HP Network Node Manager iSPI for IP Telephony Software

For the Linux operating system

Software Version: 10.00

Upgrade Reference

Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notice

© Copyright 2008 - 2014 Hewlett-Packard Development Company, L.P.

Trademark Notices

Adobe® is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

Documentation Updates

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

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates or to verify that you are using the most recent edition of a document, go to: **http://h20230.www2.hp.com/selfsolve/manuals**

This site requires that you register for an HP Passport and sign in. To register for an HP Passport ID, go to: **http://h20229.www2.hp.com/passport-registration.html**

Or click the **New users - please register** link on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

Visit the HP Software Support Online web site at: **http://www.hp.com/go/hpsoftwaresupport**

This web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support web site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To register for an HP Passport ID, go to:

http://h20229.www2.hp.com/passport-registration.html

To find more information about access levels, go to:

http://h20230.www2.hp.com/new_access_levels.jsp

HP Software Solutions Now accesses the HPSW Solution and Integration Portal Web site. This site enables you to explore HP Product Solutions to meet your business needs, includes a full list of Integrations between HP Products, as well as a listing of ITIL Processes. The URL for this Web site is **http://h20230.www2.hp.com/sc/solutions/index.jsp**

About this PDF Version of Online Help

This document is a PDF version of the online help. This PDF file is provided so you can easily print multiple topics from the help information or read the online help in PDF format. Because this content was originally created to be viewed as online help in a web browser, some topics may not be formatted properly. Some interactive topics may not be present in this PDF version. Those topics can be successfully printed from within the online help.

Contents

Chapter 1: About This Guide

This guide contains information for upgrading from the following HP NNM iSPI for IP Telephony (NNM iSPI for IPT) versions to NNM iSPI for IPT 10.00:

- Upgrading from NNM iSPI for IP Telephony 9.10 (with patch 2 or higher) to 10.00

- Upgrading from NNM iSPI for IP Telephony 9.20 (with the patch 2) to 10.00

This guide is for an expert system administrator, network engineer, or HP support engineer with experience in deploying and managing networks in large installations.

Before using this guide, make sure you have completed the following tasks:

- Installing the version (9.10 with patch 2 or higher or 9.20 with the patch 2) of NNM iSPI for IP Telephonyfrom which you are upgrading, using the *HPNetwork Node Manager iSPI for IP Telephony Software Installation Guide*.

- Reviewing the concepts described in the NNM iSPI for IP Telephony online help and the deployment information in the *HPNetwork Node Manager iSPI for IP Telephony Software Deployment Reference* for a general understanding of the iSPI for IPT functions.

- Understanding how to use the NNM iSPI for IP Telephony console.

For up-to-date, downloadable copies of the NNM iSPI for IP Telephony documentation, go to:

http://h20230.www2.hp.com/selfsolve/manuals

The information in this guide was formerly published in the *HPNetwork Node Manager iSPI for IP Telephony Software Deployment Reference*.

Chapter 2: Before you Upgrade

This chapter provides the steps to be followed before upgrading the NNM iSPI for IP Telephony from version 9.10 (with patch 2 or higher) or 9.20 (with the patch 2) to 10.00.

Before you upgrade the NNM iSPI for IP Telephony to version 10.00, perform the following tasks:

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

The NNM iSPI for IP Telephony 10.00 does not support Red Hat Enterprise Linux versions earlier than version 6.4. You must change the operating system to Red Hat Enterprise Linux version 6.4 before migrating to version 10.00.

If you have a version of Red Hat Enterprise Linux that is 6.x, but earlier than 6.4, use the `yum update` command to update to version 6.4. However, if the NNM iSPI for IP Telephony version 9.10 (with patch 2 or higher) or 9.20 (with the patch 2) is on Red Hat Enterprise Linux 5.x, follow the steps listed in the *Moving NNMi to RHEL 6.4 or Later* chapter of the *HP Network Node Manager i Software Upgrade Reference 10.00*.

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

If you have the NNM iSPI for IP Telephony 9.10 (with the patch 2 or higher) or 9.20 (with the patch 2) 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 IP Telephony 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*.

> **Note:** The upgrade process deletes the following Cisco gateways from the NNM iSPI for IP Telephony inventory, along with all the Gateway Call Activity monitoring configurations associated with the gateway:
>
> - An H.323 gateway associated with multiple Cisco Unified Communication Manager (CUCM) clusters
>
> - A gateway that acts both as an MGCP and an H.323 gateway
>
> - A gateway configured to a CUCM cluster using the short hostname or the Fully Qualified Domain Name (FQDN)

Before Upgrading from 9.10 to 10.00

Before you upgrade the NNM iSPI for IP Telephony from version 9.10 (with patch 2 or higher) to 10.00, follow these steps:

1. Configure the CDR data access for Cisco IP telephony.

   To use the CDR data collection feature for monitoring the Cisco IP telephony environment in NNM iSPI for IP Telephony 10.00, you must perform the following steps:

   a. Note down the CDR collection configuration details.

