

HP Unified Communications and Collaboration Management Solution Standard Edition

for the Windows[®] operating system

Software Version: 2011.05

Installation and Configuration Guide



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Contents

1	Overview	7
	Components of HP UCC Standard Edition	7
	Prerequisites	8
2	Installing HP UCC Standard Edition	9
	Install HP SiteScope	10
	Install NNMi	10
	Install NNM iSPI Performance for Metrics	11
	Install NNM iSPI for IP Telephony	11
	Install NNM iSPI Performance for QA	11
	Install NNM iSPI Performance for Traffic	12
3	Integrating HP SiteScope with NNMi Suite of Products	13
	Integrate HP NNMi–HP SiteScope System Metrics	13
	Integrate HP NNMi–HP SiteScope Events	13
	Enable HP NNMi–HP SiteScope Events Integration	14
	Use HP NNMi–HP SiteScope Events Integration	14
	Integrate SiteScope–NNMi iSPI for IP Telephony	14
4	Getting Started	15
	Using the NNMi Console	15
	Using the NPS Home Page	15
5	Licensing	17
	License Structure	17
A	Troubleshooting HP UCC Standard Edition Installation and Configuration	21
	Problem Statement: HP SiteScope related reports on NPS are not displayed	21
	Resolution	21
	Problem Statement: NPS is responding slowly	22
	Resolution	22
	Problem Statement: NNM iSPI for IP Telephony is not discovering users	22
	Resolution	22
	Problem Statement: NNM iSPI for IP Telephony is not discovering sites	22
	Resolution	22
	Problem Statement: NNMi displays Invalid or unknown CIA message for the incident	22
	Resolution	22

1 Overview

HP Unified Communications and Collaboration Management Solution Standard Edition (HP UCC Standard Edition) 2011.05 includes the following components:

Components of HP UCC Standard Edition

HP UCC Standard Edition integrates the following applications:

HP SiteScope

An agentless monitoring solution that enables you to collect data and report on the availability and performance of distributed IT infrastructures. Using HP SiteScope, you can monitor servers, operating systems, network devices, network services, applications, and application components.

HP Network Node Manager i Software (NNMi)

Enables you to discover and monitor fault and performance of Layer 2 and Layer 3 devices in your network. Once deployed, NNMi discovers various network elements (nodes), such as switches and routers on an ongoing basis, thus providing an up-to-date representation of the network topology. Using this information, you can view an inventory of the managed network.

Using NNMi's dynamic fault management system, you can detect, isolate, and handle problems using exceptions; the ability to pinpoint network problems by using event correlation and root cause analysis (RCA).

HP Network Node Manager iSPI for IP Telephony Software and Extension Packs (NNM iSPI for IP Telephony)

Enables you to discover and monitor the IP Telephony infrastructure in your NNMi managed network. After installing and configuring the NNM iSPI for IP Telephony, you can monitor the health and states of the IP telephony nodes in your NNMi network, monitor the call quality and the connectivity status between two nodes, configure different aspects (front end servers, gateway entities, site, etc.), and so on.

NNM iSPI Performance for Metrics

The Network Performance Server (NPS) provides the infrastructure that you can use with NNMi to analyze the health and performance of your network. With the performance data collected by different HP Network Node Manager i Software Smart Plug-ins (iSPIs), the NPS builds data tables, runs queries in response to user selections, and displays query results in web-based reports that help you diagnose and troubleshoot problems in your network environment.

NNM iSPI Performance for Metrics enables you to collect health and performance data managed by core NNMi and generate reports for the metric data polled by NNMi from different network elements. With the combination of NNMi and the NNM iSPI Performance for Metrics, you can monitor the operational performance of the network infrastructure.

[NNM iSPI Performance for QA](#)

Enables you to monitor the quality of traffic flow in the network. Pre-configured QA probes on the selected network elements ensures that the data packets traversing through the network are treated consistently by these elements. NNM iSPI Performance for QA, in conjunction with NNMi and NPS, enables you to configure and discover QA probes for various NNMi managed nodes, run these QA probes to monitor the network performance, and generate reports based on the metric data collected by these QA probes.

