the *Moving NNMi from a RHEL Version Earlier than 6.4 to RHEL 6.4 or Later* section of the *HP Network Node Manager i Software Upgrade Reference 10.00*.

Note: Before you upgrade NNM iSPI for MPLS 9.10 to NNM iSPI for MPLS 10.00, follow these steps:

1. After moving NNM iSPI for MPLS 9.10 to RHEL version 6.4, edit the following files:

- `/var/opt/OV/shared/mpls/conf/nms-mpls.address.properties`
- `/var/opt/OV/shared/mpls/conf/nms-mpls.jvm.properties`
- `/var/opt/OV/shared/mpls/conf/nnm.extended.properties`

2. Replace the hostname with the hostname of NNMi Management server running on RHEL 6.4

3. Restart the NNM iSPI for MPLS with the following commands:

```
ovstop -c mplsjoboss
```

```
ovstart -c mplsjoboss
```

4. Upgrade to NNM iSPI for MPLS 10.00

Task 2: Change the operating system from HP-UX or Solaris to Linux

If you have the NNM iSPI for MPLS 9.10 or 9.20 (with the patch 1) on the HP-UX or Solaris operating system, you must change the operating system to a supported Linux operating system (such as Red Hat Enterprise Linux 6.4 or SUSE Linux 11 SP3) before migrating to NNM iSPI for

MPLS 10.00. For more information about moving from HP-UX or Solaris operating system to Linux, see the *Moving NNMi from the HP-UX or Solaris Operating System* section of the *HP Network Node Manager i Software Upgrade Reference 10.00*.

Chapter 3: Upgrading to the NNM iSPI for MPLS 10.00

Before you start upgrading the MPLS VPN SPI from 9.x to newer version, make sure that you upgrade NNMi 9.x version to newer version. For upgrading NNMi from the earlier versions, see the *NNMi 10.00 Deployment Reference Guide*.

In addition, you must perform a discovery for the NNM iSPI for MPLS after you upgrade to the NNM iSPI for MPLS 10.00 version. To start the complete discovery for the NNM iSPI for MPLS, use `nmsmplsdisco.ovpl -all`.

License for Upgrading from the Earlier Versions

If you are upgrading from the earlier versions of the NNM iSPI for MPLS, then you can obtain the NNM iSPI for MPLS, 10.00 upgrade licenses. You can contact HP sales to know about your upgrade license entitlement based on your order number for the earlier versions of the NNM iSPI for MPLS.

License for Upgrading from the NNM iSPI for MPLS, Version 9.10, 9.20, 9.21 to Version 10.00

To upgrade to the NNM iSPI for MPLS, the Contract Migration is *not* required as both the versions use the same LTU's SKU. You only need the media product number. The NNM iSPI for MPLS, 10.00 is password protected product so you have to acquire your technical password migration. You can obtain your password from the following URL <http://support.openview.hp.com/software/updates.jsp>

Upgrading from Version 9.10 to Version 10.00

Assuming that, you have successfully installed HP NNMi 10.00, and the MPLS jboss is running, follow these steps:

1. Stop MPLS jboss using `ovstop -c mplsjboss`

Note: For successful migration, ensure that the NNMi 10.00 is running properly and MPLS jboss has completely stopped. In case the upgrade fails, the only solution is to install 10.00. This may corrupt the version 9.10 database

2. Insert the NNM iSPI for MPLS installation media into CD-ROM drive
3. In the **Introduction** screen, check the NNM iSPI for MPLS information and then click **Next**

4. **Product Agreement** screen displays the End User License information. Read the content carefully and Accept the terms to click **Next**
5. Select the desired installation type from the **Product Customization** screen and click **Next**
6. The installer checks for the required free disk space and this information is displayed on the **Product Requirement** screen. If the required disk space is available then you can click **Next**.
7. Click **Upgrade** after reviewing the summary shown in the **Pre-install Summary** screen
8. A pop-up is displayed on the **Install** screen. This pop-up recommends and encourages MPLS iSPI users to take a complete backup before proceedings with the upgrade. Click **Ok** if you have taken a backup.
9. Start MPLS jboss using `ovstart -c mplsjoboss`

Upgrading from Version 9.20 to Version 10.00

Assuming that, you have successfully installed HP NNMi 10.00, and the MPLS jboss is running, follow these steps:

1. Stop MPLS jboss using `ovstop -c mplsjoboss`

Note: For successful migration, ensure that the NNMi 10.00 is running properly and MPLS jboss has completely stopped. In case the upgrade fails, the only solution is to install 10.00. This may corrupt the version 9.20 database

2. Insert the NNM iSPI for MPLS installation media into CD-ROM drive
3. In the **Introduction** screen, check the NNM iSPI for MPLS information and then click **Next**
4. **Product Agreement** screen displays the End User License information. Read the content carefully and Accept the terms to click **Next**
5. Select the desired installation type from the **Product Customization** screen and click **Next**
6. The installer checks for the required free disk space and this information is displayed on the **Product Requirement** screen. If the required disk space is available then you can click **Next**.
7. Click **Upgrade** after reviewing the summary shown in the **Pre-install Summary** screen
8. A pop-up is displayed on the **Install** screen. This pop-up recommends and encourages MPLS iSPI users to take a complete backup before proceedings with the upgrade. Click **Ok** if you have taken a backup.

