

NORTEL

Nortel Multimedia Conferencing

Fundamentals

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New in this release

The following sections detail what is new in *Nortel Multimedia Conferencing* (NN44460-100) for Release 6.0.

Features

See the following sections for information about feature changes:

- Operations, administration, and maintenance using Element Manager (page 9)
- NMC 6.0 Dashboard (page 10)
- Video conferencing with supported SIP clients (page 10)
- Chairperson instant message notification (page 10)
- Web-based subscriber management (page 10)
- Cluster-wide reporting (page 11)
- Continuous bridge (page 11)
- Adding multiple subscribers (page 12)
- Entry/Exit Notifications (page 12)

Operations, administration, and maintenance using Element Manager

Nortel Multimedia Conferencing (NMC) 6.0 provides secure, web-based operations, administration, and maintenance using Element Manager on the Media Applications Server (MAS) 6.1 platform. Element Manager serves as a common management utility for configuring and managing the MAS and the products (such as NMC) that run on it. For detailed information about Element Manager, see *Nortel Media Application Server and Interactive Communications Portal Fundamentals* (NN44471-101). For more information about Element Manager, see the following sections:

- Planning and engineering overview (page 17)
- Media Application Server configuration (page 71)

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NMC 6.0 Dashboard

NMC 6.0 provides a web-based dashboard to view active conference sessions and view cluster-wide conference activity. For more information about the NMC Dashboard, see the following sections:

- Media Application Server configuration (page 71)
- Nortel Multimedia Conferencing 6.0 Dashboard and Subscriber Management (page 161)

Video conferencing with supported SIP clients

NMC 6.0 supports video conferencing with the Nortel SMC 3456 and Nortel LG 1535 SIP client. For more information, see the following section:

- Planning and engineering overview (page 17)

Chairperson instant message notification

NMC 6.0 provides instant message notification for chairpersons. When a participant joins or leaves a conference, an instant message notification with that participant's information is sent to the SIP address registered on the chairperson's profile.

If this feature is enabled, the chairperson receives IMs only if IMs are also enabled for their individual profiles. If the feature is disabled, IMs are not issued regardless of the subscriber profile setting. For a chairperson to receive IMs, an outbound route must be configured on the MAS for the domain name of the chairperson's preconfigured SIP address.

Customers using CS 2100 in conjunction with the Nortel MCS PC Client may use this feature. It cannot currently be supported for other SIP clients connected to CS 2100.

Routing of instant messages via CS 1000 is not supported for any currently supported release of CS 1000, and hence this feature cannot be utilized in conjunction with CS 1000 at the present time.

For more information about instant message notification, see the following sections:

- NMC deployment in a CS 1000 network (page 20)
- Media Application Server configuration (page 71)

Web-based subscriber management

NMC 6.0 provides a web-based subscriber management feature for viewing, creating, updating, and deleting account information. You can access the subscriber management feature from a remote Web browser and multiple users can perform subscriber management tasks simultaneously.

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You can use the subscriber management tool to search for existing subscribers. You can search for subscribers by the subscriber first name, last name, access code, subscriber ID, SIP user ID, or status. Search results are displayed in the subscriber management tool and can be sorted by any column. You can change the column order by dragging and dropping the column headings.

For more information about subscriber management, see the following sections:

- Media Application Server configuration (page 71)
- Nortel Multimedia Conferencing administration (page 111)
- Nortel Multimedia Conferencing 6.0 Dashboard and Subscriber Management (page 161)

Cluster-wide reporting

Using the Session Data Record (SDR) replication features of the MAS 6.1 platform, cluster-wide reporting of conference activity is available. If SDR replication is enabled in Element Manager, SDRs from all nodes in the NMC cluster are replicated to the master node. NMC reports generated from the master node reflect the replicated data from all other nodes in the cluster and provides a cluster-wide view of conference activity.

The MAS 6.1 platform also incorporates the Jasper Reporting product that enables NMC report scheduling for simple recurring execution or for a specific calendar period. This feature improves daily and weekly reporting options.

For more information about reporting, see the following section:

- Nortel Multimedia Conferencing administration (page 111)

Continuous bridge

NMC 6.0 provides an option called Ignore Bridge Time Limit on the subscriber profile. When this option is enabled for a chairperson profile, conferences started by the chairperson do not end after the designated time limit. The conference continues as normal until ended by the chairperson or until all parties disconnect.

If a conference is started and the chairperson's profile has Ignore Bridge Time Limit enabled, the conference is subject to silent conference teardown parameters that are configured on the MAS. You can disable the silent conference teardown feature on the MAS by setting the Silent Conference Teardown Delay parameter to 0. This option is located in Element Manager under System Configuration > Media > General Settings.

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For more information, see the following sections:

- Media Application Server configuration (page 71)
- Nortel Multimedia Conferencing 6.0 Dashboard and Subscriber Management (page 161)

Adding multiple subscribers

NMC 6.0 provides an optional command with the bulk import tool that you can use to add multiple NMC 5.0 subscribers in bulk from a CSV file of subscriber information. You must enter the following command at a command prompt:

```
NMCsubImport -v <version number> <filename.csv>
```

For more information, see the following section:

- Adding multiple NMC 5.0 subscribers in bulk (page 107)

Entry/Exit Notifications

Before entering a conference bridge, participants can record their name. The recorded name is played (instead of entry and exit tones) when the participant enters and exits the conference bridge. The name is announced as *<name> joined* when the participant joins a conference and *<name> left* when the participant leaves a conference. A chairperson subscriber profile has the following options for entry and exit notifications:

- None–entry and exit notifications are not played when participants enter or leave the conference
- Tones–a tone is played when participants enter or leave the conference
- Names–the participants recorded name is played when participants enter or leave the conference

The option for a chairperson to select the Names option as their Entry/Exit Notification setting using the TUI command (53) can be enabled or disabled globally. In the Element Manager Conferencing Configuration, the Entry/Exit Notification item has the following options:

- None or Tones only
- None, Tones or Names

If Name Announcements is set to None, Tones or Names, a chairperson can toggle between any of these three options using the TUI command (53) when in a conference, and the setting selected remains in effect between conferences. If Name Announcements is set to None or Tones only, a chairperson can only toggle between tone-based notification and no notification. The Names option can be assigned to a subscriber's profile by a

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user administrator using the subscriber management tool if required. This allows the feature to be made available only to specific users if required. For more information, see the following sections:

- Media Application Server configuration (page 71)
- Nortel Multimedia Conferencing configuration (page 99)

Voicemail Detection

NMC 6 can be configured to detect voicemail systems when dialling out to avoid adding an answering machine to the conference. Without this feature a voicemail system can be added to a conference and will record the conference until it ends or until the maximum voicemail message limit is reached

If voicemail detection is enabled, NMC will not immediately add a new participant after a dial-out attempt is answered. Instead, it will attempt to detect if the remote party is a voicemail system. If it decides that this is the case, the call will be dropped and the chairperson will be notified of the outcome via a voice prompt and an instant message (if these are enabled).

A new application configuration property 'Outbound Call Treatment' controls how NMC handles outgoing calls. The two available options are:

- Detect Voicemail and Drop - voicemail detection is enabled and any outbound calls that the system detects a voicemail system on will be dropped.
- None - no special handling of outbound calls is applied.

  Note: No Voicemail detection is used on calls to the operator, regardless of the value of the 'Outbound Call Treatment' setting.

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Introduction

This document describes the installation, configuration, and administration procedures for Nortel Multimedia Conferencing 6.0, as well as how to use the conferencing features.

Prerequisites

- You reviewed *Nortel Media Application Server and Interactive Communications Portal Fundamentals* (NN44471-101).
- You reviewed *Nortel Media Application Server and Interactive Communications Portal Installation* (NN44471-300).
- You reviewed *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).
- You set up network connectivity.
- You installed the MAS software.

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- Planning and engineering overview (page 17)
- Platform Vendor Independence requirements (page 31)
- Installation and configuration overview (page 41)
- Nortel Multimedia Conferencing installation (page 49)
- License keycodes (page 59)
- CS 1000 and CS 1000/Converged Office configuration (page 63)
- CS 2100 and CS 2100/Converged Office configuration (page 67)
- Media Application Server configuration (page 71)
- Nortel Multimedia Conferencing configuration (page 99)
- Nortel Multimedia Conferencing administration (page 111)
- Nortel Multimedia Conferencing 5.0 Upgrade (page 129)
- MAS A, idle CStore MAS, and NMC upgrade (page 131)
- MAS B and NMC upgrade and server backup (page 143)

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- Nortel Multimedia Conferencing 6.0 upgrade (page 157)
- Nortel Multimedia Conferencing 6.0 Dashboard and Subscriber Management (page 161)
- Common configuration problems (page 169)
- Terminology (page 181)

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Planning and engineering overview

This module explains the planning and engineering requirements for Nortel Multimedia Conferencing (NMC) 6.0.

Navigation

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- Supported network configurations (page 19)
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- Supported clients on CS 2100 (page 25)
- NMC 6.0 limitations (page 26)
- Licensing (page 27)
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Supported hardware and software platforms

Attention: You must install MAS 6.1 which includes Feature Pack 1.

The Nortel Multimedia Conferencing 6.0 application is hosted on the Media Application Server (MAS) 6.1 platform. The MAS uses commercial off-the-shelf (COTS) servers. Nortel can supply the following COTS servers for MAS:

- IBM x3550 servers
- HP DL360-G5 servers

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If you are selecting a hardware option that is not supplied by Nortel, the following hardware specifications must be met.

Item	NMC 6.0	
	Minimum	Recommended
Number of CPU cores	2	2
Processor speed	1200 MHz	1800 MHz
L2 Cache size	-	-
Memory	2 GB	4GB
Number of network connections	1	1
Modem	-	-
Free disk space	3 GB	3GB

Note: As part of the NMC 6.0 installation process, a PVI (Platform Vendor Independence) program will run to determine if the hardware system being used meets the minimum requirements of the software. If this tool fails the installation will not complete.

For more information about the MAS hardware and minimum specifications, see *Nortel Media Application Server Planning and Engineering* (NN44471-201).