[NNM iSPI Performance for Traffic](#)

Extends the capabilities of NNMi to monitor the network performance by collecting the network performance information from the IP flow records exported by the NNMi managed routers and enriching the obtained data. NNM iSPI Performance for Traffic enables you to enrich the IP flow records by adding or updating the available fields in the flow records, aggregate the flow record, and configure deployment-specific enrichment attributes like site and applications. With the help of NNMi, it enables you to monitor the performance of network traffic, and generate maps to view the traffic flow information on your network. With the help of NPS, it enables you to generate reports on the network traffic performance.

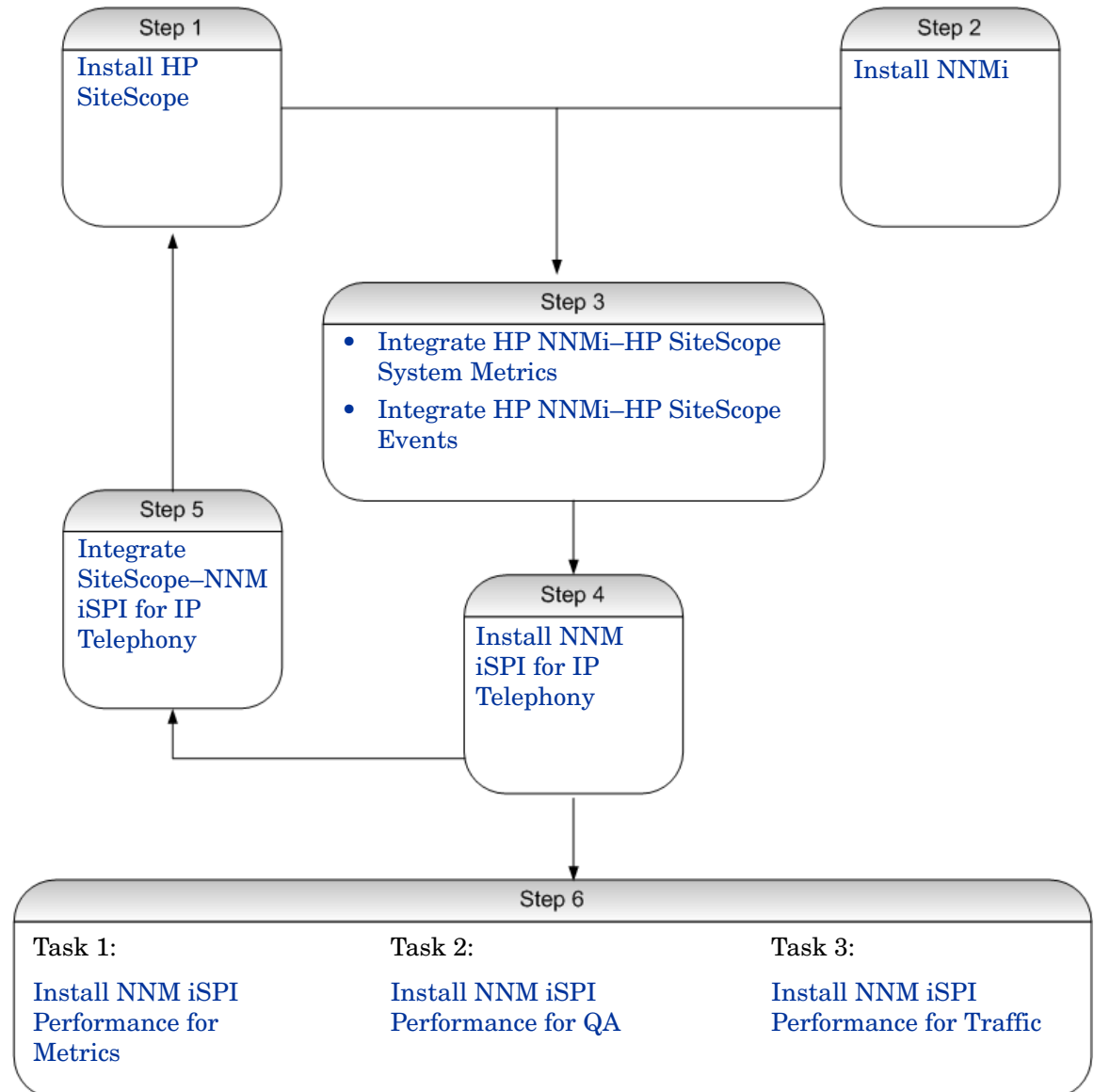
Prerequisites

Make sure that you follow the pre-installation steps before installing each of the HP UCC Standard Edition components. See the following HP sources for pre-installation preparations and hardware and software requirements:

- *HP SiteScope Deployment Guide*
- *HP Network Node Manager i Software Installation Guide*
- *HP Network Node Manager iSPI Performance for Metrics Installation Guide*
- *HP Network Node Manager i Software Smart Plug-in for IP Telephony Installation Guide*
- *HP Network Node Manager i Software Smart Plug-in Performance for Quality Assurance Installation Guide*
- *HP Network Node Manager iSPI Performance for Traffic Software Installation Guide*

2 Installing HP UCC Standard Edition

Before you start using the HP UCC Standard Edition, you must install all the components and integrate HP SiteScope with the NNMi suite of products. The following diagram displays the steps to install the solution components and integrate them:



Install HP SiteScope

Follow the instructions in the *HP SiteScope Deployment Guide* to install HP SiteScope:

- 1 Follow the steps described in the *Before You Install SiteScope* chapter of the *HP SiteScope Deployment Guide*.
 - a Prepare a server where the SiteScope application is to be installed and run.
 - b Compute server system requirements for Windows.