Upgrading from Version 9.21 to Version 10.00

Assuming that, you have successfully installed HP NNMi 10.00, and the MPLS jboss is running, follow these steps:

1. Stop MPLS jboss using `ovstop -c mplsjoboss`

Note: For successful migration, ensure that the NNMi 10.00 is running properly and MPLS jboss has completely stopped. In case the upgrade fails, the only solution is to install 10.00. This may corrupt the version 9.21 database

2. Insert the NNM iSPI for MPLS installation media into CD-ROM drive
3. In the **Introduction** screen, check the NNM iSPI for MPLS information and then click **Next**
4. **Product Agreement** screen displays the End User License information. Read the content carefully and Accept the terms to click **Next**
5. Select the desired installation type from the **Product Customization** screen and click **Next**
6. The installer checks for the required free disk space and this information is displayed on the **Product Requirement** screen. If the required disk space is available then you can click **Next**.
7. Click **Upgrade** after reviewing the summary shown in the **Pre-install Summary** screen
8. A pop-up is displayed on the **Install** screen. This pop-up recommends and encourages MPLS iSPI users to take a complete backup before proceedings with the upgrade. Click **Ok** if you have taken a backup.

Upgrading to NNM iSPI for MPLS 10.00 with Oracle

This section provides the steps to be followed for upgrading the NNM iSPI for MPLS from version 9.10 or 9.20 (latest patch) to 10.00 with Oracle.

Upgrading from Version 9.10 to Version 10.00

To complete an offline upgrade for NNM iSPI for MPLS 9.10 to NNM iSPI for MPLS 10.00 with Oracle database, follow these steps:

1. Identify two servers:
 - Server A is the current NNMi management server running RHEL (version 5.4)
 - Server B running RHEL (version 6.4)
2. On Server A, run `opt/OV/bin/nnmbackup.ovpl -type online -scope all -target temporary_ location` command to complete full NNMi and NNM iSPI for MPLS backup
3. Stop the NNMi process by using `ovstop -c`
4. On Server B, install NNM 9.10 (with latest patch) as secondary server by selecting the same Oracle server and instance configured on Server A

5. Copy `nnm.keystore` and `nnm.trusstore` from server A and merge the certificates on server B using `nnmcertmerge.ovpl`. For more information, see *NNMi 10.00 Deployment Reference*

Note: Make sure that NNMi is not running during this process.

6. Start the NNMi process using `ovstart -c`
7. Install NNM iSPI for MPLS 9.10 with Oracle database as primary server

Note: Make sure you provide the Web Service Client user credentials as mentioned during the NNM iSPI for MPLS 9.10 installation on Server A.

8. On Server B, run `nnmrestore.ovpl -source temporary_location` command to complete a full NNMi restore of the backup you completed in [step 2](#) on Server A

Note: You must manually edit the following property files: `nms-mpls.address.properties`, `nms-mpls.jvm.properties` and `nnm.extended.properties` from the `/var/opt/OV/shared/mpls/conf` directory to replace the hostname of Server A with hostname of Server B.

9. Start the NNM iSPI for MPLS process using `ovstart -c mplsjoboss`
10. Upgrade to NNMi 10.00
11. Upgrade to NNM iSPI for MPLS 10.00
12. Wait for the next discovery cycle to complete

Upgrading from Version 9.20 (latest patch) to Version 10.00

To complete an offline upgrade for NNM iSPI for MPLS 9.20 (latest patch) to NNM iSPI for MPLS 10.00 with Oracle database, follow these steps:

1. Identify two servers:

Server A is the current NNMi management server running RHEL (version 5.4)

Server B running RHEL (version 6.4)

2. On Server A, run `opt/OV/bin/nnmbackup.ovpl -type online -scope all -target temporary_location` command to complete full NNMi and NNM iSPI for MPLS backup
3. Stop the NNMi process by using `ovstop -c`

4. On Server B, install NNM 9.20 (latest patch) as secondary server by selecting the same Oracle server and instance configured on Server A
5. Copy `nnm.keystore` and `nnm.trusstore` from server A and merge the certificates on server B using `nnmcertmerge.ovpl`. For more information, see *NNMi 10.00 Deployment Reference*

Note: Make sure that NNMi is not running during this process.

6. Start the NNMi process using `ovstart -c`
7. Install NNM iSPI for MPLS 9.20 (latest patch) with Oracle database as primary server

Note: Make sure you provide the Web Service Client user credentials as mentioned during the NNM iSPI for MPLS 9.20 (latest patch) installation on Server A.