NMC 6.0 and MAS 6.1 require Microsoft Windows 2003 Server or Microsoft Windows 2003 Server R2 with Service Pack 2 or higher. Microsoft Windows 2008 Server is not supported. The MAS is also supported on the following non-English language versions of Microsoft Windows:

- French
- German
- Japanese
- Simplified Chinese

Microsoft Silverlight 2.0

NMC 6.0 requires Microsoft Silverlight 2.0 to support the Web-based subscriber management feature, the dashboard, and active conference session features. The Silverlight Plugin is delivered by Microsoft and is available on the Microsoft Web site. When you first access the Subscriber Manager page, your system automatically attempts to downloaded and install

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the Silverlight plugin from the Microsoft Web site. Silverlight is supported for the following Web browsers and the Microsoft Windows Server 2003 operating system:

- Internet Explorer 6, and 7
- Firefox 1.5, 2, and 3

If you cannot access the Microsoft Web site, Microsoft Silverlight is included with the NMC distribution and you can install it manually. For more information, see Installing the Microsoft Silverlight Web browser plugin locally (page 57).

Media Application Server platform

The Media Application Server (MAS) provides a robust, scalable software platform for hosting multimedia applications. The platform is designed for generic multimedia processing and is based on standard open protocols. The MAS is deployed on commercial off-the-shelf (COTS) hardware and utilizes host-based SoftDSP technology. You install the Nortel Multimedia Conferencing application on a MAS platform and configure NMC options in Element Manager.

The MAS platform uses standard Session Initiation Protocol (SIP) for signaling and Real-Time Transport Protocol (RTP)/Real-Time Control Protocol (RTCP) for transporting audio and video, enabling the MAS to interwork with a variety of clients and gateways.

Supported network configurations

Nortel Multimedia Conferencing (NMC) can be deployed with the following systems and solutions:

- SIP-enabled CS 1000, Release 5.0
- SIP-enabled CS 1000, Release 5.5
- SIP-enabled CS 1000, Release 6.0
- SIP-enabled CS 1000 Converged Office, Release 5.0, with Microsoft Office Communications Server 2007 Release 1.0
- SIP-enabled CS 1000 Converged Office, Release 5.5, with Microsoft Office Communications Server 2007 Release 1.0
- SIP-enabled CS 1000 Converged Office, Release 6.0, with Microsoft Office Communications Server 2007 Release 1.0
- CS 2100, Release SN10 and SE 11
- CS 2100 Converged Office, Release SN10 and SE 11

To deploy NMC, you require a number of SIP/port licenses on the CS 1000 or CS 2100 system, equal to the number of NMC conference licenses.

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Supported switches

NMC supports the following switches:

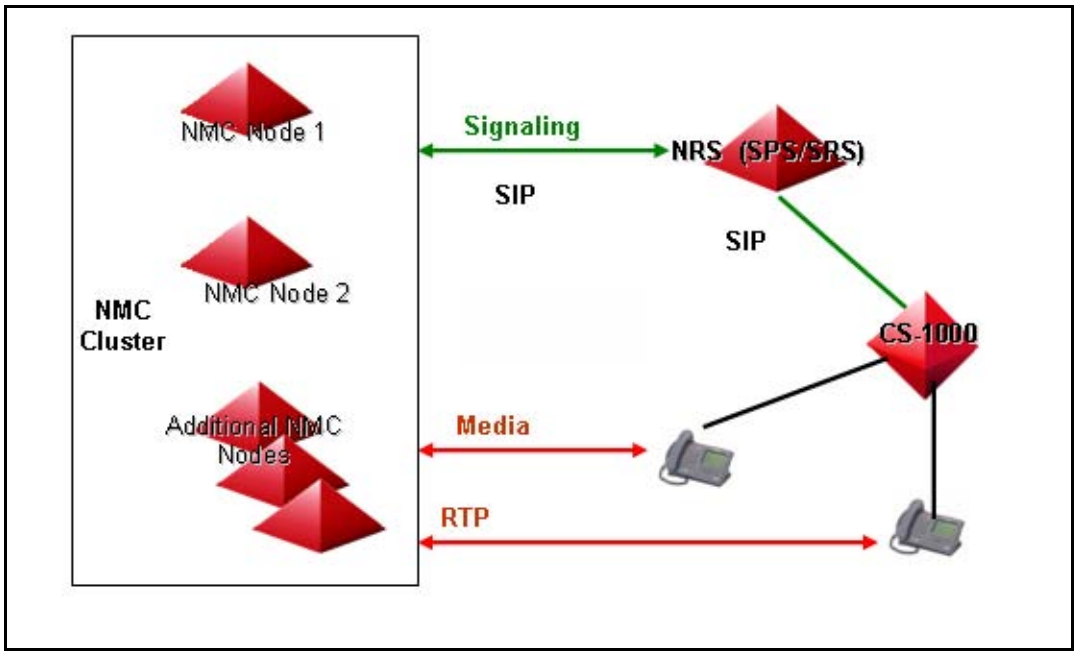
- SIP-enabled CS 1000, Release 5.0
- SIP-enabled CS 1000, Release 5.5
- SIP-enabled CS 1000, Release 6.0
- SIP-enabled CS 2100, Release SN10 and SE 11

NMC deployment in a CS 1000 network

In the CS 1000 deployment solution, the NMC servers are configured as the gateway endpoint at the CS 1000 Network Routing Service. In a multinode NMC cluster, the CS 1000 supports mechanisms for a fail-over.

The following figure shows an example of an NMC cluster in a CS 1000 deployment.

Figure 1 CS 1000 deployment

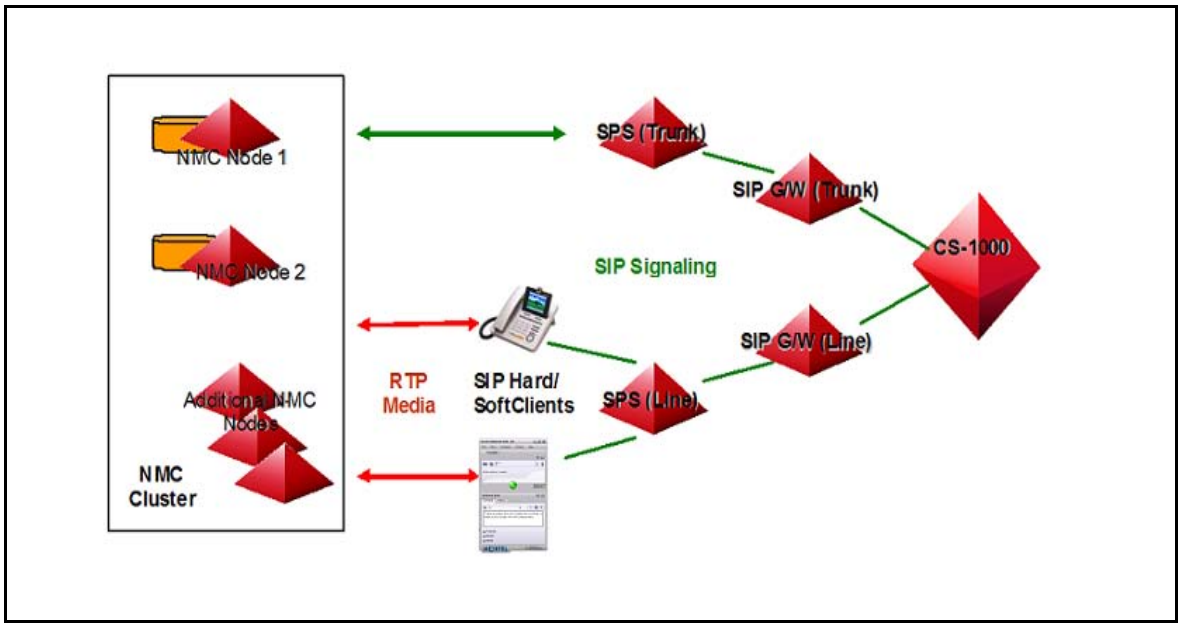


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NMC deployment in a CS 1000 network with SIP clients

The Communication Server 1000 (CS 1000) is a feature-rich hybrid Internet Protocol Private Branch Exchange (IP PBX) solution, which delivers Business Grade Telephony features and functionality to IP endpoints. The SIP Line Service fully integrates Session Initiation Protocol (SIP) endpoints in the CS 1000 system and extends the CS 1000 telephony features to the SIP clients. The following diagram shows a CS 1000 deployment with SIP clients.

Figure 2 CS 1000 deployment with SIP clients



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NMC deployment with CS 1000 Converged Office

Nortel Multimedia Conferencing 6.0 supports CS 1000 Release 5.0 and 6.0 are also supported. In a Converged Office solution, NMC 6.0 is deployed with Microsoft Office Communications Server (OCS) 2007.

NMC with OCS 2007

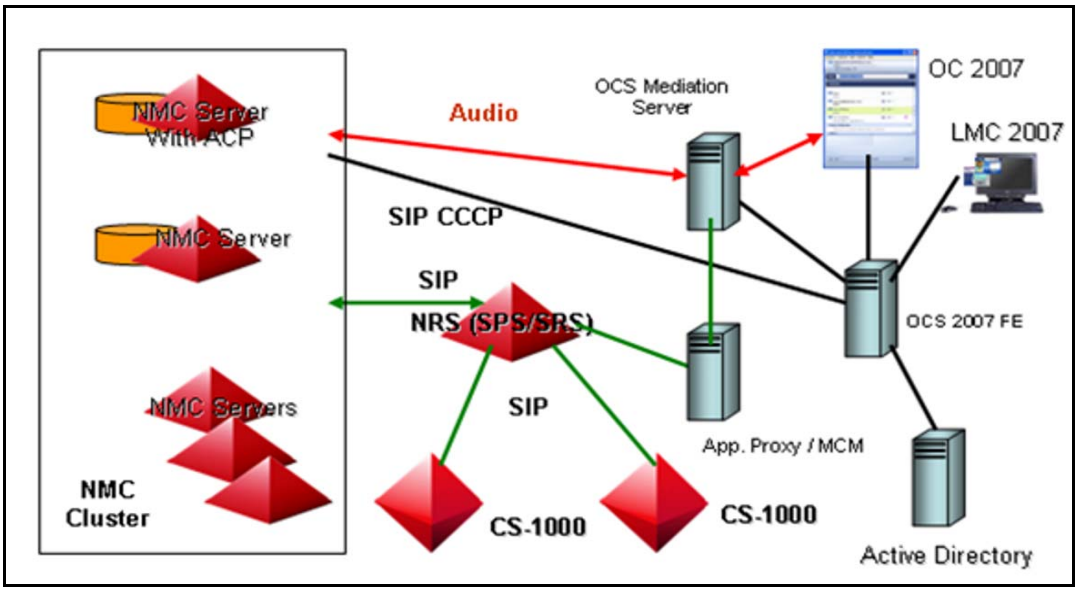
The Nortel Multimedia Conferencing (NMC) 6.0 supports CS 1000 Release 5.0 Converged Office.