 - c Compute the client system requirements.
- 2 Using the `HPSiteScope_11.10_setup.exe` program, run the Installation Wizard. Follow the steps described in the *Installing Using the Installation Wizard* section of the *HP SiteScope Deployment Guide*

By default, the product installs with a 60-day trial license.

Install NNMi

Follow the instructions listed in the *HP Network Node Manager i Software Installation Guide* to install NNMi:

- 1 Complete the tasks defined in the *Preinstallation Checklists* chapter of the *HP Network Node Manager i Software Installation Guide*.
 - a Prepare NNMi management server for installation following the steps described in *NNMi Management Server Preparation* section in *HP Network Node Manager i Software Installation Guide*.
 - b If you decide to use Oracle database, follow the instructions in the *Database Installation* section of the *HP Network Node Manager i Software Installation Guide*.
 - c Configure your DNS servers for faster resolution of the `nslookup` requests following the instructions described in the *Check for a Well-Configured DNS* section of the *HP Network Node Manager i Software Installation Guide*.
- 2 Install the product following the steps described in the *Installing and Enabling NNMi* chapter in the *HP Network Node Manager i Software Installation Guide*.

Make sure that you install any available patch when the installation process prompts you for the location of the available NNMi patches.
- 3 Configure NNMi discovery to discover and manage the servers and networking devices and interfaces on the network. Follow the steps described in *Using the Quick Start Configuration Wizard* section in the *HP Network Node Manager i Software Installation Guide*.
- 4 Configure NNMi monitoring settings for performance data collection. Enable SNMP Performance Polling on selected interfaces following the instructions in *Default Performance Monitoring (HP Network Node Manager iSPI Performance for Metrics Software)* and *Default Extend the Scope of Polling Beyond Connected Interfaces* sections in the *HP Network Node Manager i Software Online Help: Help for Administrators*.

