

HP Unified Communications and Collaboration Management Solution Standard Edition

for the Windows® operating system

Software Version: 2011.05

Deployment Guide

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1 Introduction

This guide contains a number of scenarios and use cases to deploy and use HP Unified Communications and Collaboration Management Solution Standard Edition (HP UCC Standard Edition).

This guide assumes that you have already installed and deployed the following products:

- HP SiteScope
- HP Network Node Manager i Software (NNMi)
- NNM iSPI for IP Telephony
- NNM iSPI Performance for Metrics
- NNM iSPI Performance for QA
- NNM iSPI Performance for Traffic

See the following guides to install and deploy each of these products:

Table 1 Reference Documents

Product Name	Document Name
HP SiteScope	<ul style="list-style-type: none">• <i>HP SiteScope Deployment Guide</i>• <i>HP SiteScope Using SiteScope</i>
NNMi	<ul style="list-style-type: none">• <i>HP Network Node Manager i Software Installation Guide</i>• <i>HP Network Node Manager i Software Deployment Reference</i>
NNM iSPI Performance for Metrics	<ul style="list-style-type: none">• <i>HP Network Node Manager iSPI Performance for Metrics / Network Performance Server Installation Guide</i>• <i>HP Network Node Manager i Software Deployment Reference</i>

Table 1 Reference Documents

Product Name	Document Name
NNM iSPI for IP Telephony	<ul style="list-style-type: none">• <i>HP Network Node Manager i Software Smart Plug-in for IP Telephony Software Installation Guide</i>• <i>HP Network Node Manager i Software Smart Plug-in for IP Telephony Deployment Guide</i>
NNM iSPI Performance for QA	<ul style="list-style-type: none">• <i>HP Network Node Manager iSPI Performance for Quality Assurance Software Installation Guide</i>• <i>HP Network Node Manager iSPI Performance for Quality Assurance Software Deployment Reference</i>
NNM iSPI Performance for Traffic	<ul style="list-style-type: none">• <i>HP Network Node Manager iSPI Performance for Traffic Software Installation Guide</i>• <i>HP Network Node Manager iSPI Performance for Traffic Software Deployment Reference</i>

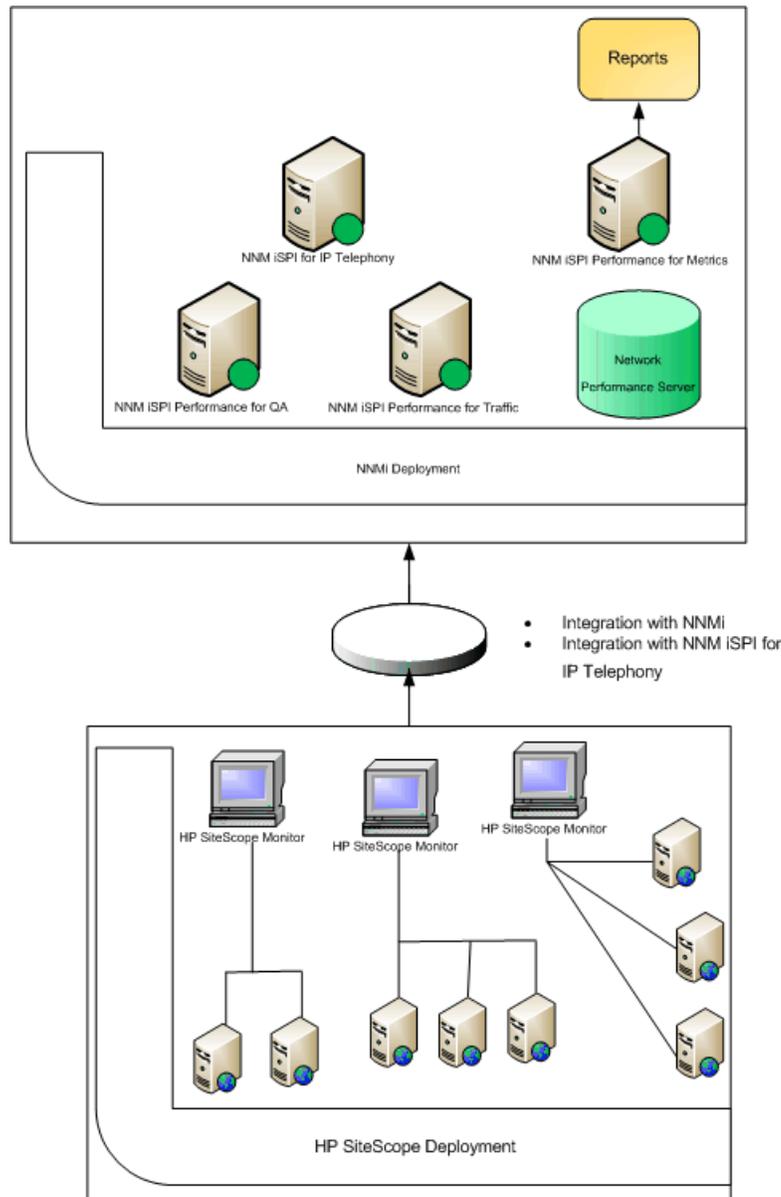
2 Deployment Scenarios

You can deploy HP UCC Standard Edition to collaborate metrics and events from globally dispersed installations of HP SiteScope and NNMi. The following deployment scenarios aim to familiarize you with the deployment specifications based on the number of Microsoft Lync Servers managed.

Scenario 1: Single HP SiteScope Server - Single NNMi Management Server - Single Network Performance Server

We recommend you to use this deployment scenario if you need to manage less than 1500 Microsoft Lync Servers.