The changes for OCS 2007 that impact NMC are as follows:

- introduction of the Mediation Server—Because NMC video is encoded in H.263 and the present release of the Mediation Server cannot transcode it to RT/Video format, the video portion of the conference is provided by Microsoft Live Meeting Console 2007 and not NMC.
- change of clients—Microsoft Office Communicator (OC) 2007, supported by CS 1000 Converged Office, does not have the external conference provider interface. The Microsoft Live Meeting Console (LMC) 2007 must be used with NMC 6.0 to engage collaborative conferencing features. The OC 2007 client can still be used to handle the audio portion of the conference when the conference is started by LMC 2007.

The following figure shows an example of NMC deployment with CS 1000 Release 5.0 Converged Office including Microsoft OCS 2007. The ACP server is installed on only one node in the NMC cluster. In a cluster configuration of two or more nodes, install the ACP server on the primary node.

Figure 3 CS 1000 Converged Office deployment with OCS 2007



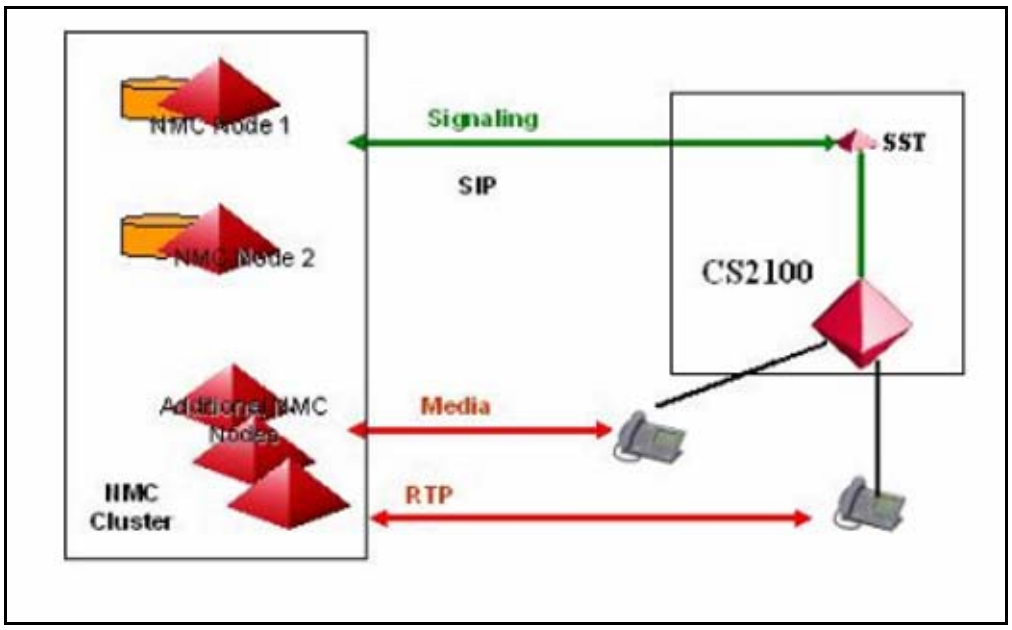
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NMC deployment in a CS 2100 network

In the CS 2100 deployment solution, the NMC server is configured as a remote SIP server at the CS 2100 SST/IDP (SIP Session Trunk/Integrated Desktop Phone) component. In a multi-node NMC cluster, one NMC node is configured as a remote SIP server and the remaining nodes are configured as optional IP addresses of that remote SIP server.

The following figure shows an NMC cluster in a CS 2100 network.

Figure 4 NMC deployment in a CS 2100 network



NMC may also be configured to deliver instant messages to chairpersons for notification of participant entry/exit in a CS 2100 network when using the Nortel MCS PC Client.

Figure 5- NMC deployment for IM delivery to MCS PC Client on CS2100 represents the deployment model for delivery of instant messages. In this configuration, an outbound route is configured to the CS 2100 SSL with the domain name of the chairperson SIP URIs.

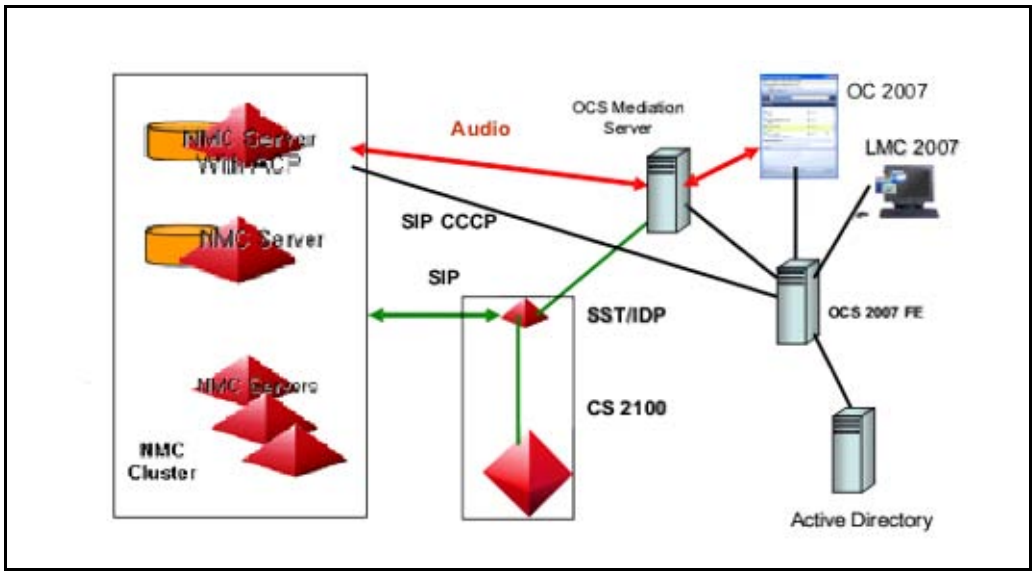
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NMC deployment with CS 2100 Converged Office

Nortel Multimedia Conferencing 6.0 supports CS 2100 Release SN10 and SE 11 Converged Office. In the CS 2100 Converged Office solution, NMC is deployed with Microsoft OCS 2007. The ACP server is installed on only one node in the NMC cluster. In a cluster configuration of two or more nodes, install the ACP server on the primary node.

The following figure shows an example of NMC deployment with CS 2100 Converged Office and Microsoft OCS 2007.

Figure 5 CS 2100 Converged Office deployment



Supported clients on CS 1000

NMC supports any clients for audio conferencing that are supported by CS 1000, Release 5.0, 5.5 and 6.0. The following list is representative of the supported clients but is not a complete list. The following clients are audio-only:

- IP Phone 2004, Phase 0
- IP Phone 2002/2004, Phase 1
- IP Phone 2001/2002/2004, Phase 2
- IP Phone 2007
- IP Softphone 2050
- IP Phone 1120E/1140E
- WLAN IP Handsets 2210/2211/2212
- IP Audio Conference Phone 2033
- Digital Phone 3902/3903/3904/3905

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The following video-enabled SIP clients are supported:

- Nortel softphone 3456 soft client
- Nortel LG 1535 desktop client
- Nortel MCS PC client

  Note: This client must be connected to an MCS server, and not directly to the CS1000.

If you are using NMC in a Converged Office deployment with OCS 2007, you must use Microsoft Live Meeting Console (LMC) 2007 to engage collaborative conferencing features, such as video, file sharing, or chat. In this case, the video is provided by LMC 2007 and not NMC, and lacks automatic video switching to the current speaker. The chairperson must select whose video stream is delivered to the other participants.

You can also use Microsoft Office Communicator 2007 in a Converged Office deployment with OCS, but only as a telephone.

Supported clients on CS 2100

NMC does not restrict the list of clients that you can use to obtain conferencing services. The following list is representative of the supported clients but is not a complete list. The following clients are audio only:

- IP Phone 2001/2002/2004/2007
- IP Phone 1120E/1140E/1150E
- IP Audio Conference Phone 2033
- Wireless IP Phone 2210/2211/2212
- Soft client m6350

The following video-enabled SIP clients are supported:

- Nortel SMC 3456 soft client
- Nortel LG 1535 desktop client
- Nortel MCS PC client

In a Converged Office deployment, you can use Microsoft Live Meeting Console 2007 to engage collaborative conference features such as video, file sharing, or chat. You can use Microsoft Office Communicator 2007, but only as a telephone.

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Supported SIP clients

NMC 6.0 supports video-enabled SIP clients. The SIP clients supported depends on the switching platform that NMC is deployed with. The following table provides details for SIP client and call server support for NMC 6.0

SIP Client	SIP Gateway			
	CS 1000			CS 2100
	5.0	5.5	6.0	SN10 or SE11
Nortel Softphone 3456 soft client	No	Yes	Yes	Yes
Nortel LG1535 desktop client	No	Yes	Yes	No
Nortel MCS PC CLient	No	Yes (via 5100/5200 Server)		
Microsoft Office Communicator 2007 R1	No	No		No
Microsoft Office Live Meeting 2007	No	No		No

SIP client limitations

Although the Microsoft Office Live Meeting 2007 client and the two new SIP clients introduced with NMC 6.0 support sharing video within a conference, it is not possible for video streams to be exchanged between OCS and non-OCS endpoints. The video-sharing that occurs within Live Meeting originated conferences is handled by the OCS server and not by NMC. It is possible for OCS and non-OCS endpoints to participate in the same audio conference using NMC, however, any video streams are partitioned between the OCS and non-OCS endpoints, with NMC handling the streams for the non-OCS endpoints.

NMC 6.0 limitations

NMC Release 6.0 supports the following features in a Converged Office deployment only.

- Chat
- Web collaboration

If you install NMC in a stand-alone CS 1000 or CS 2100 environment, these features are not available.

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Licensing

NMC is licensed per port. A port is one call or session. Video is licensed independently of audio. For example, you can license 32 Nortel Multimedia Conferencing ports. You can utilize the 32 ports with any supported codec and you can provision as many subscribers as you want.

For a single-node NMC, use node locked licensing. For a multinode NMC cluster, use cluster licensing. With cluster licensing, redundant license servers distribute floating licenses to NMC nodes within the cluster. You can purchase capacity for up to seven servers and float the licenses across up to eight servers for redundancy.

MAS node locked licensing

In this configuration, you must configure a license key for each MAS node. In the node locked configuration, licenses are bound to a particular MAS platform and are not shared across MAS nodes.