Install NNM iSPI Performance for Metrics

Follow the instructions listed in the *HP Network Node Manager iSPI Performance for Metrics Installation Guide* to install NNM iSPI Performance for Metrics:

- 1 Perform the pre-installation tasks described in the *Prerequisites and Planning* chapter.
- 2 You can install NPS either on a NNMi management server or on a dedicated NPS server. If you are installing on a dedicated NPS server, run the enablement script on the NNMi management server following the steps described in the *Running the Enablement Script* section in the *Installing on a Dedicated Server* chapter. This script enables you to create a shared location on the NNMi management server that NPS accesses from the dedicated server to gather the data collected by NNMi.
- 3 Install the product using the installation wizard either on a NNMi management server or on a dedicated NPS server. Follow the steps described in the *Installing on the NNMi Management Server* or *Installing on a Dedicated Server* chapter.
- 4 You must use secured mode of transmission (HTTPS) while using NPS. Enable HTTPS for NPS following the steps described in the *Enabling Secured Mode of Transmission for NPS* section.
- 5 Install NNM iSPI Performance for Metrics if you have not already installed it while installing NPS. Follow the instructions as described in the *Installing the NNM iSPI Performance for Metrics* section.

Install NNM iSPI for IP Telephony

Follow the instructions listed in the *HP Network Node Manager i Software Smart Plug-in for IP Telephony Software Installation Guide*:

- 1 Perform the pre-installation tasks described in the *Before You Begin* chapter.
- 2 Install the product using the installation wizard on a NNMi management server using your **Administrator** privileges. follow the steps described in the *Installing on a Windows or UNIX Management Server* section of the *Installing the iSPI for IP Telephony* chapter.
- 3 Configure an FTP server on the NNMi management server. This FTP server enables the CDRonDemand Web Service to send the CDR files from the Cisco Unified Communications Manager clusters to NNM iSPI for IP Telephony. follow the instructions described in the *FTP Server Configuration* section.
- 4 Configure your NNM iSPI for IP Telephony installation following the steps described in the *Post Installation Configuration Tasks* section.

Install NNM iSPI Performance for QA

Follow the instructions listed in the *HP Network Node Manager iSPI Performance for Quality Assurance Software Installation Guide*:

- 1 Perform the pre-installation tasks described in the *Before You Begin* chapter.

- 2 Install the product using the installation wizard on a NNMi management server using your **Administrator** privileges. follow the steps described in the *Install on a Windows Management Server* section in the *Installing NNM iSPI Performance for QA* chapter.

Install NNM iSPI Performance for Traffic

Follow the instructions listed in the *HP Network Node Manager iSPI Performance for Traffic Software Installation Guide*:

- 1 Plan a monitoring environment depending upon the scale of your network. See the scenarios described in the *Installation Overview* chapter.
- 2 Perform the pre-installation steps as described in the *Planning for Installation* chapter.
- 3 Install the HP NNMi Extension for iSPI Performance for Traffic to add the NNM iSPI Performance for Traffic Configuration form into the NNMi workspace and create the launch points for traffic maps. Follow the instructions described in the *Installing the HP NNMi Extension for iSPI* chapter.
- 4 Install the Master Collector following the instructions described in the *Installing the Master Collector* chapter.
- 5 Install the Leaf Collectors following the instructions described in the *Installing the Leaf Collector* chapter.
- 6 Configure NNM iSPI Performance for Traffic following the tasks described in the *Post-Installation Tasks* chapter.

3 Integrating HP SiteScope with NNMi Suite of Products

To enable HP UCC Standard Edition to collect the metrics and events generated by HP SiteScope, you must integrate HP SiteScope with the following NNMi products:

- NNMi
- NNM iSPI for IP Telephony

Integrate HP NNMi–HP SiteScope System Metrics

Using this integration, you can store the metrics data collected by the HP SiteScope monitors in NPS and enable NPS to generate reports on system metrics data collected by SiteScope monitors. Configure the Generic Data Integration on the HP SiteScope server to enable the following integration:

- 1 HP SiteScope transfers the collected monitor data to NNMi in XML format at pre-configured interval.
- 2 NNMi places this information in CSV format in the location that it shares with NPS.
- 3 NPS consumes this information to generate HP SiteScope reports.