The following figure displays a sample HP UCC Standard Edition deployment, highlighting the integrated applications:



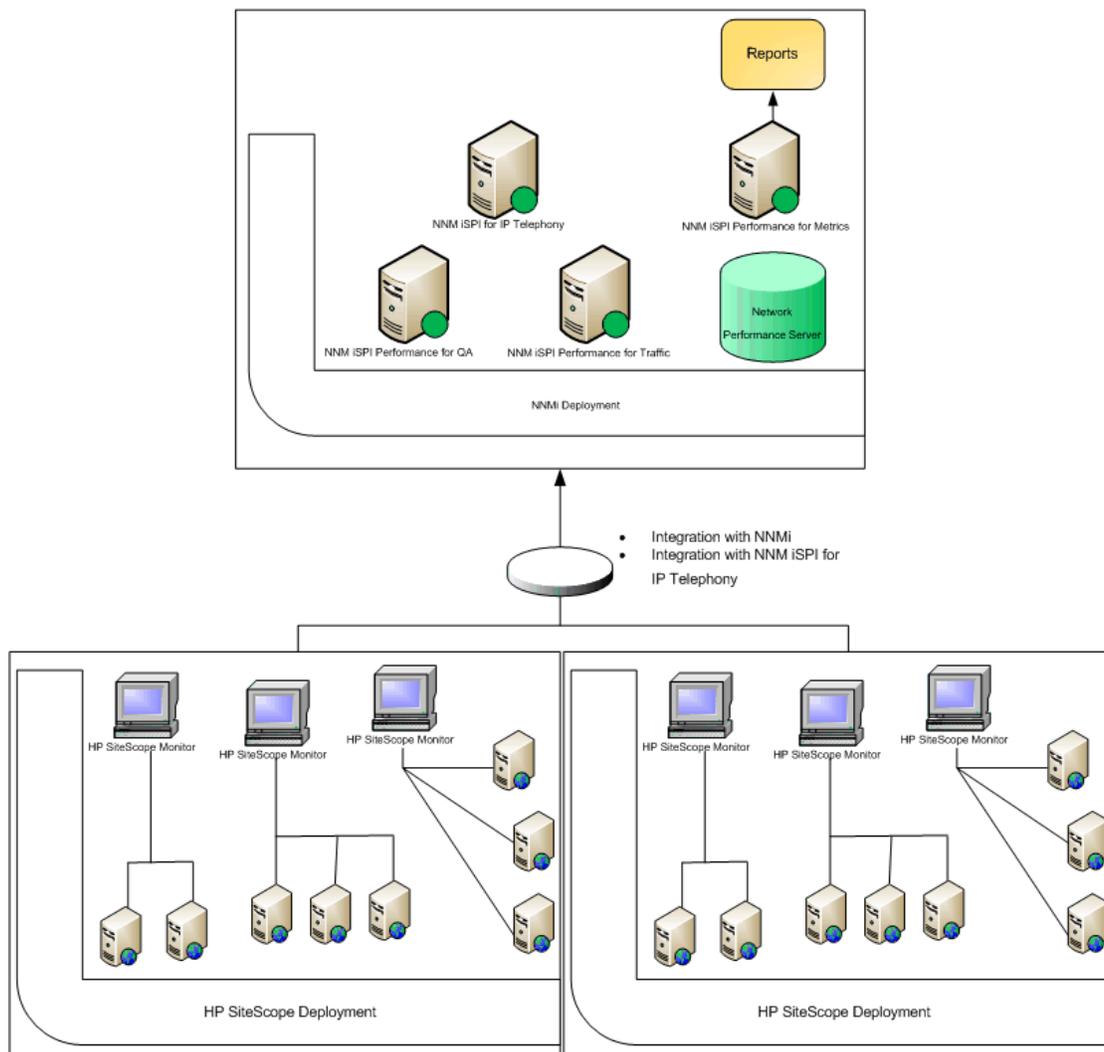
This deployment scenario consists of the following components:

- Single HP SiteScope server managing less than 1500 Microsoft Lync Servers.
- Single NNMi management server and the following NNM iSPI products:
 - NNM iSPI for IP Telephony
 - NNM iSPI Performance for Metrics
 - NNM iSPI Performance for QA
 - NNM iSPI Performance for Traffic
- Single Network Performance Server

Scenario 2: Multiple HP SiteScope Server - Single NNMi Management Server - Single Network Performance Server

We recommend you to use this deployment scenario if you need to manage 1500 to 5000 Microsoft Lync Servers.

The following figure displays a sample HP UCC Standard Edition deployment, highlighting the integrated applications:



This deployment scenario consists of the following components:

- Multiple HP SiteScope servers managing 1500 to 5000 Microsoft Lync Servers.

The HP SiteScope servers must not manage overlapping nodes. That is, the HP SiteScope monitors must monitor different sets of managed nodes for each server.

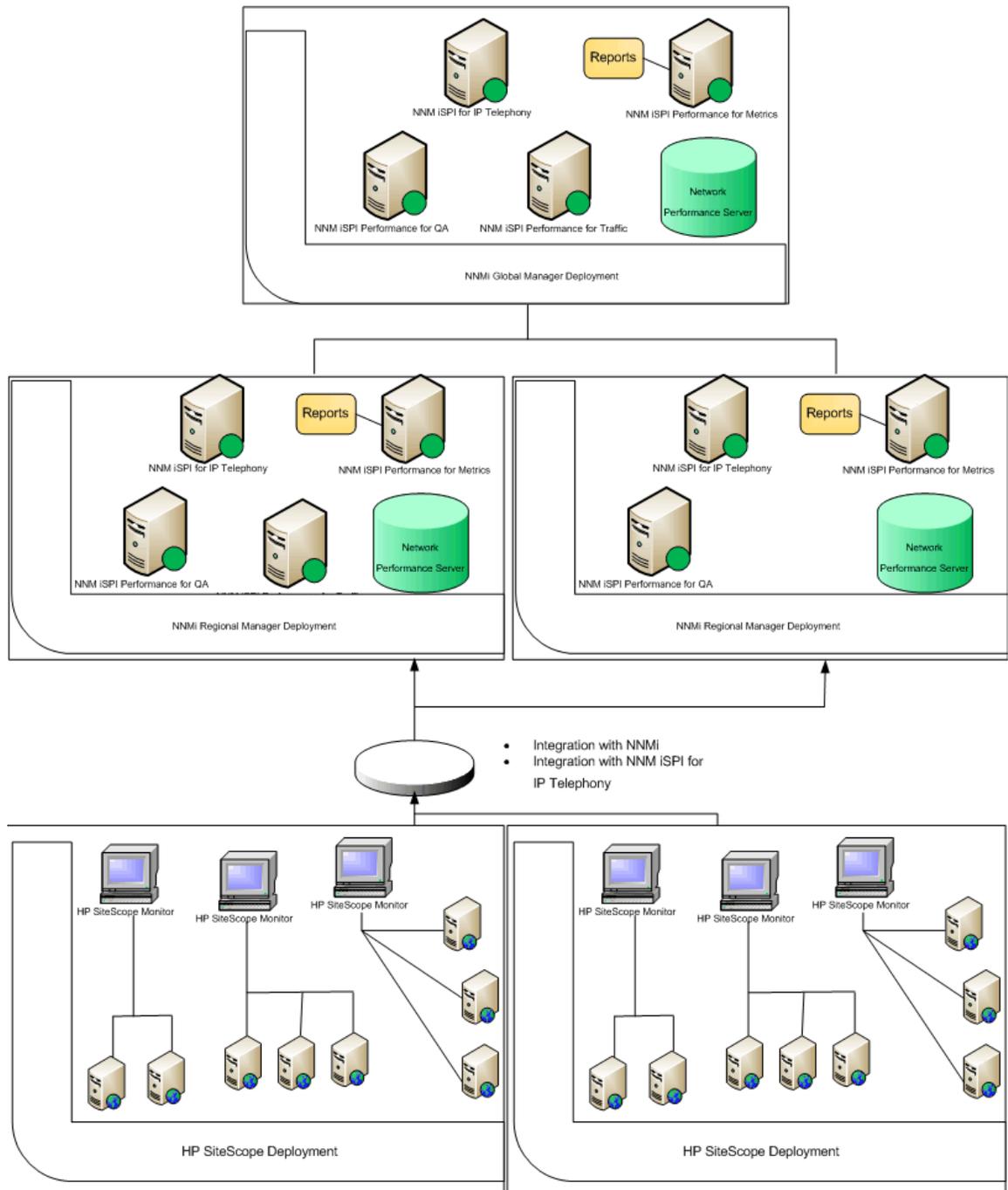
- Single NNMi management server and the following NNMI iSPI products:
 - NNMI iSPI for IP Telephony