To configure node locked licensing, you must configure each MAS node individually. For more information about configuring licensing, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

MAS cluster licensing

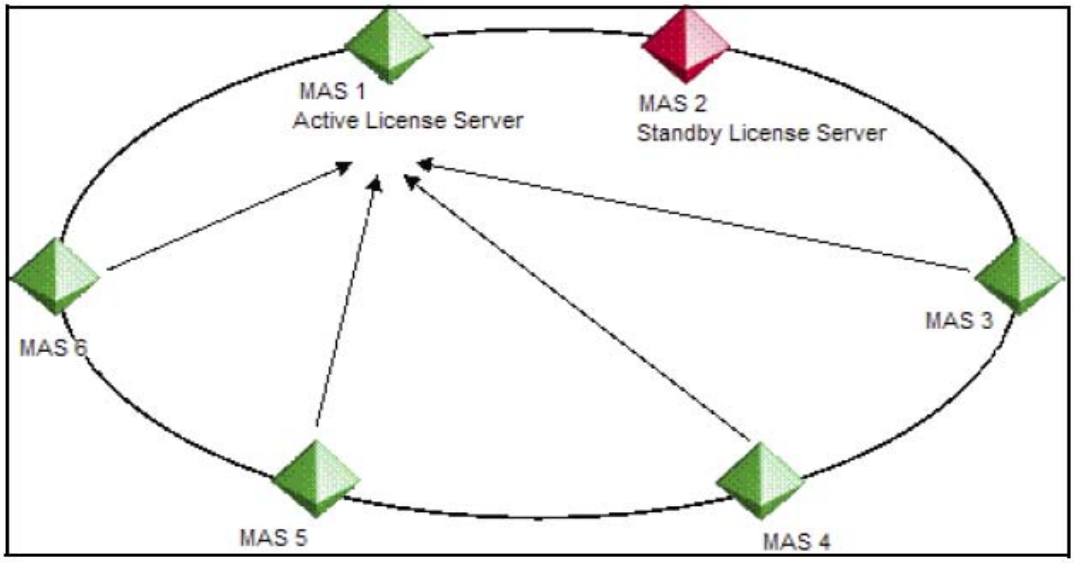
In this configuration, licenses are shared and float across all MAS nodes in the same cluster. You must configure one MAS node to run a license server to govern license usage across all nodes in the cluster. Configure a second MAS node to run a license server for redundancy. In a redundant configuration, both licenses servers (active and standby) work in unison to manage licenses across all nodes. The server that currently serves licenses is called the Active License server and the server that is currently idle is called the Standby License server. When the Active License server goes down, the Standby License server transitions to become the Active License server.

You receive two licences keys for the cluster; one for the primary server and one for the backup server.

The following figure shows a cluster with an Active License server and a Standby License server.

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Figure 6 License cluster



You must configure both license servers on the same subnet.

For more information about configuring cluster licensing, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

Capacity planning and resource usage

Attention: Ensure that you are using the most current version of the PVI Engineering tool.

NMC 6.0 provides a Platform Vendor Independent (PVI) checker tool that verifies the minimum hardware and software requirements for MAS 6.1 and NMC 6.0. With PVI support, port capacity depends on the hardware platform used. If you are using the IBM x3550 server, the following capacity specifications apply (same as NMC 5.0):

- Up to 800 audio ports for each server (assuming an even split of G.711 and G.729 codecs)
- Up to 5600 audio ports for total capacity in a 7+1 cluster configuration
- Up to 300 participants for an individual conference.

The number of participants in a single conference depends on the hardware platform NMC is installed on. Ongoing conference calls subtract from the maximum number of participants for a conference on a specific platform.

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A PVI Engineering tool is available for customers and sales persons that can determine the number of servers required for NMC at specific capacity levels. The Engineering tool provides the recommended server configuration and options to meet the specified inputs based on a combination of the following parameters:

- Maximum concurrent audio conference channels or total number of conference users plus the average usage level per user.
- Expected maximum concurrent video-enabled conference channels as a percentage of the number of overall channels.
- Processor family (optional)

You can download the Engineering tool from the Nortel Enterprise Configurator.

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Platform Vendor Independence requirements

This module explains the Platform Vendor Independence (PVI) requirements for Nortel Multimedia Conferencing (NMC) 6.0.

Navigation

- Server naming requirements (page 31)
- Third-party software requirements (page 32)
- Operating System updates (page 34)
- Technical support (page 35)
- Hardware requirements (page 35)
- Disk Partitioning requirements (page 37)
- Operating System requirements (page 37)
- PVI Checker utility (page 38)
- Port usage (page 38)

Server naming requirements

Server names must follow RFC 1123 (Requirements for Internet Hosts) which specifies that a host name must adhere to the following:

- Only characters a - z, A - Z, 1 - 9 can be used in a host name.
- The underscore character (_) and dot character (.) cannot be used.
- Spaces and hyphens in the host name are not supported.
- Host names must be 6 to 15 characters in length.
- Fully qualified domain names must not exceed 255 characters.

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Third-party software requirements

Due to the mission-critical, real-time processing performed by NMC, you must not install any other application class software on the server. You can install certain utility class software on the server, providing it conforms to the guidelines listed below.

Application class software generally requires a certain amount of system resources and therefore must not be installed on any server running an NMC application. Installing third-party applications can cause the NMC application to operate outside of the known engineering limits and can therefore create potential unknown system problems (for example, CPU contentions, increased network traffic loading, and disk access degradations).

Certain third-party utility class software applications, such as hardware diagnostics or backup tools, generally require less system resources during the normal operation of NMC and are therefore permitted. Exceptions are utilities such as screen savers, which can cause system problems and degrade performance. Antivirus software is classified as a utility and is subject to the generic guidelines listed below.

Generic guidelines for utility-class software applications

The following are guidelines for utility class software.

- During run-time, the utility must not degrade the NMC application beyond an average percentage of CPU utilization allowed. The utility must not lower the minimum amount of free hard disk space required by the NMC application and the Windows Operating system.
- The utility must not cause any improper software shutdowns or out-of-sequence shutdowns.
- The utility must not administer the NMC.
- If the utility has its own database, it must not impact the NMC database.
- Disk compression utilities must not be used.
- Memory tweaking utilities (for example, WinRAM Turbo or Memory Zipper) used to reclaim memory that is unused by Microsoft must not be used.
- The installation or uninstallation of the third-party software must not impact or conflict with the NMC application (for example, it must not cause .DLL conflicts). If such conflicts are discovered, a rebuild of the server may be necessary.
- The implementation personnel must perform tests to ensure these conditions and recommendations are met prior to putting an NMC application into production. Nortel support personnel may ask for the results of the testing during fault diagnosis. As part of the fault diagnosis process, the distributor or end user may be asked to remove third-party software.

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Additional guidelines for use of antivirus software

Nortel acknowledges that your security policies may require the installation of Antivirus software on the application server.

Nortel has selected a representative sample of anti-virus software packages and has a policy of performing, where possible, a validation of these products to ensure co-residency with NMC.

The current suite of antivirus products that are used as part of this policy are:

- Symantec Antivirus
- McAfee Antivirus

This selection is intended to be a representative sample and will vary over time.

The following are generic guidelines for using of antivirus software:

- The NMC application must be installed before installing the antivirus software. When the antivirus software is installed, it is the implementation personnel's responsibility to perform testing with the antivirus software, in accordance with the guidelines for utility-class guidelines outlined in Generic guidelines for utility-class software applications (page 32).
- Virus scans must be set to run during off-peak hours, and not to start on the hour.
- Infected file quarantine policy on the NMC–Do not configure the antivirus software to deal automatically with suspected infected files. In the event of infected files being located, do not attempt to replace or remove them. Contact your local Nortel support representative for assistance in determining if the files are part of the NMC or a critical system file.
- Do not connect NMC directly to the Internet to download virus definitions or updated files. Furthermore, Nortel recommends that you do not use an NMC server to connect to the Internet. Instead, you must download virus definitions and updated files to another location on the customer network, and manually load them from this interim location onto the NMC server.
- Do not connect NMC directly to the Internet to download NMC QFEs. This method limits access to the Internet reduces the risk of downloading infected files.
- Nortel recommends that you scan all Patch files, CD-ROMs, and floppy disks prior to installation or uploading to the NMC server. This practice minimizes any exposure to infected files from outside sources.
- Capacity considerations–Customers must note that running virus scan software can place an additional load on the NMC server. It is the implementation personnel's responsibility to run the performance monitor

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tool on the server to gauge CPU utilization. If the antivirus software scan causes the platform average CPU utilization to exceed the recommended percentage for longer than 20 minutes, then the antivirus software must not be loaded onto the NMC.

Note the following:

- Nortel does not provide support for configuring antivirus software but will offer guidance where possible. Questions or problems on antivirus software should be directed to the appropriate vendor.
- If performance or functionality issues are raised to Nortel support personnel, as part of the fault diagnosis process, you may be asked to remove third-party utility software or antivirus software.

Operating System updates

Operating system updates include service updates and service packs.

Service updates

Nortel recommends that you follow Microsoft recommendations regarding newly discovered vulnerabilities and that you promptly install any security service updates issued by Microsoft.

Whenever possible, Nortel incorporates the latest operating system security recommendations and service updates in an integrated solutions testing strategy during each test cycle. However, due to the urgent nature of security service updates when vulnerabilities are discovered, Nortel recommends that customers follow Microsoft guidelines as they are issued, including any Microsoft installation procedures and security service update rollback processes that may be in place.

You must make a full system backup before updating the system to ensure that a rollback is possible. If NMC does not function properly after you apply a Microsoft security service update, you must remove the service update and revert to the previous version of the application (from the backup you made before applying the service update).

Operating System Service Packs

Nortel's policy is to implement testing of all new Operating System service packs for compatibility with NMC as soon as they are available. Because a service pack may contain a significant amount of new content, Nortel requires that you wait until compatibility testing is complete before you apply the new service pack. Note that Operating System service packs are typically tested with the latest NMC Maintenance release (MR) or Feature Pack (FP) and, therefore, an upgrade to a Microsoft new service pack may necessitate an upgrade to the latest NMC MR or FP. Before uploading a new service pack, you must complete a full system backup for system rollback if necessary.

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Technical support

All hardware diagnostics are the responsibility of the hardware vendor. You should always check with the manufacturer's instructions and recommendations before you perform any hardware-related procedure.