For detailed information, see *Reporting Metrics to NNMi* section in the *Using SiteScope* guide.

Follow these steps to enable this integration:

- 1 In NNMi console select the **Enable Integration** check box in the HP NNMi–HP SiteScope System Metrics Integration Configuration form.

For detailed information, see *HP NNMi–HP SiteScope System Metrics Integration* section in the *HP Network Node Manager i Software Deployment Reference*.

- 2 Configure HP SiteScope to report metrics data to NNMi.

Follow the instructions described in the *How to Configure SiteScope to Report Metrics Data to NNMi* in the *Using SiteScope* guide.

Integrate HP NNMi–HP SiteScope Events

Once integrated, HP SiteScope acts as a data collector for NNMi. HP SiteScope uses SNMP Trap alerts to forward event data from any type of HP SiteScope monitor to NNMi management server. NNMi converts these traps into NNMi incidents. From these incidents, an NNMi console user can launch HP SiteScope in the context of that monitor.

To enable HP SiteScope to send event alerts to NNMi management server, configure the following:

Enable HP NNMi–HP SiteScope Events Integration

- 1 In the HP SiteScope user interface, create an SNMP preference for reporting the SNMP Trap to the NNMi management server.
- 2 In the HP SiteScope user interface, create an SNMP Trap alert with SNMP Trap alert action for each possible monitor status level.

Follow the steps described in the *How to Configure SiteScope to Send Event Data to NNMi* section in the *Using SiteScope* guide.

Use HP NNMi–HP SiteScope Events Integration

NNMi defines the following incident types for the HP SiteScope monitor alert traps:

- SiteScopeAlertEvent1 converts SNMPv1-format traps to NNMi incidents.
- SiteScopeAlertEvent2 converts SNMPv2c-format traps to NNMi incidents.

You can use the Incident Configurations feature of NNMi to change HP NNMi–HP SiteScope Events Integration. Follow the instructions described in the following documents:

- *Using the HP NNMi–HP SiteScope Events Integration* section in the *HP Network Node Manager i Software Deployment Reference*
- *Manage Incidents Using Incident Configurations* in *HP Network Node Manager i Software Online Help: Help for Administrators*

Integrate SiteScope–NNM iSPI for IP Telephony

HP SiteScope monitors different aspects of the Microsoft Lync Server 2010 server. You can integrate NNM iSPI for IP Telephony with HP SiteScope to gather performance metrics for the Microsoft unified communication and collaboration applications that include the Lync Server applications and the Exchange Server application on your network. With this integration, you can collect performance metrics and generate reports using the HP SiteScope monitors.

Follow the instructions in the HP Network Node Manager i Software Smart Plug-in for IP Telephony Online Help to configure SiteScope- NNM iSPI for IP Telephony integration:

- 1 After logging on as an administrator to the NNMi console, click **Integration Module Configuration > HP SiteScope IP Telephony....**
- 2 In the HP SiteScope IP Telephony tab page select **Microsoft UC Applications Performance Monitoring** and configure the integration.

4 Getting Started

After you complete installing HP UCC Standard Edition, you can access the collaborated information using the following products:

Using the NNMi Console

To access the information integrated using the solution components, follow these steps:

- 1 Launch the NNMi console.
- 2 Log on to the NNMi console with one of the following user roles:
 - Administrator
 - Operator level 1
 - Operator level 2
 - Guest
- 3 In the Workspace pane, click **Microsoft IP Telephony** workspace, and then click individual views to see details on various network elements and devices.