- NNM iSPI Performance for Metrics
- NNM iSPI Performance for QA
- NNM iSPI Performance for Traffic
- Single Network Performance Server

Scenario 3: Multiple HP SiteScope Servers - Globally Deployed NNMi - Multiple Network Performance Servers

We recommend you to use this deployment scenario if you need to manage more than 5000 Microsoft Lync Servers.

The following figure displays a sample HP UCC Standard Edition deployment, highlighting the integrated applications:



This deployment scenario consists of the following components:

- Multiple HP SiteScope server managing more than 5000 Microsoft Lync Servers.

The HP SiteScope servers must not manage overlapping nodes. That is, the HP SiteScope monitors must monitor different sets of managed nodes for each server.

- Each HP SiteScope server should be integrated with an NNMi Regional Manager.

- Multiple NNMi management server using Global Network Management. Multiple regional managers report to the global manager, which in turn displays the consolidated events and reports. These reports include the Microsoft Lync Reports and Microsoft Exchange Server Reports, generated using the NNM iSPI for IP Telephony - HP SiteScope integration.

The global manager may not have an integrated HP SiteScope server.

Each NNMi management server consists following NNM iSPI products:

- NNM iSPI for IP Telephony
- NNM iSPI Performance for Metrics
- NNM iSPI Performance for QA
- NNM iSPI Performance for Traffic

- Network Performance Server



Sitescope System Metric reports generated on the regional managers are not consolidated on the global manager. Each NNMi management server (global manager or regional manager) displays these reports using its own HP NNMi - HP SiteScope integration.

A Use Cases

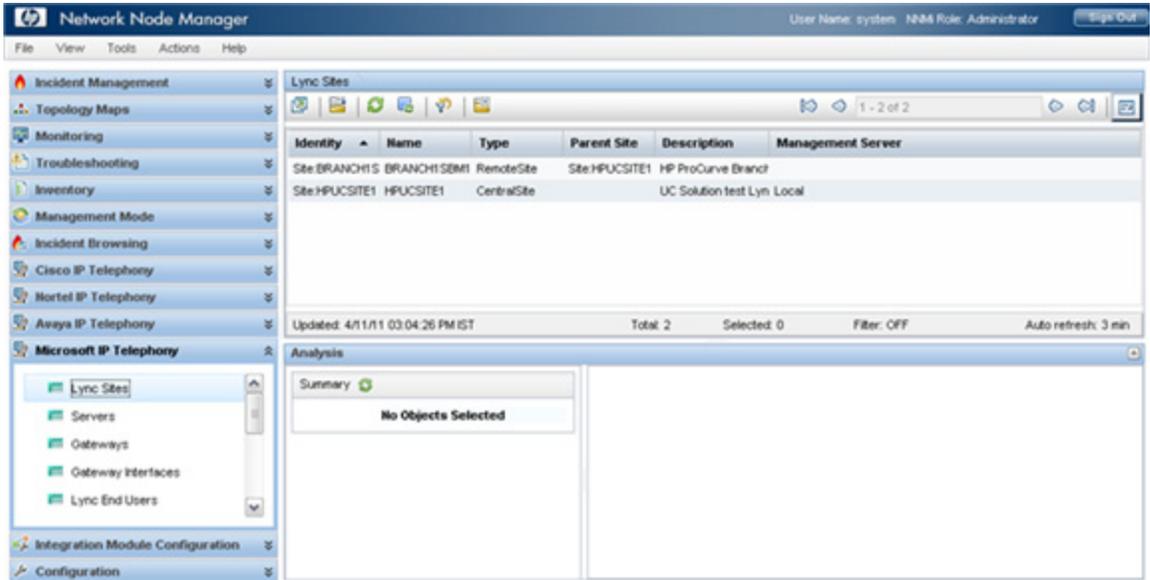
Use Case 1: Visualizing Enterprise Lync Topology

Summary	This use case represents a scenario that monitors different aspects of the Microsoft Lync servers managed by HP UCC Standard Edition.
Application	HP Unified Communications and Collaboration Management Solution Standard Edition
Actors	<ul style="list-style-type: none">• NNMi Network Administrators• SiteScope Administrators• SiteScope/NNMi End Users
Pre-Condition	<ul style="list-style-type: none">• The following components of HP UCC Standard Edition are installed:<ul style="list-style-type: none">— HP SiteScope— NNMi— NNM iSPI Performance for Metrics— NNM iSPI for IP Telephony— NNM iSPI Performance for QA— NNM iSPI Performance for Traffic• Network Performance Server (NPS) contains performance data for at least past 24 hours.
Assumptions for the Scenario	<ul style="list-style-type: none">• We have two Microsoft Lync server sites; one central site and one branch site.