      To find the CDR collection configuration details, follow these steps:

      i. On the NNM iSPI for IP Telephony console, from the **Workspaces** navigation pane, select **Configuration**, and then click **iSPI for IP Telephony Configuration** > **Cisco Configuration**. The HP NNM iSPI for IP Telephony Cisco Configuration console opens.

      ii. Click **Data Access Configuration**. The NNM iSPI for IP Telephony Cisco Data Access Configuration form opens.

      iii. Click the **CDR Access** tab. From the **Current Configurations** section, you can note down the CDR collection configuration details.

   b. Create the following directory:

      `/var/opt/OV/shared/ipt/IPTCiscoCDRCollection`

      > **Note:** While upgrading the NNM iSPI for IP Telephony in a High Availability cluster, you must create the following directory:
      >
      > `/nnm_mount_point/NNM/dataDir/shared/ipt/IPTCiscoCDRCollection`

   c. Create a new user with read-write access to the `/var/opt/OV/shared/ipt/IPTCiscoCDRCollection` directory.

      > **Note:** For an existing user, make sure that the user has read-write access to the location.

      > **Note:** While upgrading the NNM iSPI for IP Telephony in a High Availability cluster, the new user must be given access to the following directory:
      >
      > `/nnm_mount_point/NNM/dataDir/shared/ipt/IPTCiscoCDRCollection`

   d. *Only if you want to use the Billing Server mode.* Configure the CUCM to export CDR files into the newly created directory (Step 2) on the NNMi management server. This configuration task is performed in the Cisco Unified Serviceability console by specifying the Billing Application Server parameters.

2. Unistall the following Cisco IP telephony extension packs from the Network Performance

Server (NPS):

- Cisco_IPT_BChannel_Activity

- Cisco_IPT_Calls_Terminations_Types

- Cisco_IPT_Call_By_Details

- Cisco_IPT_GW_Calls

- Cisco_IPT_IP_Trunk_Calls

- Cisco_IPT_VM_Information

To uninstall the Cisco IP telephony extension packs, follow these steps:

a. Log on to NPS as root.

b. Go to the following directory:

    `/opt/OV/NNMPerformanceSPI/bin`

c. Run the following commands:

    ○ `uninstallExtensionPack.ovpl -p Cisco_IPT_BChannel_Activity`

    ○ `uninstallExtensionPack.ovpl -p Cisco_IPT_Calls_Terminations_Types`

    ○ `uninstallExtensionPack.ovpl -p Cisco_IPT_Call_By_Details`

    ○ `uninstallExtensionPack.ovpl -p Cisco_IPT_GW_Calls`

    ○ `uninstallExtensionPack.ovpl -p Cisco_IPT_IP_Trunk_Calls`

    ○ `uninstallExtensionPack.ovpl -p Cisco_IPT_VM_Information`

3. Make sure the NNM iSPI for IP Telephony version 9.10 with the latest patch is installed on the management server.

4. Delete the Cisco IP telephony extension packs from the NNMi management server.

    To delete the Cisco IP telephony extension packs, follow these steps:

    a. Go to the following directory:

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

        Note: While upgrading the NNM iSPI for IP Telephony in a High Availability cluster, you must go to the following directory:

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

b. Delete the following files manually (in the given order):

- `Cisco_IPT_BChannel_Activity.tar.gz.processed`

- `Cisco_IPT_BChannel_Activity.tar.gz`

- `Cisco_IPT_Calls_Terminations_Types.tar.gz.processed`

- `Cisco_IPT_Calls_Terminations_Types.tar.gz`

- `Cisco_IPT_CDR_Collection.tar.gz.processed`

- `Cisco_IPT_CDR_Collection.tar.gz`

- `Cisco_IPT_GW_Calls.tar.gz.processed`

- `Cisco_IPT_GW_Calls.tar.gz`

- `Cisco_IPT_IP_Trunk_Calls.tar.gz.processed`

- `Cisco_IPT_IP_Trunk_Calls.tar.gz`

- `Cisco_IPT_VM_Information.tar.gz.processed`

- `Cisco_IPT_VM_Information.tar.gz`

5. *Skip this step if you are not using the Oracle database.* Drop the following Oracle tables manually (in the given order):

a. ciscovmdevice

b. vmdevice

c. cktswitchedif

d. monitoredcktswiface

e. SIPSignalGateway

f. SignalGateway

g. CiscoGateKeeper

h. Iptciscogatekeeperstatus

      i.   NORTELH323GK

      j.   H323Gatekeeper

6. *Skip this step if you are not using the Oracle database.* Drop the following Oracle tables manually (need not be in the given order):