Using the NPS Home Page

You can access the HP UCC Standard Edition reports using any of the following extension packs:

- UCC Applications
 - Microsoft Exchange
 - Microsoft Lync
- Microsoft IP Telephony
 - Call Reports
 - Gateway statistics
- SiteScope System Metrics

Log on to the NPS Home Page and navigate to the required report using the navigation pane. For information about how to access the NPS Home Page, see *Launching the NPS Reports* section in the *Getting Started* chapter of *HP Network Node Manager iSPI Performance for Metrics/Network Performance Server Installation Guide*.

5 Licensing

The license pack for HP UCC Standard Edition solution consists of the following product centers, products, and license structures:

Table 1 Solution Pack Structure

Product Name	Version	License Structure
NNMi	9.10	Node Based
NNM iSPI Performance for Metrics	9.10	Node Based
NNM iSPI Performance for QA	9.10	iSPI Points
NNM iSPI Performance for Traffic	9.10	iSPI Points
NNM iSPI for IP Telephony	9.10	iSPI Points
HP SiteScope	11.10	SiS Points

License Structure

To use the solution pack, you must have the following license packs:

Collaboration User Pack

- You must have at least one Collaboration User Pack to install HP UCC Standard Edition 2011.05.
- Each Collaboration User Pack must contain at least one unit of management server.

Each Collaboration User Pack characterizes the following:

- Each Collaboration User Pack supports 1000 users.
- The Collaboration User Pack can support the following tiers
 - 1-15000 users
 - 15000-40000
 - More than 40000

Management Server Pack

- You must have at least one Management Server Pack for each Collaboration User Pack.
- To install HP UCC Standard Edition 2011.05 on a distributed environment, you require multiple units of Management Server Packs.
- Each Management Server Pack consists of the following components:

HP SiteScope Templates

- SiteScope OS Template

- SiteScope MS SQL Template
- SiteScope Exchange Template
- SiteScope Active Directory Template
- SiteScope SharePoint Template
- SiteScope Lync Server Template

NNM iSPI Templates

- NNM iSPI Point Packs

To generate licenses for the solution pack:

- 1 Navigate to **www.webware.hp.com**
- 2 Click **Generate New Licenses**.
- 3 In the Order number page, type your order number in the Order number field and click **Next**.
- 4 In the Product Selection page, select the products for which you want to generate licenses, and click **Next**.
Make sure that the correct product versions are selected in the Product version column.
- 5 In the License redemption page, specify the order and product details and click **Next**.
Make sure that you specify the correct IP addresses for the NNMi management server and HP SiteScope server, where you want to deploy the licenses.
- 6 In the Transaction Summary page review the order details and click **Next** to complete license generation.
- 7 Deploy the HP SiteScope licenses using any of the following options:
 - Select the license file in the Settings screen of the SiteScope Configuration Wizard while installing HP SiteScope. For detailed instructions, see *Installing Using the Installation Wizard* section in the *Installing SiteScope* chapter in *HP SiteScope Deployment Guide*.
 - If you did not specify your HP SiteScope license information during installation, import the license from a license file in Preferences > General Preferences > Licenses pane. For user interface details, see *General Preferences Page* section in the *HP SiteScope Using SiteScope* guide.
- 8 Restart the HP SiteScope server to apply the changes.
- 9 On the NNMi management server, deploy the NNMi and NNM iSPIs using the following command:

```
nnmlicense.ovpl <Product_Code> -g
```

The following table lists the product codes for NNMi and NNM iSPIs:

Table 2 Product Code to Deploy Licenses

Product	Product Code
NNMi	NNM
NNM iSPI Performance for Metrics	PerfSPI

Table 2 Product Code to Deploy Licenses

Product	Product Code
NNM iSPI for IP Telephony	iSPI-Points
NNM iSPI Performance for QA	iSPI-Points
NNM iSPI Performance for Traffic	iSPI-Points

- 10 In the AutoPass: License Management console, retrieve the licenses from the respective license files, and install the licenses.