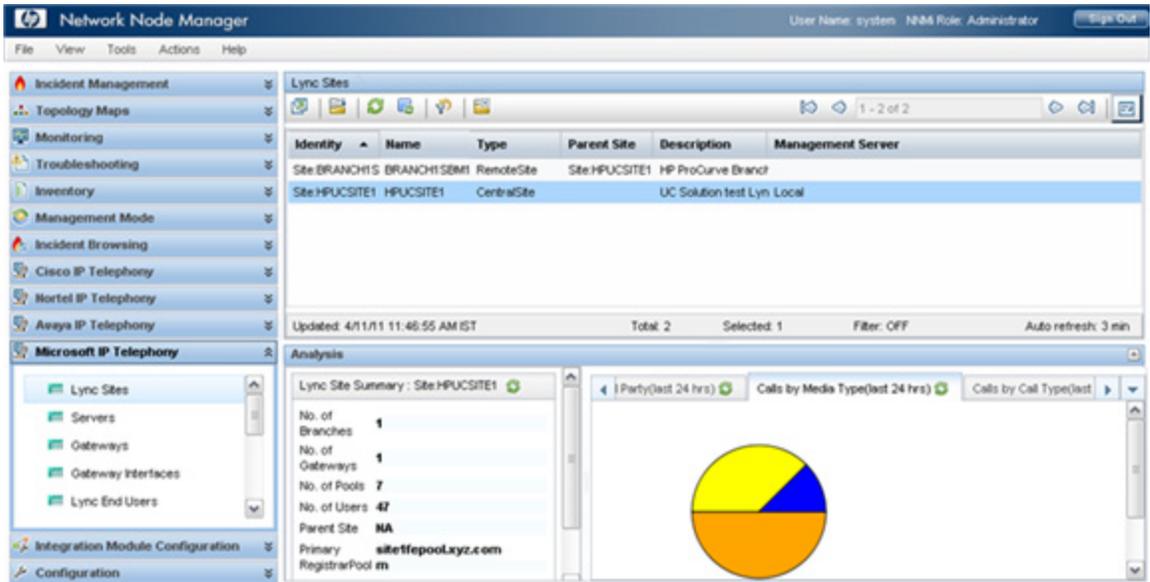
Use Case Process

- 1 Log on to NNMi console using your username and password.
- 2 Select **Microsoft IP Telephony** workspace.

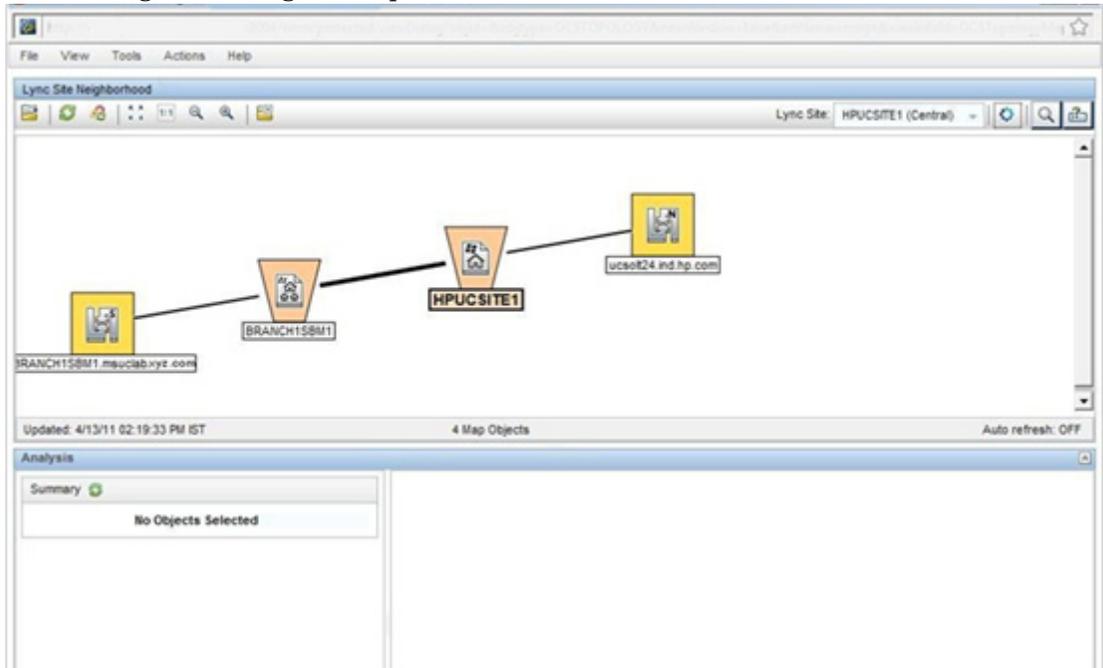
3 Select **Lync Sites** to view the list of central and branch Microsoft Lync server sites.



4 Select a site to view the details of the site.



- 5 Select Microsoft IP Telephony -> Lync Site Neighborhood and display how it is connected to its neighbors using the map view.



- View health and performance reports of various Microsoft Lync server components using NNM iSPI Performance for Metrics.

The screenshot displays the Network Node Manager (NNM) interface. The top section shows a list of Lync Sites with columns for Identity, Name, Type, Parent Site, Description, and Management Server. A context menu is open over the 'Site:HPUCSITE1' entry, showing options like 'Select All', 'Sort', 'Filter', 'Export To CSV', 'IP Telephony', and 'UCC Applications'. The 'UCC Applications' menu is expanded, showing 'Microsoft Lync' and 'Microsoft Exchange' sub-menus. The 'Microsoft Lync' sub-menu is further expanded, listing server roles: 'A/V Conferencing Server', 'Archiving Server', 'Director Server', 'Edge Server', 'Frontend Server', 'Mediation Server', 'Monitoring Server', and 'Registrar Server'. The 'Monitoring Server' option is highlighted.

Below the site list, the 'Analysis' section provides a 'Lync Site Summary' for 'Site:HPUCSITE1'. The summary includes the following statistics:

- No. of Branches: 1
- No. of Gateways: 1
- No. of Pools: 7
- No. of Users: 47
- Parent Site: NA
- Primary RegistrarPool: m

The bottom section of the screenshot shows the 'NNM iSPI Performance' window for 'Microsoft Lync - Monitoring_Server - Chart Detail'. The chart displays performance metrics over time (Apr 11, 2011 10:50:00 AM to Apr 11, 2011 11:50:00 AM). The Y-axis represents the metric value (0.00 to 6.00). The X-axis represents time in 5-minute increments. The chart shows two metrics: 'Metric in Y1 (solid line)' and 'Metric in Y2 (dashed line)'. The legend indicates that the solid line represents 'Queue Latency (ms) (avg)' and the dashed line represents 'Fatal SQL Errors (sum)'. The chart shows a significant increase in the solid line metric starting around 11:10 AM, reaching a peak of approximately 6.00 at 11:40 AM. The dashed line metric remains near zero throughout the period.