- ccmindex

- ciscocallmanagertogkmapper

- ciscounity

- h323trunkstate

- producttype

- routegrpnametodevnamemapping

- ciscocmexpress

- ciscocallmanager

- ciscocktswitchedchannel

- ciscocktswitchedif

- ciscoextension

- ciscoh323gateway

- ciscomediagateway

- ciscosipgateway

- ciscosrstrouter

- ciscocallcontroller

- ciscovoicegateway

- cktswitchedchanne

- monitoredchannelinterface

- h323trunk

- mediasignalgateway

- CiscoRLRGMapping

- CiscoRGDeviceMapping

- CiscoUnityPolledAttributes

- channelstatusconclusion

- ciscoextensionstatusconclusion

- ciscovmstatusconclusion

- cktswitchedifstatusconclusion

- gkictstatusconclusion

- ciscoextensionstatus

- ciscovmstatus

- cktswitchedchannelstatus

- cktswitchedifstatus

- ciscogkcontrolledictstatus

- H323SignalGateway

7. Upgrade NNMi to version 10.00. For more information, see the *HP Network Node Manager i Software Upgrade Reference 10.00*.

8. Upgrade the NNM iSPI Performance for Metrics to version 10.00. For more information about upgrading the NNM iSPI Performance for Metrics to version 10.00, see the *Network Node Manager iSPI Performance for Metrics Software Upgrade Reference 10.00*.

   After you upgrade the NNM iSPI Performance for Metrics to version 10.00, follow these steps:

   a. Stop the ETL processes on the NPS system by running the following command:

      `/opt/OV/NNMPerformanceSPI/bin/stopETL.ovpl`

   b. Take a backup of `perfspi.pm`, which is available in the following location:

      `/opt/OV/nonOV/perl/a/lib/5.8.8`

Before Upgrading from 9.20 to 10.00

Before you upgrade the NNM iSPI for IP Telephony from version 9.20 (with the patch 2) to 10.00, make sure to upgrade the following:

- NNMi to version 10.00

- NNM iSPI Performance for Metrics to version 10.00

Upgrading the NNM iSPI for IP Telephony

To upgrade the NNM iSPI for IP Telephony from version 9.10 (with patch 2 or higher) or 9.20 (with the patch 2) to 10.00, install the NNM iSPI for IP Telephony by following the instructions in the *HP Network Node Manager iSPI for IP Telephony Software Installation Guide 10.00*.

Chapter 3: Post-upgrade Steps

This section provides the steps to be followed after upgrading the NNM iSPI for IP Telephony from version 9.10 (with patch 2 or higher) to 10.00.

After Upgrading from 9.10 to 10.00

After upgrading the NNM iSPI for IP Telephony version 9.10 (with patch 2 or higher) to version 10.00, do the following:

- Start the ETL process on the NNM iSPI Performance for Metrics system by running the following command:

  `/opt/OV/NNMPerformanceSPI/bin/startETL.ovpl`

- Verify the Data Access Configuration

  The upgrade procedure does not retain the data that was collected by the previous version of the NNM iSPI for IP Telephony. It retains only the configuration data. Therefore, after upgrade, you must manually discover all the IP telephony nodes (or wait for the next polling cycle). In addition, you must manually make tenant selections for a set of forms as NNM iSPI for IP Telephony 9.10 did not support multi-tenancy of these forms.

  To manually discover the IPT nodes and to make tenant selections, follow these steps:

  a. Log on to the NNMi console as an administrator.