It is the Distributor or end user's responsibility to verify their selected server. This verification should include making sure the PVI system conforms to specifications as listed in this document, installing the Operating System and ensuring it is functional (that is, the system boots up correctly and is able to connect to the network), before installing and configuring NMC. The distributor or end user should make an effort to rule out hardware faults before escalating issues into Nortel. During the course of problem diagnosis, Nortel Support personnel may ask for test reports carried out on PVI hardware, or it may be necessary to request the removal of certain software utilities if it is deemed necessary as part of the fault investigation process.

Hardware requirements

Attention: You must install MAS 6.1.1 which includes Feature Pack 1.

The Nortel Multimedia Conferencing 6.0 application is hosted on the Media Application Server (MAS) 6.1 platform and this combination can run on any third party server that meets the hardware requirements. NMC 6.0 is specifically tested on the following server platforms:

- IBM x3550 servers
- HP DL360-G5 servers

Attention: Ensure that you use the NMC Capacity Assessment Spreadsheet.

Use the NMC Capacity Assessment Spreadsheet (CapTool) to determine the exact platform size required for a given NMC capacity requirement.

The hardware specifications detailed in this section are for general guidance only. Carry out a detailed analysis of your NMC Capacity Assessment Spreadsheet requirements using the Capacity Spreadsheet before you decide on the specifications for your server for such items as CPU speed, RAM size and disk space. The Capacity Assessment Spreadsheet is a standalone utility that can be downloaded from the Partner Information web site (www.nortel.com/pic).

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The following table lists the hardware requirements for NMC. A detailed analysis of your NMC capacity requirements should always be carried out using the NMC Capacity Tool. It is likely that for large installations this server specification may not be sufficient. Some system size examples are provided below.

Hardware item (Nortel	Supported minimum	Recommended minimum requirements for new server (Nortel)	Additional information
CPU type	Dual core Intel Processor	Quad Core Xeon or higher	Intel Xeon family Processor Types Supported: • Xeon 54xx • Xeon 53xx • Xeon 52xx
Number of CPU Cores	2	2	-
Processor Speed	1200 MHz	2.0 GHz	-
RAM	2 GB	4 GB	-
Hard Disk Space	3GB	3GB	3GB requirement is specific to NMC and MAS Software.
Hard Disk Partitioning	No special requirements	No special requirements	-
CD/ DVD drive	One CD-ROM drive	One DVD-ROM Drive	-
Network Interface	1 Network Interface	1 Network Interface	Minimum speed is 100Mbit, Recommend 1Gbit.

Capacity Assessment Spreadsheet

This spreadsheet can be downloaded from the Nortel Partner Information Centre at www.notrel.com/pic. It is a simple tool that allows a user to provide a set of basic inputs (such as maximum number of participants for audio or video, codec type, and processor type and speed) and it outputs the number of servers required and the associated CPU utilization.

Below are some example outputs from the NMC Capacity Assessment Spreadsheet for some typical installations:

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Example A: Single node system	
Number of Servers	1
Processor	Dual Processor, Intel 54xx series, 2.8Ghz
Audio Codec used	G.711
Maximum System Capacity	955 audio participants, no video participants

Example B: T3-node cluster	
Number of Servers	3
Processor	Quad Processor, Intel 54xx series, 2.0 Ghz. (all three servers using this processor)
Audio Codec used	G.711
Absolute Maximum System Capacity	1180 audio participants, an additional 1180 participants using video. Note that the video calls implicitly have audio associated with them. In this example there are 1180 + 1180 = 2360 calls in total, of which half are audio only. **OR** 2950 audio participants, with no video participants.

The above are a few examples of output from the NMC Capacity Assessment Spreadsheet. Nortel recommends that you download the tool from www.nortel.com/pic and use it to determine the server requirements that are tailored for your own installation and business requirements.

CPU utilization

For optimal performance, the average CPU utilization should not exceed 70 percent over at least a 15-minute time interval.

Disk Partitioning requirements

No specific requirements identified for NMC.

Operating System requirements

The following table identifies the operating system requirements.

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OS type	Internationalized versions supported
Windows Server 2003 R2 standard edition	English
	German
	Japanese
	Simplified Chinese
Windows Server 2003 R2 Enterprise Edition	As per Windows Server 2003 R2 standard edition
Windows Server 2003 R2, Datacenter Edition	As per Windows Server 2003 R2 standard edition
Windows Server 2003 R2 Standard x64 Edition	Not Supported
Windows Server 2003 R2 Enterprise x64 Edition	Not Supported
Windows Server 2003 Datacenter x64 Edition	Not Supported
Windows Server 2003 Web Edition	Not Supported
Windows Small Business Server 2003	Not Supported

PVI Checker utility

The PVI Checker is a software utility that determines the suitability of a Server to run the NMC application. It examines a variety of server characteristics including hardware, operating system version, and other relevant areas such as disk space, and port usage. This utility is included on the CD containing the NMC software and it runs automatically in the background as part of the NMC installation. If the target server platform does not meet the minimum requirements, the installation fails and the installer is referred to the log files for more detailed information.

The PVI Checker utility can be downloaded from www.nortel.com/pic as a standalone executable and used to determine the suitability of a server before NMC and MAS software is available.

Port usage

The following table lists the ports used by MAS and NMC.

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Description	Port Number
Soap Server TCP port	80
LDAP TCP port	389
Soap Server TLS port	443
LDAP SSL port	636
ECM RADIUS port	1812
MySQL TCP port	3306
Diameter over SCTP port	3867
Diameter over TCP port	3868
Diameter over TLS port	3869
License Server port	3998
IvrMP MSLink port	4001
SIP UA MSLink port	4004
Resource Manager ExtSess TCP port	4005
SIP UA cmd i/f port	4014
Resource Manager cmd i/f port	4015
ACP Server TCP port	5040
ACP Server TLS port	5041
SIP TCP port	5060
SIP UDP port	5060
SIP TLS port	5061
ConfMP MSLink port	7080
JBoss port	8080
ECM bind port for JMS	8093
ECM TLS port for JMS	8193
JBoss HTTPS port	8443
DiamC MSLink port	11004
DiamC cmd i/f port	11014
Resource Manager CPLink port	19899
IvrMP ssdata port	19999
ECM clustered JNDI Stub download port	31000
ECM TLS port for RMI queries on the clustered JNDI	31001

(1 of 2)

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Description	Port Number
ECM auto discovery clustered JNDI port	31002
ECM listening port for bootstrap JNP service	31003
ECM ECM port for the RMI naming service	31004
ECM selecting primary security server using JGroup protocol port	45566
Resource Manager IPC port	51000
VoiceXML Interpreter IPC port	51002
CStore MSLink port	52005
CStore RTFT port	52007
IvrMP RTFT port	52009

(2 of 2)

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Installation and configuration overview

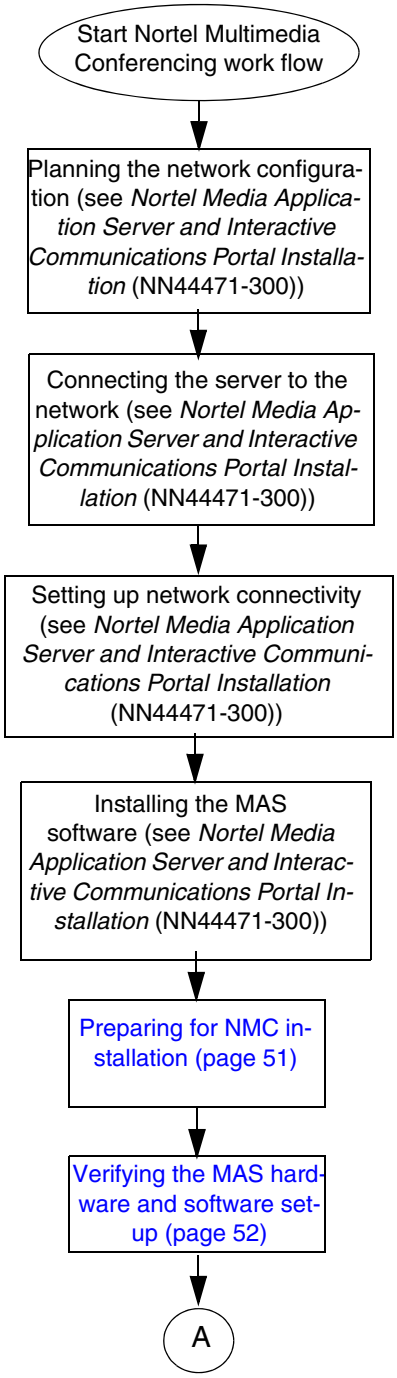
This module describes the order of the tasks you must perform to install and configure the Media Application Server (MAS) 6.1 platform and the Nortel Multimedia Conferencing (NMC) 6.0 application.

Installation and configuration workflow

Use the following work flow to help you install and configure the MAS software and the NMC application.