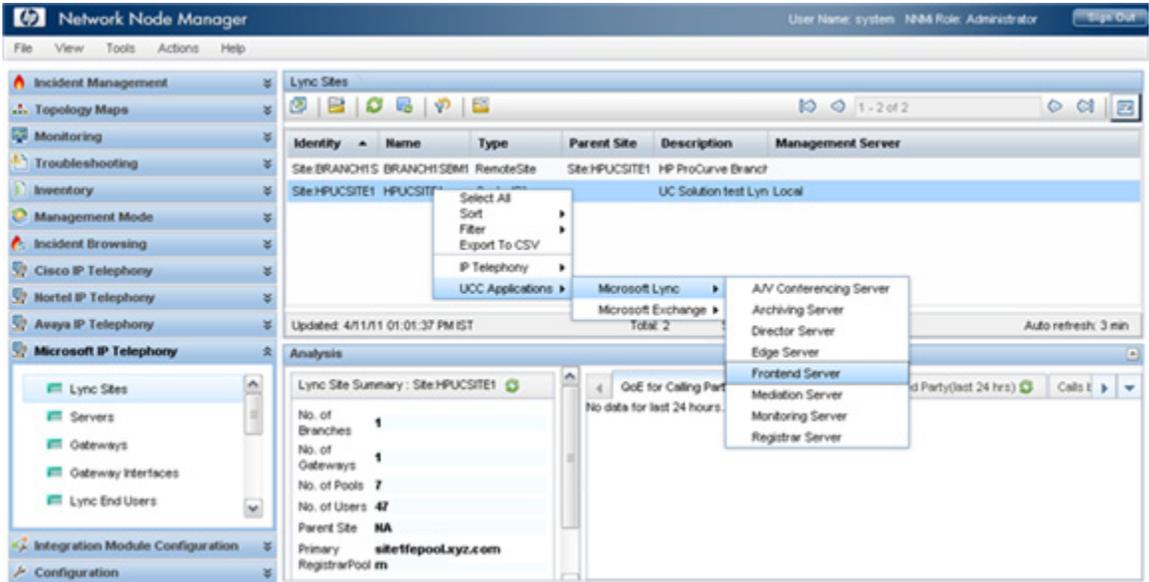
Use Case 2: Monitoring Application Performance

Summary	This use case represents a scenario that monitors the performance of the available Microsoft Lync Frontend servers.
Application	HP Unified Communications and Collaboration Management Solution Standard Edition
Actors	<ul style="list-style-type: none">• NNMi Network Administrators• SiteScope Administrators• SiteScope/NNMi End Users
Pre-Condition	<ul style="list-style-type: none">• The following components of HP UCC Standard Edition are installed:<ul style="list-style-type: none">— HP SiteScope— NNMi— NNM iSPI Performance for Metrics— NNM iSPI for IP Telephony— NNM iSPI Performance for QA— NNM iSPI Performance for Traffic• Network Performance Server (NPS) contains performance data for at least past 24 hours.
Assumptions for the Scenario	<ul style="list-style-type: none">• The Frontend Server component performance of the Microsoft Lync Server site HPUCSITE1 is degraded.• We have two Microsoft Lync server sites; one central site and one branch site.

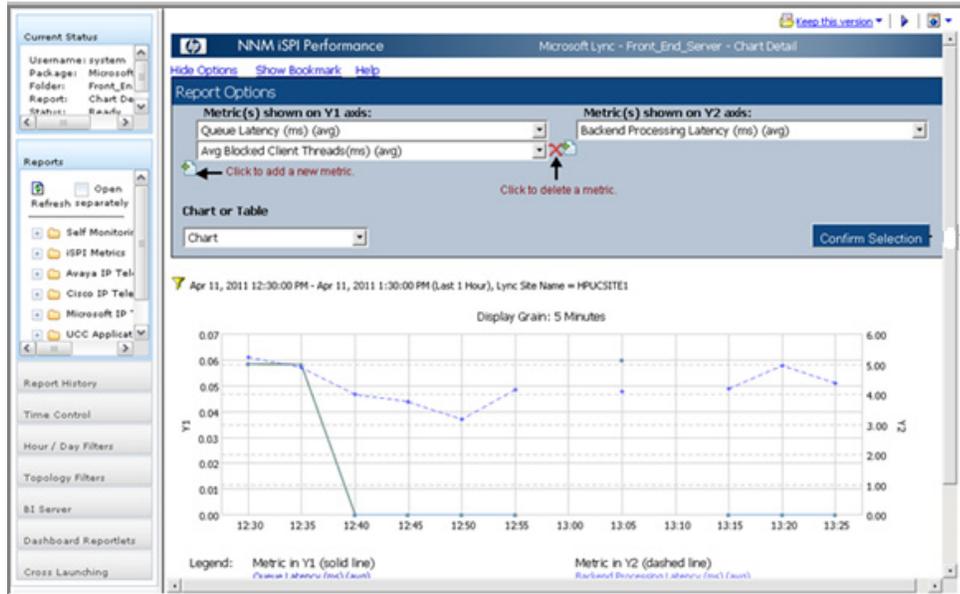
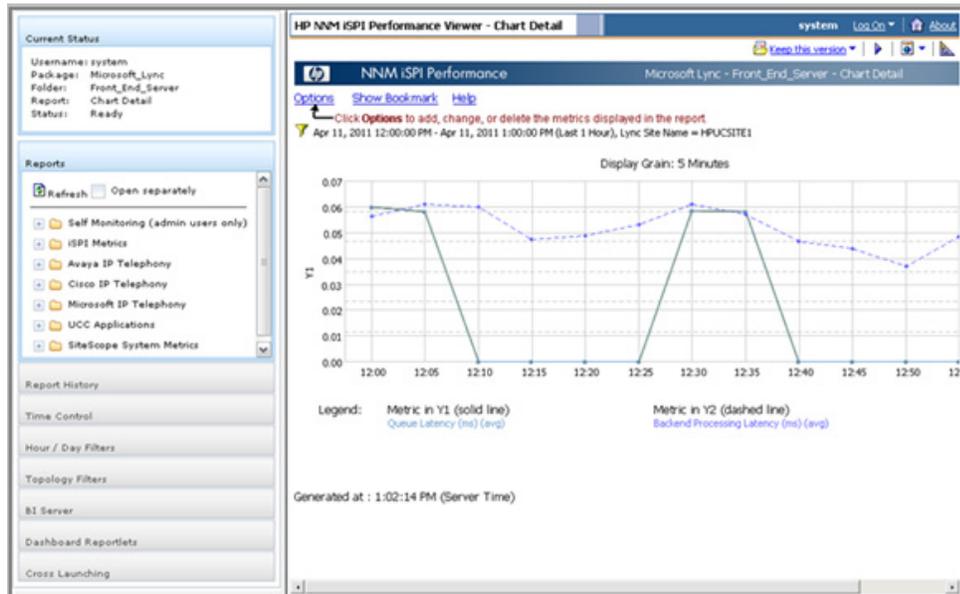
Use Case Process