     > **Tip:** If you use Mozilla Firefox, make sure to delete all the cookies from the browser before you log on to the NNMi console.

  b. From the **Workspaces** navigation pane, select **Configuration**, and then click **iSPI for IP Telephony Configuration** > **Cisco Configuration**. The NNM iSPI for IP Telephony Cisco Configuration Console opens.

  c. In the **Tenant** field of the following forms—where, by default the `Default Tenant` is selected—select a tenant of your choice:

     ○ **Add/Modify AXL Access Configuration for a Cluster** section of the NNM iSPI for IP TelephonyCisco Data Access Configuration form (**Cisco Configuration** > **Data Access Configuration** > **AXL Access** tab)

     ○ **NNM iSPI for IP TelephonyCisco IP Phone Configuration** form (**Cisco Configuration** > **IP Phone Configuration**)

     ○ **Add Cluster Specific QOS Configuration** section of the Cisco Call Monitoring Configuration form (**Cisco Configuration** > **Call Monitoring Configuration** >

Thresholds for QOS/MOS Monitoring tab > **Thresholds for QOS/MOS Monitoring** tab page > **Cluster Specific Thresholds for QOS/MOS Monitoring** pane)

d. Go to the **Add/Modify Configuration for Accessing CDR from Cisco Unified Communications Manager Clusters** section of NNM iSPI for IP Telephony Cisco Data Access Configuration form (**Cisco Configuration** > **Data Access Configuration** > **CDR Access** tab), and follow these steps:

i. Select a tenant of your choice.

ii. For a non-CDRonDemand-based collection configuration, make sure that the name of the directory for downloading the CDR files is the same as that created before the upgrade, and is a subdirectory of the following directory:

`/var/opt/OV/shared/ipt/IPTCiscoCDRCollection`

You can also use the NNM iSPI for IP Telephony Quick Start Wizard to configure the Cisco CDR data access configuration.

You can now manually discover all the IP telephony nodes. Alternatively, you can use the iSPI inventories and reports after the next polling cycle.

Chapter 4: Upgrading in a High Availability Cluster

This chapter provides a basic path for upgrading the NNM iSPI for IP Telephony from version 9.10 (with the patch 2 or higher) or 9.20 (with the patch 2) to 10.00 in a High Availability (HA) cluster.

Before you Upgrade from 9.10 to 10.00

Before you upgrade the NNM iSPI for IP Telephony from version 9.10 (with patch 2 or higher) to 10.00 in an HA cluster, follow these steps:

1. Follow the steps listed in Before Upgrading from 9.10 to 10.00.

2. On the primary (active) NNMi management server in the HA cluster, do the following:

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

        /var/opt/OV/hacluster/*<resource_group_name>*

    b. Upgrade the NNMi to version 10.00. For more information, see the *HP Network Node Manager i Software Upgrade Reference 10.00*.

    c. Run `ovstatus -c` to make sure that `ovjboss` is running.

3. On the secondary (passive) nodes in the HA cluster, follow these steps:

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

        /var/opt/OV/hacluster/*<resource_group_name>*

    b. Upgrade the NNMi to version 10.00. However, do not start the NNMi.

Before you Upgrade from 9.20 to 10.00

Before you upgrade the NNM iSPI for IP Telephony from version 9.20 (with the patch 2) to 10.00 in an HA cluster, make sure to upgrade the following:

- NNMi to version 10.00

- NNM iSPI Performance for Metrics to version 10.00

Upgrading the NNM iSPI for IP Telephony

To upgrade the NNM iSPI for IP Telephony from version 9.10 (with patch 2 or higher) or 9.20 (with the patch 2) to 10.00 in an HA cluster, install the NNM iSPI for IP Telephony by following the

instructions in the *HP Network Node Manager iSPI for IP Telephony Software Installation Guide 10.00*.

Post-upgrade Steps

After upgrading the NNM iSPI for IP Telephony version 9.10 (with patch 2 or higher) to version 10.00 in an HA cluster, do the following:

- Start the ETL process on the NNM iSPI Performance for Metrics system by running the following command:

  `/opt/OV/NNMPerformanceSPI/bin/startETL.ovpl`

- Verify the primary (active) NNMi management server in the HA cluster

  On the active node, follow these steps:

  a. Stop the `ovjboss` process.

  b. Make sure that the following files from the `/var/opt/OV/nmsas/ipt/conf` contain the virtual FQDN for the corresponding parameters:

File Name	Variable Name
`nms-ipt.jvm.properties`	`-Dcom.hp.ov.nms.ssl.keystore.alias`
`nnm.extended.properties`	`com.hp.ov.nms.spi.ipt.Nnm.hostname`
`nnm.extended.properties`	`com.hp.ov.nms.spi.ipt.spi.hostname`

  c. Make sure that the `server.properties` file from the `/var/opt/OV/nmsas/ipt` directory contains the virtual FQDN of the NNMi management server (for the `java.rmi.server.hostname` and `nmsas.server.net.hostname.private` parameters).

  d. Make sure that the `login-config.xml` file from the `/opt/OV/ipt/server/conf` directory contains the virtual FQDN of the NNMi management server (for the `module-option` element).

  e. Modify the relevant files in the `/var/opt/OV/shared/ipt/conf` directory with the up-to-date information on both the primary and secondary cluster nodes.

  f. Run the `ovstart -c` command.