See the following HP sources for the license information for each product:

- *HP Network Node Manager i Software Installation Guide*
- *HP SiteScope Deployment Guide*
- *HP Network Node Manager iSPI Performance for Metrics Installation Guide*
- *HP Network Node Manager i Software Smart Plug-in for IP Telephony Software Installation Guide*
- *HP Network Node Manager iSPI Performance for Quality Assurance Software Installation Guide*
- *HP Network Node Manager iSPI Performance for Traffic Software Installation Guide*

A Troubleshooting HP UCC Standard Edition Installation and Configuration

Problem Statement: HP SiteScope related reports on NPS are not displayed

Resolution

- 1 Check the shared folder for NNMi on NPS contains the recent final and working data.
- 2 Check if the NPS archive folder contains the archived reports. The default directory for archiving reports is:

```
C:\ProgramData\HP\HP BTO
Software\NNMPerformanceSPI\Microsoft_Lync\archives\metric
```

- 3 If the report is already archived, check if the NPS server is running.
- 4 If the report is not archived, check the following:
 - a Can you access the shared directory for NNMi on NPS?
 - b Does the shared directory for NNMi on NPS has the correct permissions?
 - c Does HP SiteScope integrate correctly with NNMi and NNM iSPI for IP Telephony?
 - d Verify that the following option is selected on the NNMi console:

Integration Module Configuration -> HP SiteScope IP Telephony.... -> Enable Integration

Alternatively, you can verify this information in the JbossServer.log for NNM iSPI for IP Telephony. Statements similar to the following example would ensure that the HP SiteScope - NNM iSPI for IP Telephony integration is not correct:

```
-----
2011-02-18 12:01:48,523 ERROR [STDERR] Feb 18, 2011 12:01:48 PM
com.hp.ov.nms.spi.uc.services.util.SiteScopeConfigUtil is SiteScope
Enabled
```

```
INFO: Verifying if SiteScope is enabled...
```

```
2011-02-18 12:01:48,539 ERROR [STDERR] Feb 18, 2011 12:01:48 PM
com.hp.ov.nms.spi.uc.services.util.SiteScopeConfigUtil
isSiteScopeEnabled
```

```
INFO: isSiteScopeEnabled(): Returning false
-----
```

- e Check if a tag is configured to integrate NNM iSPI for IP Telephony with HP SiteScope using the following interface in the HP SiteScope console:

Integration Preferences > Data Integration > <Name of IP Telephony Integration>

The same tag name should be enabled in the following HP SiteScope interface for each of the HP SiteScope monitor that the NPS uses for reporting:

Monitor > Properties > Search/Filter Tags

Also check if Receiver URL is correctly specified in the following HP SiteScope interface:

Preferences > Integration Preferences > Data Integration Preferences Settings

Problem Statement: NPS is responding slowly

Resolution

- 1 Check if you have more than 5 GB free space on the NPS server.
- 2 Check if you have too many extension packs deployed for various NNM iSPIs.
Uninstall any unused extension pack using the following command :
uninstallExtensionpack.ovpl -p
- 3 Try deploying the BI server on distributed environment, if you have high ETL workloads (many managed objects) and high reporting activity (many concurrent interactive users or many scheduled reports).

Problem Statement: NNM iSPI for IP Telephony is not discovering users

Resolution

Divert the output of `#get-csuser` command to a file on your Front End server to check if you have users with conflicting NNM iSPI URLs.

Problem Statement: NNM iSPI for IP Telephony is not discovering sites

Resolution

Check if you have the necessary permissions for Remote Powershell on the Front End server of the site for the user running the msproxy service of NNM iSPI for IP Telephony

Problem Statement: NNMi displays Invalid or unknown CIA message for the incident

This problem statement refers to the situation when you have configured alerts for Lync monitors in HP SiteScope and alert actions to generate traps in NNMi.

Resolution

- 1 Make sure that the Description field for the Alerts Actions pane is NULL in HP SiteScope Alerts tab. You can use the monitor tree to open the Alerts tab for the monitor.
- 2 Verify NNMi configuration for handling unresolved traps using the SNMP Trap Configuration Form.