- 1 Log on to NNMi console using your username and password.
- 2 Select **Microsoft IP Telephony** workspace.
- 3 Select **Lync Sites** to view the list of central and branch Microsoft Lync server sites

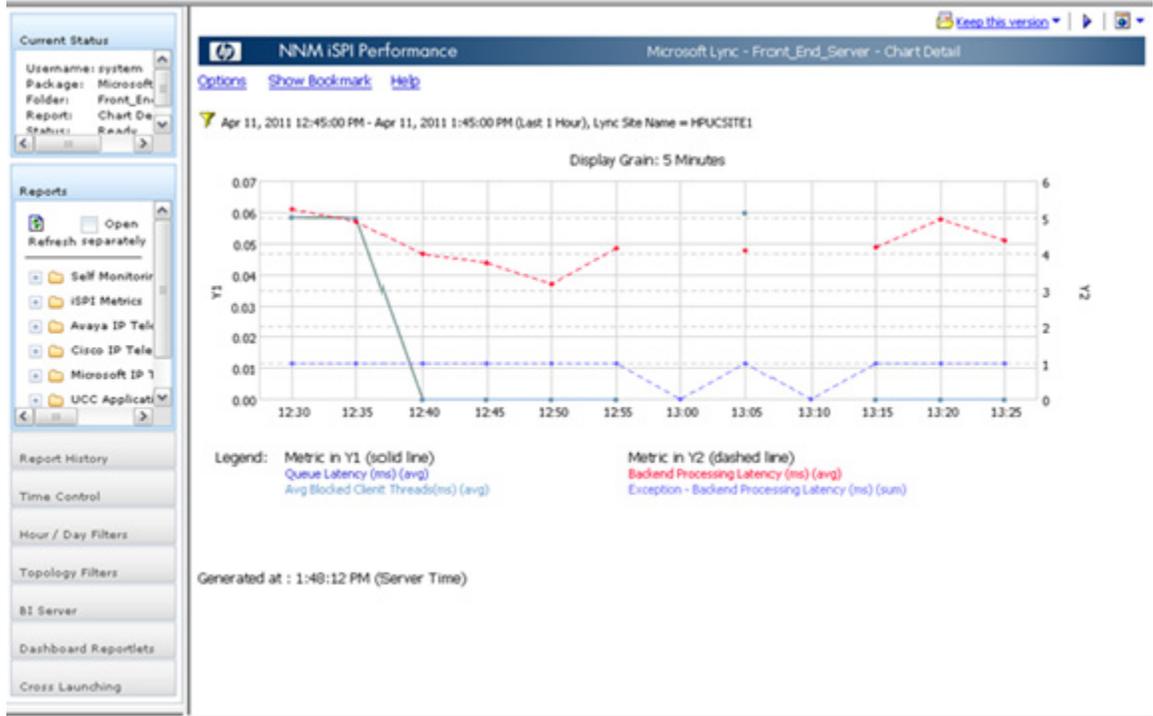
4 Select a site and select **UCC Applications > Microsoft Lync > Frontend Server**.



NNM iSPI Performance for Metrics displays the report with the default metrics. You can select different metrics or select a different report to view the health and performance of the available Frontend servers



- Click **Confirm Selection** to display the report with new metrics.



- Check the SNMP traps received from HP SiteScope for site HPUCSITE1. To view the traps received, select the site and select **Trap Analytics** from the Tools menu.

Total Traps Received (by SNMP OID) at 1:26 PM - Mozilla Firefox

Total Traps Received (by SNMP OID) at 1:26 PM

This report displays the total number of traps received since NNM was last started.
 Note: NNM discards traps that do not have an associated Incident Configuration or whose Incident Configuration is Disabled.

Total trap Count since 4/12/11 11:26 AM (2 hours ago): 5

Graph incoming traps for these top 1 sources.

Refresh the current view, or view another Trap Analytics Report

- Recent Top Trap Rate (by Node)
- Recent Top Trap Rate (by SNMP OID)
- Total Traps Received (by Node)

Count	Graph	Incident Configuration	First Trap Time	Last Trap Time	Trap OID (Numeric)	Trap OID (Text)
5		SiteScopeAlertEvent2	4/12/11 11:26 AM	4/12/11 12:56 PM 1.5 hours	.1.3.6.1.4.1.11.15.1.4.1	iso.org.dod.internet.private.enterprises.vya.bom.sitescope.trap.siteScopeAlertEvent