- Verify the the secondary (passive) nodes in the HA cluster

  On the passive nodes, follow these steps:

a. Stop all the NNMi and iSPI processes.

b. Make sure that the following files from the `/var/opt/OV/nmsas/ipt/conf` contain the virtual FQDN for the corresponding parameters:

File Name	Variable Name
`nms-ipt.jvm.properties`	`-Dcom.hp.ov.nms.ssl.keystore.alias`
`nnm.extended.properties`	`com.hp.ov.nms.spi.ipt.Nnm.hostname`
`nnm.extended.properties`	`com.hp.ov.nms.spi.ipt.spi.hostname`

c. Make sure that the `server.properties` file from the `/var/opt/OV/nmsas/ipt` directory contains the virtual FQDN of the NNMi management server (for the `java.rmi.server.hostname` and `nmsas.server.net.hostname.private` parameters).

d. Make sure that the `login-config.xml` file from the `/opt/OV/ipt/server/conf` directory contains the virtual FQDN of the NNMi management server (for the `module-option` element).

e. Modify the relevant files in the `/var/opt/OV/shared/ipt/conf` directory with the up-to-date information on both the primary and secondary cluster nodes.

f. Make sure that the contents of the files present in the following directories are identical on the primary server as well as the secondary server:

   ○ `/var/opt/OV/shared/ipt/avayacdr/conf`

   ○ `/var/opt/OV/shared/ipt/NortelCSMessageCodes/conf`

g. Remove the maintenance file from all the passive nodes in the cluster.

h. On the active server, do the following:

   i. Run the `ovstop -c` command.

   ii. Start the resource group by running the `nnmhastartrg.ovpl` command.

   iii. After the resource group is online, remove the `maintenance` file.

- Verify the Data Access Configuration

  The upgrade procedure does not retain the data that was collected by the NNM iSPI for IP Telephony 9.10. It retains only the configuration data. Therefore, after upgrade, you must manually discover all the IP telephony nodes (or wait for the next polling cycle). In addition, you must manually make tenant selections for a set of forms as the NNM iSPI for IP Telephony 9.10 did not support multi-tenancy for these forms.

  To manually discover the IPT nodes and to make tenant selections, follow these steps:

a. Log on to the NNMi console as an administrator.

> **Tip:** If you use Mozilla Firefox, make sure to delete all cookies from the browser before you log on to the NNMi console.

b. From the **Workspaces** navigation pane, select **Configuration**, and then click **iSPI for IP Telephony Configuration** > **Cisco Configuration**. The NNM iSPI for IP Telephony Cisco Configuration Console opens.

c. In the **Tenant** field of the following forms—where, by default the Default Tenant is selected—select a tenant of your choice:

- **Add/Modify AXL Access Configuration for a Cluster** section of the NNM iSPI for IP TelephonyCisco Data Access Configuration form (**Cisco Configuration** > **Data Access Configuration**>**AXL Access** tab)

- **NNM iSPI for IP TelephonyCisco IP Phone Configuration** form (**Cisco Configuration** > **IP Phone Configuration**)

- **Add Cluster Specific QOS Configuration** section of the Cisco Call Monitoring Configuration form (**Cisco Configuration** > **Call Monitoring Configuration** > **Thresholds for QOS/MOS Monitoring** tab > **Thresholds for QOS/MOS Monitoring** tab page > **Cluster Specific Thresholds for QOS/MOS Monitoring** pane)

d. Go to the **Add/Modify Configuration for Accessing CDR from Cisco Unified Communications Manager Clusters** section of NNM iSPI for IP Telephony Cisco Data Access Configuration form (**Cisco Configuration** > **Data Access Configuration** > **CDR Access** tab), and follow these steps:

i. Select a tenant of your choice.

ii. For a non-CDRonDemand-based collection configuration, make sure that the name of the directory for downloading the CDR files is the same as that created before the upgrade, and is a sub-directory of the following directory:

/nnm_mount_point/NNM/dataDir/shared/ipt/IPTCiscoCDRCollection

You can now manually discover all the IP telephony nodes. Alternatively, you can use the inventories and reports of the NNM iSPI for IP Telephony after the next polling cycle.

We appreciate your feedback!

If you have comments about this document, you can contact the documentation team by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Upgrade Reference (Network Node Manager iSPI for IP Telephony Software 10.00)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to docfeedback@hp.com.