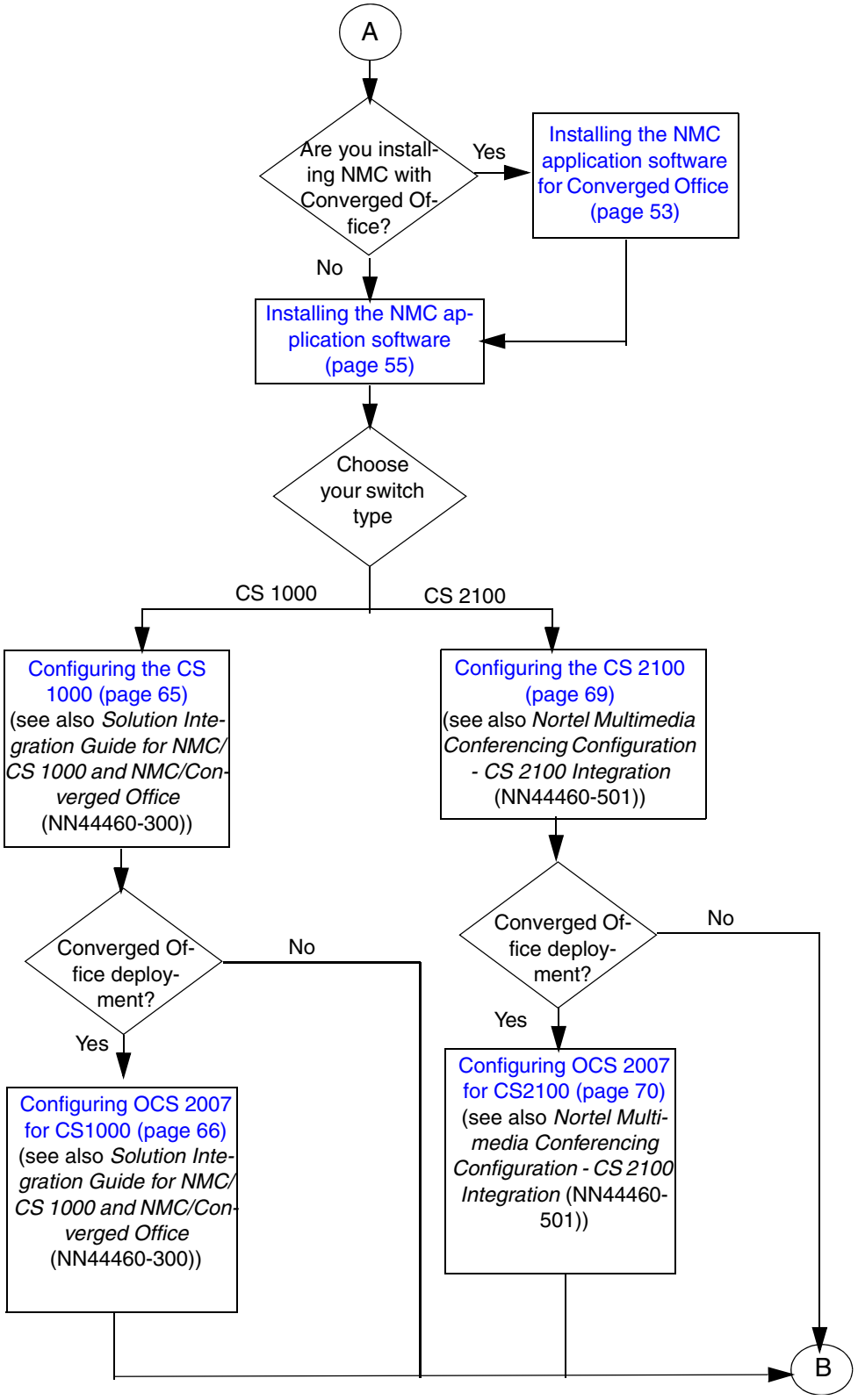
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Figure 7 Installation and configuration work flow



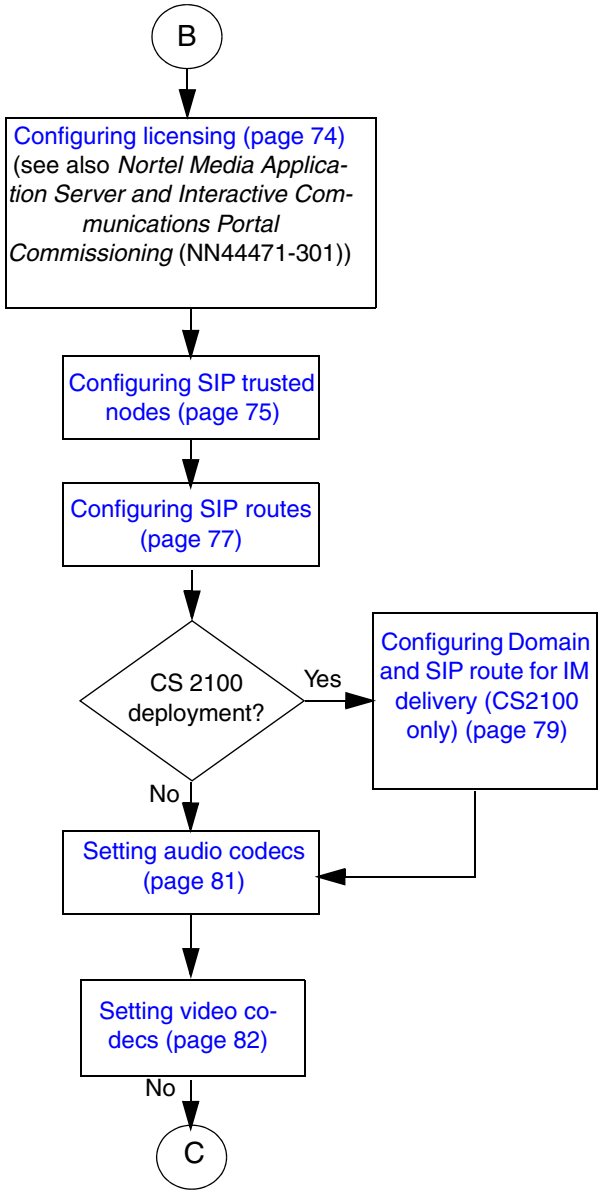
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Figure 8 Nortel Multimedia Conferencing work flow continued



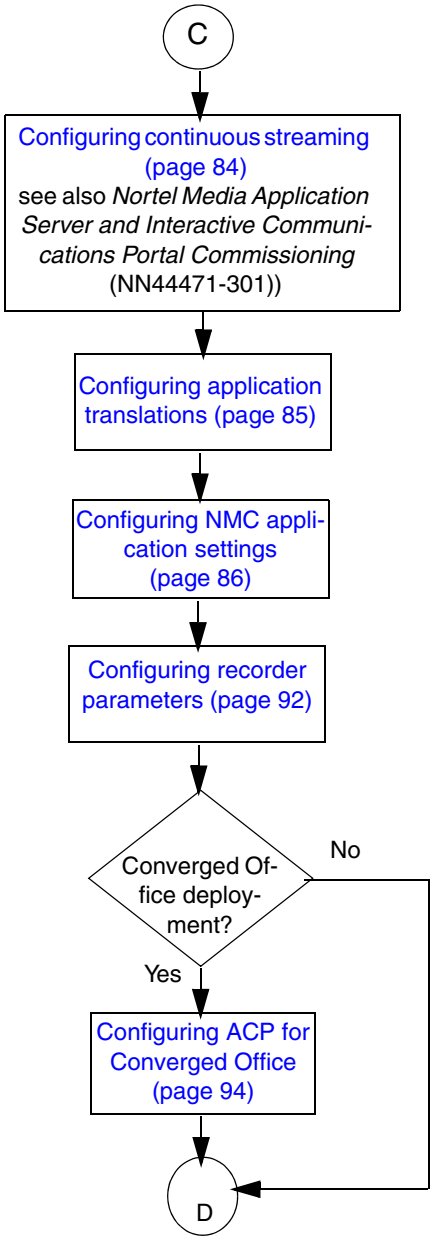
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Figure 9 Nortel Multimedia Conferencing work flow continued



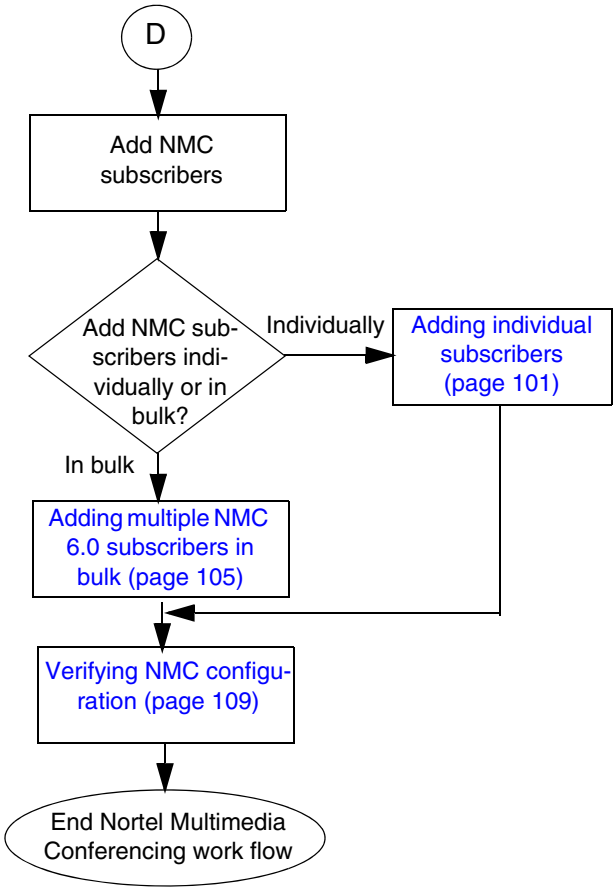
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Figure 10 Nortel Multimedia Conferencing work flow continued



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Figure 11 Nortel Multimedia Conferencing workflow continued



Navigation

- Preparing for NMC installation (page 51)
- Verifying the MAS hardware and software setup (page 52)
- Installing the NMC application software for Converged Office (page 53)
- Installing the NMC application software (page 55)
- Configuring the CS 1000 (page 65)
- Configuring OCS 2007 for CS1000 (page 66)
- Configuring the CS 2100 (page 69)
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- Configuring licensing (page 74)
- Configuring SIP trusted nodes (page 75)
- Configuring SIP routes (page 77)

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- Configuring Domain and SIP route for IM delivery (CS2100 only) (page 79)
- Setting audio codecs (page 81)
- Setting video codecs (page 82)
- Configuring continuous streaming (page 84)
- Configuring application translations (page 85)
- Configuring NMC application settings (page 86)
- Configuring recorder parameters (page 92)
- Configuring ACP for Converged Office (page 94)
- Adding individual subscribers (page 101)
- Adding multiple NMC 6.0 subscribers in bulk (page 105)
- Verifying NMC configuration (page 109)

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Nortel Multimedia Conferencing installation

This module describes the procedures for installing the Nortel Multimedia Conferencing (NMC) application.

Prerequisites

- Install the Media Application Server 6.1 For detailed information, see *Nortel Media Application Server and Interactive Communications Portal Installation* (NN44471-300).
- Verify that the SNTP Source Server field (located in Element Manager under System Configuration > Network Settings) on the primary node has a valid SNTP server address. For more information, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).
- If you want to migrate service and configuration data from a previous version of NMC, ensure that you back up your service and configuration data. For information about backing up service and configuration data for NMC 5.0, see Media Application Server 5.1 Administration and Security (NN44450-600).