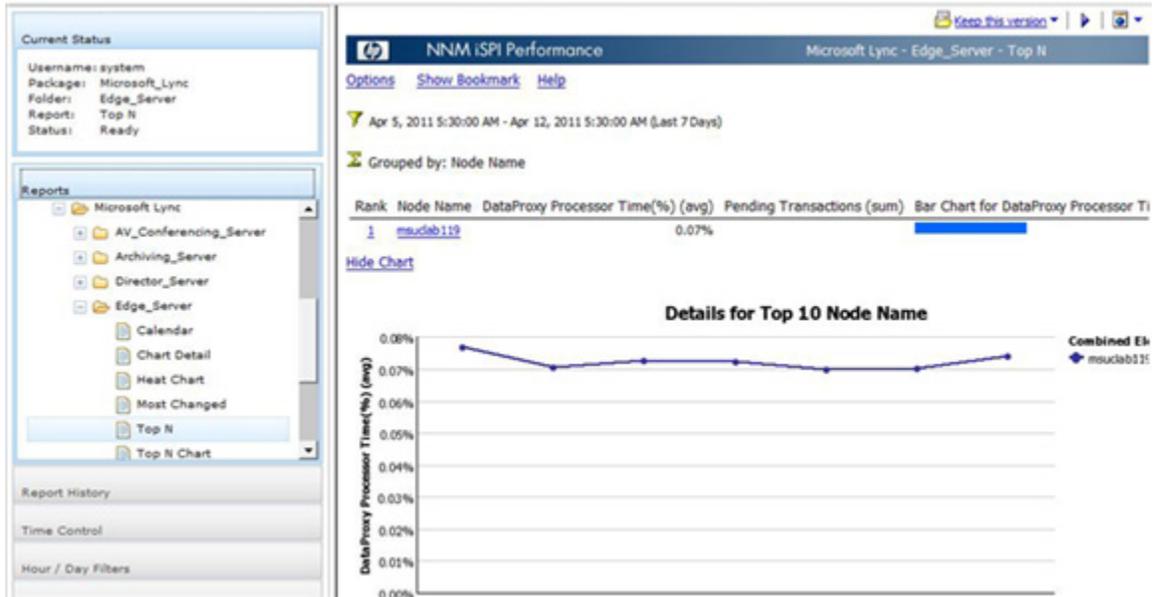
Use Case 3: Monitoring Edge Server Health and Performance

Summary	This use case represents a scenario where the operator needs to monitor the performance of the available Microsoft Lync Edge Servers.
Application	HP Unified Communications and Collaboration Management Solution Standard Edition
Actors	<ul style="list-style-type: none">• SiteScope/NNMi End Users
Pre-Condition	<ul style="list-style-type: none">• The following components of HP UCC Standard Edition are installed:<ul style="list-style-type: none">— HP SiteScope— NNMi— NNM iSPI Performance for Metrics— NNM iSPI for IP Telephony— NNM iSPI Performance for QA— NNM iSPI Performance for Traffic• Network Performance Server (NPS) contains performance data for at least past 24 hours.
Assumptions for the Scenario	<ul style="list-style-type: none">• Monitor the Edge Server component of the Microsoft Lync Server site HPUCSITE1.• We have two Microsoft Lync server sites; one central site and one branch site.

Use Case Process

- 1 Log on to NNMi console using your username and password.
- 2 Select **Microsoft IP Telephony** workspace.
- 3 Select the site HPUCSITE1, right click on the site name, and select **UCC Applications >Microsoft Lync > Edge Server**.

- 4 NNM iSPI Performance for Metrics displays the report with the default metrics. You can select different metrics or select a different report to view the health and performance of the available Edge Servers.



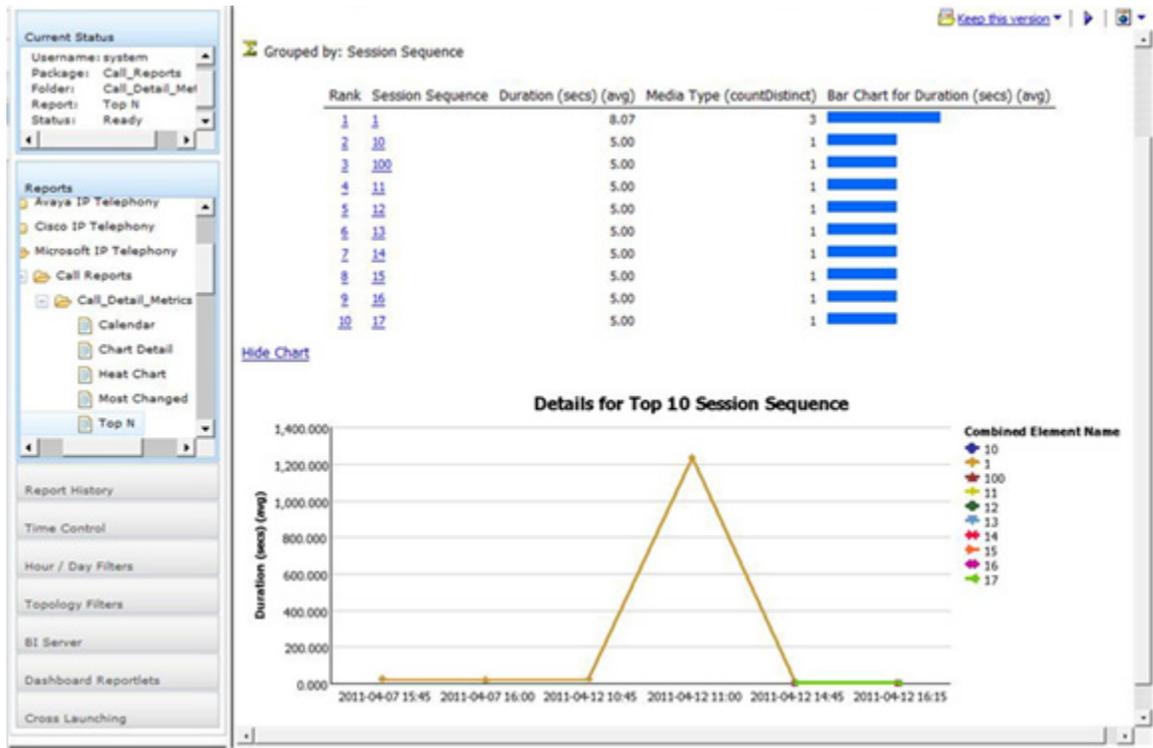
Use Case 4: Analyzing Call Quality, Call Volume, and Traffic on the Switch

Summary	This use case represents a scenario analyzes the call quality and traffic for the selected
Application	HP Unified Communications and Collaboration Management Solution Standard Edition
Actors	<ul style="list-style-type: none">• SiteScope/NNMi End Users
Pre-Condition	<ul style="list-style-type: none">• The following components of HP UCC Standard Edition are installed:<ul style="list-style-type: none">— HP SiteScope— NNMi— NNM iSPI Performance for Metrics— NNM iSPI for IP Telephony— NNM iSPI Performance for QA— NNM iSPI Performance for Traffic• Network Performance Server (NPS) contains performance data for at least past 24 hours.
Assumptions for the Scenario	<ul style="list-style-type: none">• We have two Microsoft Lync server sites; one central site and one branch site.