8. On Server B, run `nnmrestore.ovpl -source temporary_location` command to complete a full NNMi restore of the backup you completed in [step 2](#) on Server A
9. Start the NNM iSPI for MPLS process using `ovstart -c mplsjoboss`
10. Upgrade to NNMi 10.00
11. Upgrade to NNM iSPI for MPLS 10.00
12. Wait for the next discovery cycle to complete

Chapter 4: Upgrading the NNM iSPI for MPLS in an HA Cluster

To upgrade the NNM iSPI for MPLS to the version 10.00 in an HA cluster, follow these steps:

1. On the primary (active) node in the cluster, follow these steps:
 - a. Put the NNMi resource group to the HA maintenance mode by placing the maintenance file under the following directory:

```
$NnmDataDir/hacluster/<resource_group_name>
```
 - b. Upgrade NNMi to the version 10.00.
 - c. Run `ovstart -c ovjboss` to make sure that ovjboss is running.
 - d. Upgrade the NNM iSPI for MPLS to the version 10.00,
 - e. Stop all NNMi and iSPI processes.
 - f. Make sure that the following files from the `/var/opt/OV/shared/mpls/conf` contain the virtual FQDN for the following parameters :

File Name	Variable Name
nms-mpls.jvm.properties	-Dnmsas.server.security.keystore.alias
nnm.extended.properties	com.hp.ov.nms.spi.mpls.Nnm.hostname
nnm.extended.properties	com.hp.ov.nms.spi.mpls.spi.hostname

- g. Make sure that the `server.properties` file from the `/var/opt/OV/nmsas/mpls` directory contains the virtual FQDN of the NNMi management server for the `java.rmi.server.hostname` and `nmsas.server.net.hostname.private` parameters).
- h. Make sure that the `login-config.xml` file from the `/opt/OV/mpls/server/conf` directory contains the virtual FQDN of the NNMi management server (for the `module-option` element).
- i. If you have modified any folders and files specified in `mplsdbdatareplicator.conf` file, then replicate them on each cluster member. In case of NNM iSPI for MPLS, the `mplsdbdatareplicator.conf` contains the following:

```
/var/opt/OV/mpls/server/conf/login-config.xml|
```

```
/var/opt/OV/mpls/server/conf/logging.properties|M
```

`/var/opt/OV/mpls/server/deploy/jboss-logging.xml|M`

`/var/opt/OV/mpls/server/conf|CM`

`/var/opt/OV/shared/mpls/conf/publicASMapping|M`

`/var/opt/OV/shared/mpls/conf/privateASMapping|M`

`/var/opt/OV/shared/mpls/conf/interProviderVPNConfig|M`

`/var/opt/OV/shared/mpls/conf/ParserConfig.xml|M`

`/var/opt/OV/shared/mpls/conf/.keyFile|CM`

2. On the secondary (passive) node in the cluster, follow these steps:

- a. Put the NNMi resource group to the HA maintenance mode by placing the maintenance file under the following directory:

`$NnmDataDir/hacluster/<resource_group_name>`

- b. Upgrade NNMi to the version 10.00.
- c. Upgrade the NNM iSPI for MPLS to the version 10.00,
- d. Make sure that the following files from the `/var/opt/OV/shared/mpls/conf` contain the virtual FQDN for the following parameters :

File Name	Variable Name
<code>nms-mpls.jvm.properties</code>	<code>-Dnmsas.server.security.keystore.alias</code>
<code>nnm.extended.properties</code>	<code>com.hp.ov.nms.spi.mpls.Nnm.hostname</code>
<code>nnm.extended.properties</code>	<code>com.hp.ov.nms.spi.mpls.spi.hostname</code>

- e. Make sure that the `server.properties` file from the `/var/opt/OV/nmsas/mpls` directory contains the virtual FQDN of the NNMi management server for the `java.rmi.server.hostname` and `nmsas.server.net.hostname.private` parameters).
- f. Make sure that the `login-config.xml` file from the `/opt/OV/mpls/server/conf` directory contains the virtual FQDN of the NNMi management server (for the `module-option` element).
- g. If you have modified any folders and files specified in `mplsdbdatareplicator.conf` file, then replicate them on each cluster member. In case of NNM iSPI for MPLS, the `mplsdbdatareplicator.conf` contains the following:

```
/var/opt/OV/mpls/server/conf/login-config.xml|M  
/var/opt/OV/mpls/server/conf/logging.properties|M  
/var/opt/OV/mpls/server/deploy/jboss-logging.xml|M  
/var/opt/OV/mpls/server/conf|CM  
/var/opt/OV/shared/mpls/conf/publicASMapping|M  
/var/opt/OV/shared/mpls/conf/privateASMapping|M  
/var/opt/OV/shared/mpls/conf/interProviderVPNConfig|M  
/var/opt/OV/shared/mpls/conf/ParserConfig.xml|M  
/var/opt/OV/shared/mpls/conf/.keyFile|CM
```

3. Repeat [step 2](#) on each passive node.
4. Remove the maintenance file from all passive nodes in the cluster.
5. Stop all the processes on the primary server by running `ovstop -c`

Note: You have to run `ovstop` because `ovjboss` starts on primary server

6. Execute the command `Nnmhastartrg.ovpl` on primary server. After the resource-group is online and all the processes are running, remove the maintenance file from primary server

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