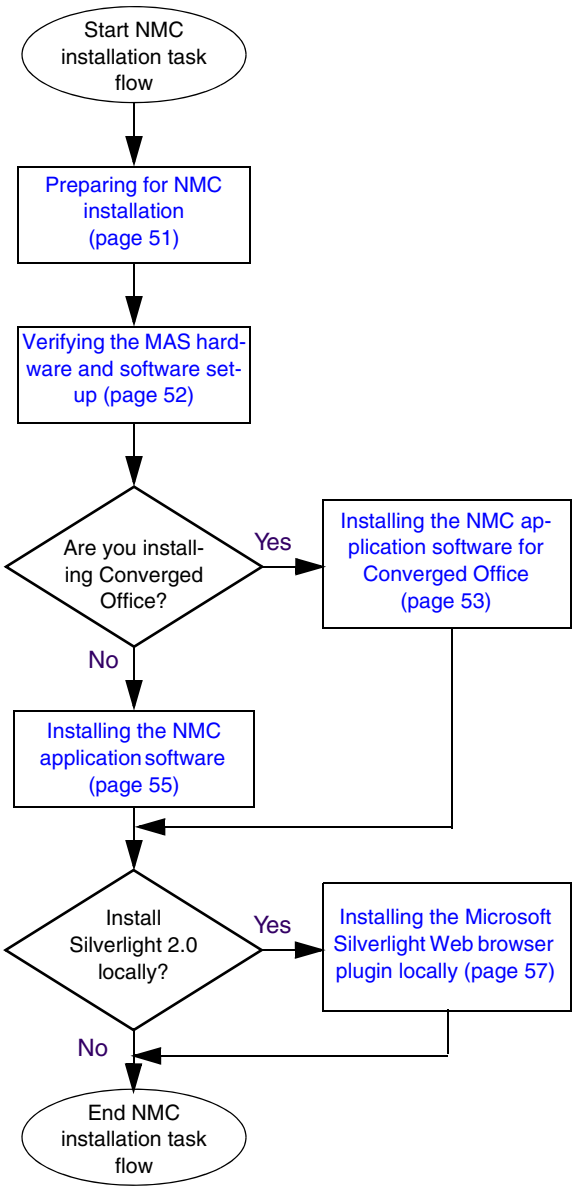
Attention: If you are installing NMC in a Converged Office solution, you must install ACP as described in Installing the NMC application software for Converged Office (page 53) on one node in the cluster. In a cluster configuration of two or more nodes, install ACP on the primary node.

NMC installation task flow

Use the following task flow to help you install NMC.

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Figure 12 NMC installation task flow



Navigation

- Preparing for NMC installation (page 51)
- Verifying the MAS hardware and software setup (page 52)
- Installing the NMC application software for Converged Office (page 53)
- Installing the NMC application software (page 55)
- Installing the Microsoft Silverlight Web browser plugin locally (page 57)

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Preparing for NMC installation

Perform the following steps before you install the NMC software.

Procedure steps

Step	Action
1	Ensure that you have the NMC software CD.
2	Ensure you have the documentation for both NMC and MAS. Check the Nortel Web site (www.nortel.com/documentation) to ensure you have the latest documentation.

--End--

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Verifying the MAS hardware and software setup

Perform the following steps to verify your MAS hardware and software setup before you install NMC.

Procedure steps

Step	Action
1	On each node, select **Start > Control Panel > Add or Remove Programs**.
2	Verify that **Nortel Media Application Server Platform 6.1.xxx** is installed.

--End--

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Installing the NMC application software for Converged Office

If you are installing NMC in a Converged Office solution, you must perform this procedure to install ACP. Perform this procedure on only one node of your cluster. For all other nodes in the cluster, perform the procedure for Installing the NMC application software (page 55). If you are installing Converged Office in a cluster of two or more nodes, install ACP on the primary node.

Prerequisites

- You installed the MAS 6.1 platform.
- The NMC installation includes a Platform Vendor Independent (PVI) checker that determines if your system meets the required specifications. The PVI checker runs automatically and a message is displayed only if your system does not meet the PVI requirements. For information about the PVI checker and running the PVI checker manually with the **`mapvicheck`** command, see *Nortel Media Application Server and Interactive Communications Portal Installation* (NN44471-300).

Procedure steps

Step	Action
1	Insert the NMC application CD into the CD or DVD drive of the Media Application Server.
2	Browse to the Conferencing application setup program.
3	Double-click **setup_nmc_6.0.xxx_yyyy.mm.dd.exe** (for example, setup_nmc_6.0.103.2009.01.07.exe).
4	On the **Welcome** dialog box, click **Next**. If the PVI Checker Report window displays, go to step 5. If the PVI Checker Report window is not displayed, go to step 8.
5	If your system does not meet the PVI requirements, the **PVI Checker Report** window displays and provides the PVI checker results. Click **Next**.
6	On the **Installation Error** window, click **Next**.
7	Click **Finish** to exit the installation. NMC is not installed and you must ensure your system meets the minimum requirements. Review the PVI Checker results to determine which items do not meet the requirements.
8	On the **License Agreement** dialog box, select **I accept the terms of the license agreement**.
9	Click **Next**.
10	Select **Custom**.

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11 On the **Select Features** dialog box, select **Converged Audio Conferencing Provider Feature**.

12 Click **Next**.

13 On the **Nortel Multimedia Conferencing - InstallShield Wizard** message

14 On the **Microsoft .Net Framework 2.0 Welcome** dialog box, click **Next**.

15 On the **End-User License Agreement** dialog box, select **I accept the terms of the license agreement**.

16 Click **Next**.

17 On the **Setup Complete** dialog box, click **Finish**.

18 On the **Ready to Install the Program** dialog box, click **Install**.

19 On the **NMC Installation Completed** window, select **Yes** to migrate data from NMC 5.0 back up archives or select **No** to optionally migrate data at a later time.

Attention: In a multinode configuration, you must only migrate NMC 5.0 configuration and service data on the primary node.

If you selected yes, go to step 16. If you selected No, go to step 19.

20 On the **Nortel Multimedia Conferencing upgrade** window, click **Browse** beside the first text box and select your NMC 5.0 configuration data back up file and click **Open**.

21 Click **Browse** beside the second text box and select your NMC 5.0 service data back up file and click **Open**.

22 Click **Next** to start the upgrade process.

The time it takes to complete the upgrade depends on the amount of data in the back up file.

23 On the **InstallShield Wizard Complete** dialog box, click **Finish**.

--End--

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Installing the NMC application software

Use the following procedure to perform a typical installation of NMC. If you are installing NMC as part of a Converged Office solution, you can perform this procedure on all nodes in the cluster except one. You must install NMC with ACP on one node, as described in Installing the NMC application software for Converged Office (page 53).

Prerequisites

- You installed the MAS 6.1 platform.
- The NMC installation includes a Platform Vendor Independent (PVI) checker that determines if your system meets the required specifications. The PVI checker runs automatically and a message is displayed only if your system does not meet the PVI requirements. For information about the PVI checker and running the PVI checker manually with the **`mapvicheck`** command, see *Nortel Media Application Server and Interactive Communications Portal Installation* (NN44471-300).

Procedure steps

Step	Action
1	Insert the NMC application CD into the CD or DVD drive of the Media Application Server.
2	Browse to the Conferencing application setup program.
3	Double-click **setup_nmc_6[1].xxx_yyyy.mm.dd.exe** (for example, setup_nmc_6[1].1.106_2009.01.07.exe).
4	On the **Welcome** dialog box, click **Next**. If the PVI Checker Report window displays, go to step 5. If the PVI Checker Report window is not displayed, go to step 8.
5	If your system does not meet the PVI requirements, the **PVI Checker Report** window displays and provides the PVI checker results. Click **Next**.
6	On the **Installation Error** window, click **Next**.
7	Click **Finish** to exit the installation. NMC is not installed and you must ensure your system meets the minimum requirements. Review the PVI Checker results to determine which items do not meet the requirements.
8	On the **License Agreement** dialog box, select **I accept the terms of the license agreement**.
9	Click **Next**.
10	Select **Typical**.
11	Click **Next**.

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12 On the **Nortel Multimedia Conferencing - InstallShield Wizard** message box, click **Install**.

Attention: If Microsoft .Net Framework 2.0 is already installed on your server, the dialog boxes in steps 11 through 14 do not appear.

13 On the **Microsoft .Net Framework 2.0 Welcome** dialog box, click **Next**.

14 On the **Ready to Install the Program** dialog box, click **Install**.

15 On the **NMC Installation Completed** window, select **Yes** to migrate data from NMC 5.0 back up archives or select **No** to optionally migrate data at a later time.

Attention: In a multinode configuration, you must only migrate NMC 5.0 configuration and service data on the primary node.

If you selected yes, go to step 16. If you selected No, go to step 19.

16 On the **Nortel Multimedia Conferencing upgrade** window, click **Browse** beside the first text box and select your NMC 5.0 configuration data back up file and click **Open**.

17 Click **Browse** beside the second text box and select your NMC 5.0 service data back up file and click **Open**.

18 Click **Next** to start the upgrade process.

The time it takes to complete the upgrade depends on the amount of data in the back up file.

19 Click **Finish**.

--End--

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Installing the Microsoft Silverlight Web browser plugin locally

Install the Microsoft Silverlight 2.0 Web browser plugin manually if the plugin does not automatically install.

For more information about Microsoft Silverlight 2.0, see Microsoft Silverlight 2.0 (page 18).

Prerequisites

- For a distributed installation of the Microsoft Silverlight plugin, follow one of the following approaches:
  - — Using media on the NMC server–Log on to each PC with administrative privileges, connect to the NMC server and locate the mounted shared NMC distribution media.
  - — Central Management Tool–If you have a central management tool in your network, such as a Systems Management Server (SMS), the required controls are bundled into the Silverlight.2.0.exe file. You can use the SMS server to run this file and silently install the required plugin on all clients.
  - — Install locally–If you do not have an SMS server, a user with administrative privileges can install the Silverlight plugin on each PC individually.

Procedure steps

Step	Action
1	Mount the NMC installation media for NMC 6.0.
2	In the NMC application CD root directory, double-click **Silverlight.2.0.exe**.
3	On the **Install Silverlight 2** window, click **Install now**. The installation progress is displayed.
4	On the **Installation successful** window, click **Close**.

--End--

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License keycodes

The following chapter describes how to obtain license keycodes for Nortel Multimedia Conferencing 6.0.

Prerequisites

- The MAC address must be supplied by the customer.
- You must have a Nortel username and password. If you do not have one, you can register for an account.

Navigation

- Accessing the Keycode Retrieval System (page 60)
- Retrieving the keycode (page 61)
- Generating the keycode (page 62)

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Accessing the Keycode Retrieval System

Access the Keycode Retrieval System (KRS) to retrieve your license keycode.

Procedure steps

Step	Action
1	Go to the Nortel Web site (www.nortel.com).
2	From the **Support & Training** menu, select **Online Self-Service > Keycode Retrieval**.
3	Under **Step 1**, choose the appropriate login location.
4	Under **Step 2**, choose **Communication Server 1000**.
5	Click **Go**.