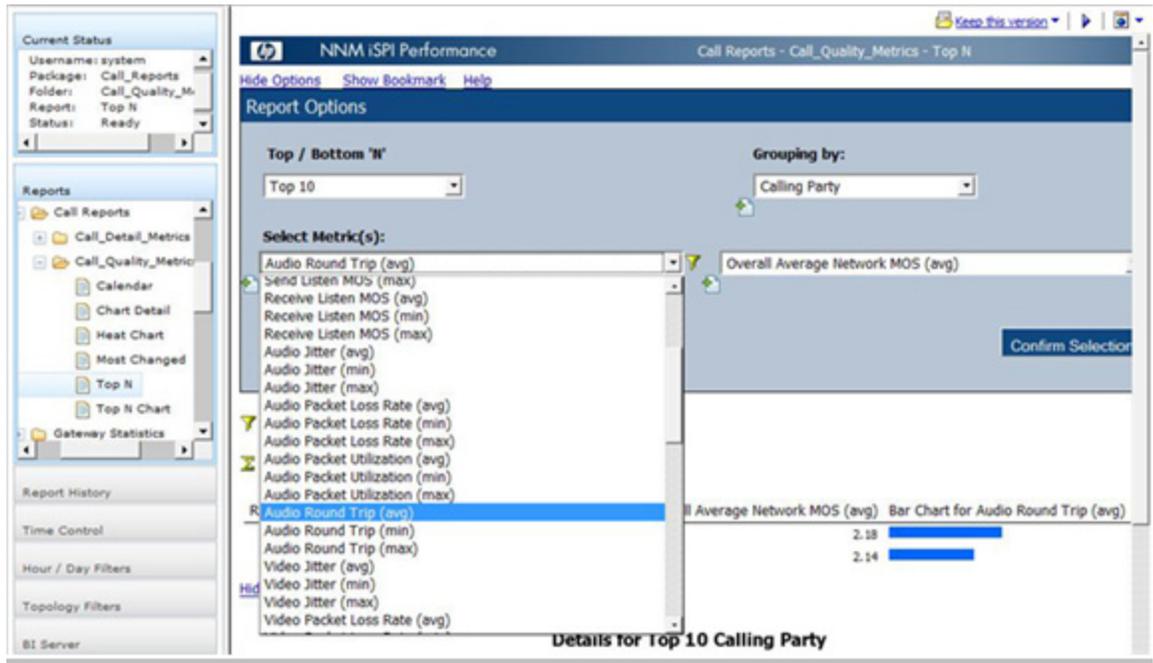
Use Case Process

- 1 Log on to NNMi console using your username and password.
- 2 Select **Microsoft IP Telephony** workspace.

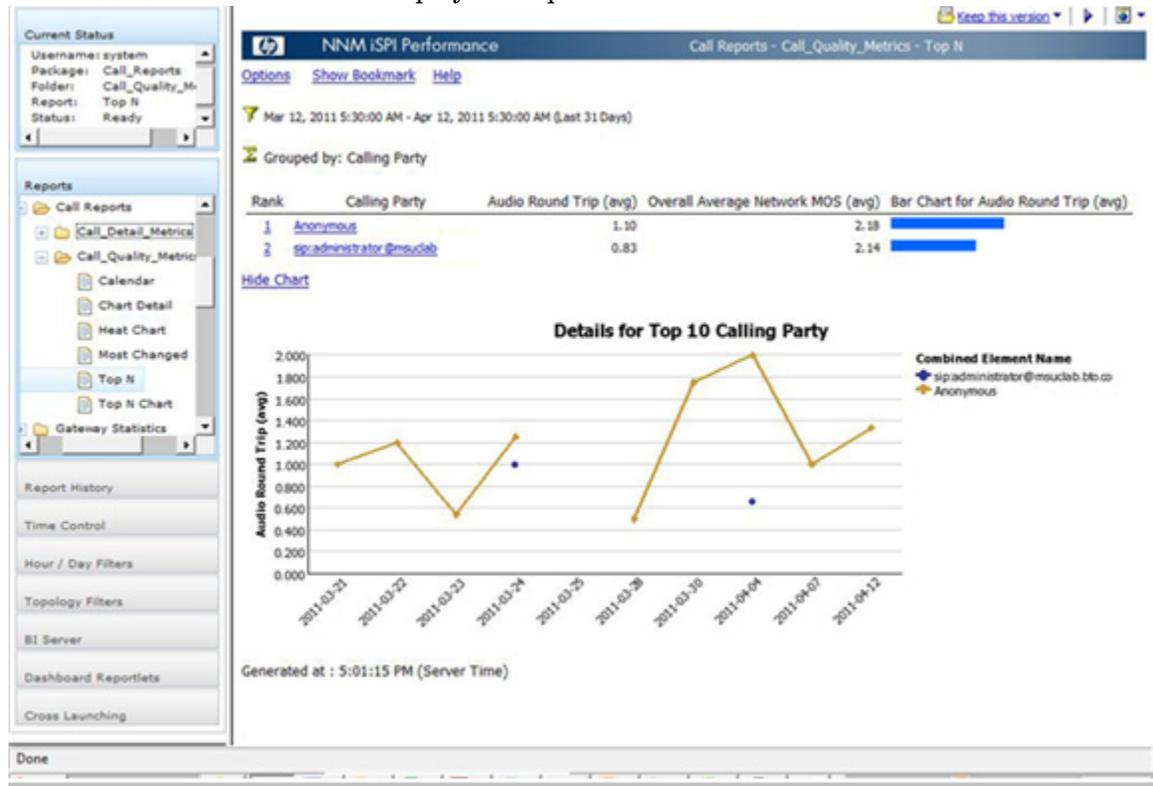
- 3 Select the site HPUCSITE1 and then select **Actions > IP Telephony > Call Details** to launch the Call Reports displaying call durations grouped by Calling Party



- 4 Select Top N report from Call Reports > Call_Quality_Metrics folder under Reports tab.
- 5 NNM iSPI Performance for Metrics displays the report using the default set of metrics. Select different metrics to display the call quality based on the average Audio Round Trip Time metric.



6 Select **Confirm Selection** to display the report.



7 Select the **Traffic Analysis** workspace > **Traffic Reporting Nodes** to display the top applications