--End--

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Retrieving the keycode

Use the following procedure to retrieve your NMC keycode.

Prerequisites

- You logged onto the Keycode Retrieval System (KRS). See Accessing the Keycode Retrieval System (page 60).
- You have one of the following: System or Product ID, Unique Reference Number (URN), Media Access Control (MAC) address of a registered system (in the format XX:XX:XX:XX:XX:XX), Customer purchase order (PO), or Nortel Sales Order. The MAC address must be supplied by the customer.
- For information about applying keycodes, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

Procedure steps

Step	Action
1	On the Keycode Retrieval page, search for your NMC license or NMC history by entering one of the following: • System ID/Product ID —Site ID for a nodal NMC system —Unique Reference Number (URN) for a corporate (cluster) NMC system —MAC address of a registered system (in the format XX:XX:XX:XX:XX:XX) • Customer PO • Nortel Sales Order If information is found, you are redirected to the product page.
2	From the **Product** list, select **Nortel Multimedia Conferencing**. The configuration information for the system and the license keycode (if generated) appears.

--End--

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Generating the keycode

Perform the steps in this procedure to generate the license keycode for NMC.

Prerequisites

- You logged on to KRS. See Accessing the Keycode Retrieval System (page 60).
- You accessed your system information. See Retrieving the keycode (page 61).

Procedure steps

Step	Action
1	On the Keycode Retrieval page, from the **Product Control** menu, select **Generate using URN**.
2	Enter the Unique Reference Number (URN). You can find the URN on the confirmation sheet shipped with the NMC software.
3	Enter the MAC address of the Media Application Server (MAS) that you are installing NMC on.
4	If you are operating in a cluster with more than one server, enter the MAC address of the secondary MAS.
5	Click **Continue**.
6	Reenter the MAC address of the MAS on which you are installing NMC.
7	If you are operating in a cluster, reenter the MAC address of the secondary MAS.
8	Click **Confirm**. The following message appears: We are generating your keycode now. This may take some time. Please wait. When the keycode generation is complete, you are redirected to the appropriate system history.
9	From the **Product** list, select **Nortel Multimedia Conferencing**.
10	Click **Download Keycode** (at the bottom of the page).
11	Save the license file to a suitable location.

--End--

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CS 1000 and CS 1000/Converged Office configuration

This module describes the tasks you must perform to configure the Communication Server (CS) 1000.

Prerequisites

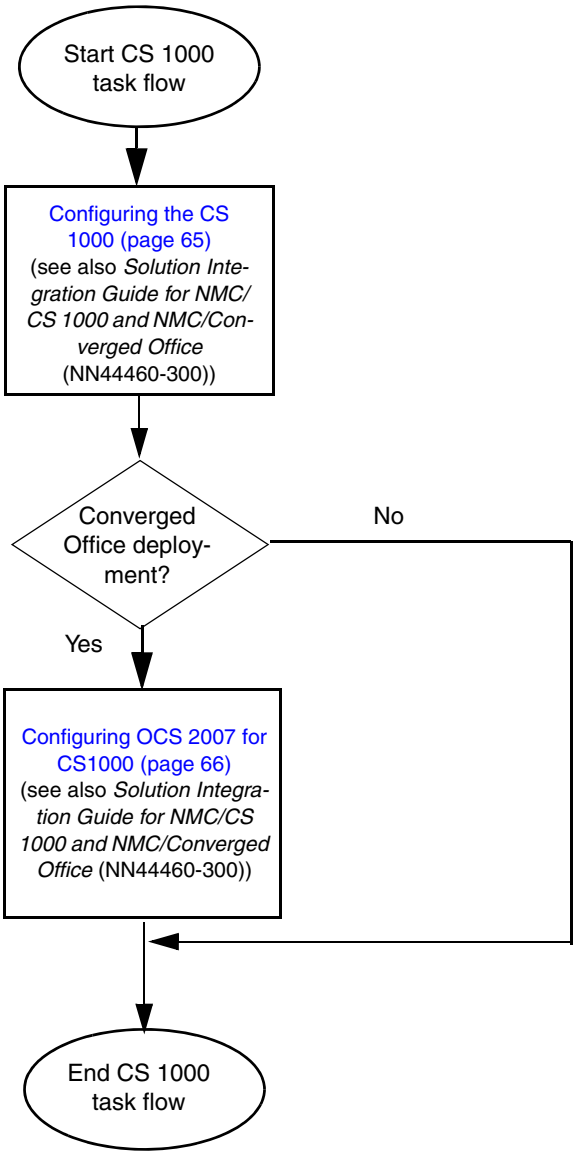
- You installed the MAS 6.1 platform.
- You installed the NMC 6.0 software.
- You reviewed *Solution Integration Guide for NMC/CS 1000 and NMC/Converged Office* (NN44460-300).

CS 1000 configuration task flow

Use the following task flow to help you configure the CS 1000 and optionally, Office Communications Server 2007 for NMC.

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Figure 13 CS 1000 configuration task flow



Navigation

- Configuring the CS 1000 (page 65)
- Configuring OCS 2007 for CS1000 (page 66)

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Configuring the CS 1000

Perform the following tasks on the CS 1000 to configure it for NMC. For detailed procedures, see the *Solution Integration Guide for NMC/CS 1000 and NMC/Converged Office* (NN44460-300).

If you must change any settings on the CS 1000 after you configure NMC, you must also make the appropriate changes to the MAS or NMC settings.

Procedure steps

Step	Action
1	Configure gateway endpoints on the Network Routing Service (NRS).
2	Configure trusted nodes.
3	Configure the operator Directory Number (DN) (optional).
4	Configure the CS 1000 for Converged Office parameters (optional).

--End--

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Configuring OCS 2007 for CS1000

Configure the Office Communications Server (OCS) 2007 to enable interaction with the NMC servers.

Prerequisites

- You installed the NMC software for Converged Office. See Installing the NMC application software for Converged Office (page 53).
- For CS 1000 release 5.0, install and patch Office Communications Server (OCS) 2007 Standard or Enterprise Edition as required in *Solution Integration Guide for Communication Server 1000 Release 5.0/Microsoft Office Communications Server 2007* (NN49000-309).
- For more information and detailed procedures, see *Solution Integration Guide for NMC/CS 1000 and NMC/Converged Office* (NN44460-300).

Procedure steps

Step	Action
1	Enable conferencing on the OCS 2007 front end servers.
2	Configure host authorization on the OCS 2007 front end servers.
3	Configure a static route on OCS 2007 for the NMC server where you installed ACP.

--End--

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CS 2100 and CS 2100/Converged Office configuration

This module describes the tasks you must perform to configure the CS 2100 to work with NMC and the tasks you must perform to configure OCS 2007 to work with the CS 2100 and NMC in a Converged Office deployment.

Prerequisites

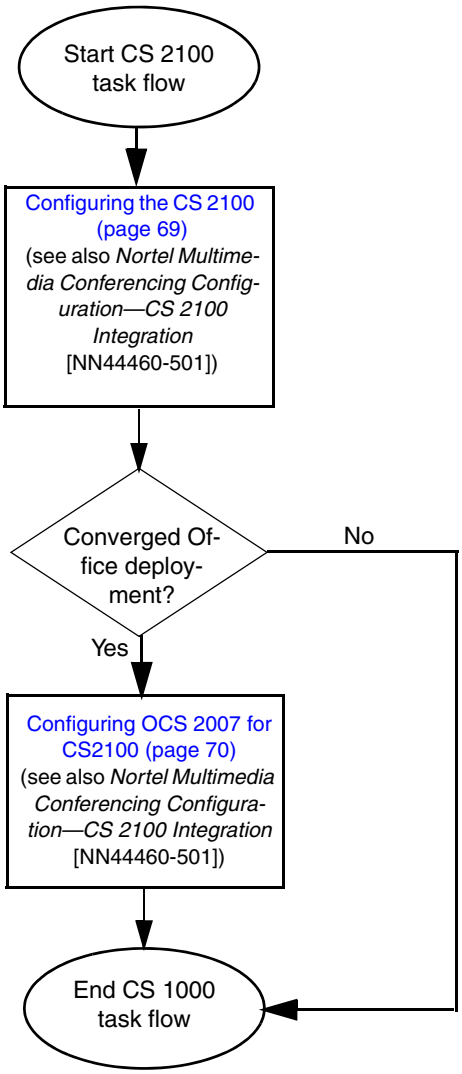
- The CS 2100 is installed and patched.
- For more information, see *Nortel Multimedia Conferencing Configuration - CS 2100 Integration* (NN44460-501).

CS 2100 configuration task flow

Use the following task flow to configure the CS 2100 and optionally, the Office Communications Server 2007 for NMC.

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Figure 14 CS 2100 configuration task flow



Navigation

- Configuring the CS 2100 (page 69)
- Configuring OCS 2007 for CS2100 (page 70)

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Configuring the CS 2100

Perform the following steps on the CS 2100 to configure it for NMC.

Prerequisites

- The CS 2100 is installed and configured (for more information, refer to the CS 2100 documentation).

Procedure steps

Step	Action
1	Configure one NMC server as a remote SIP server at the CS 2100 SST/IDP component.
2	Configure each remaining NMC server IP address as an optional IP address of the remote SIP server.
3	Provision one trunk group for the NMC cluster, with the maximum number of ports matching the number of NMC ports.
4	In a multinode NMC cluster, enable the Heartbeat option on the remote SIP server to ensure that the CS 2100 does not route calls to an NMC node that is down or off-line.

--End--

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Configuring OCS 2007 for CS2100

Configure the Office Communications Server (OCS) 2007 to enable interaction with the NMC servers.

Prerequisites

- You installed the NMC software for Converged Office. See Installing the NMC application software for Converged Office (page 53).
- Converged Office is installed and operational. See *Nortel Communication Server 2100 Converged Office Fundamentals* (NN42200-525).

Procedure steps

Step	Action
1	Enable conferencing on the OCS 2007 front end servers.
2	Configure host authorization on the OCS 2007 front end servers.
3	Configure a static route on OCS 2007 for the NMC server where you installed ACP.

--End--

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Media Application Server configuration

This module describes the tasks you must perform to configure the Media Application Server (MAS) for NMC 6.0.

Nortel recommends that you leave any parameters on the MAS not discussed in this module at their default settings. If you change these settings and encounter any issues, reset them back to the default.

Prerequisites

- You installed the MAS 6.1 platform.
- You installed the NMC 6.0 software.
- You reviewed *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).
- The element manager URL is:

  https://<FQDN of host>:8443/em

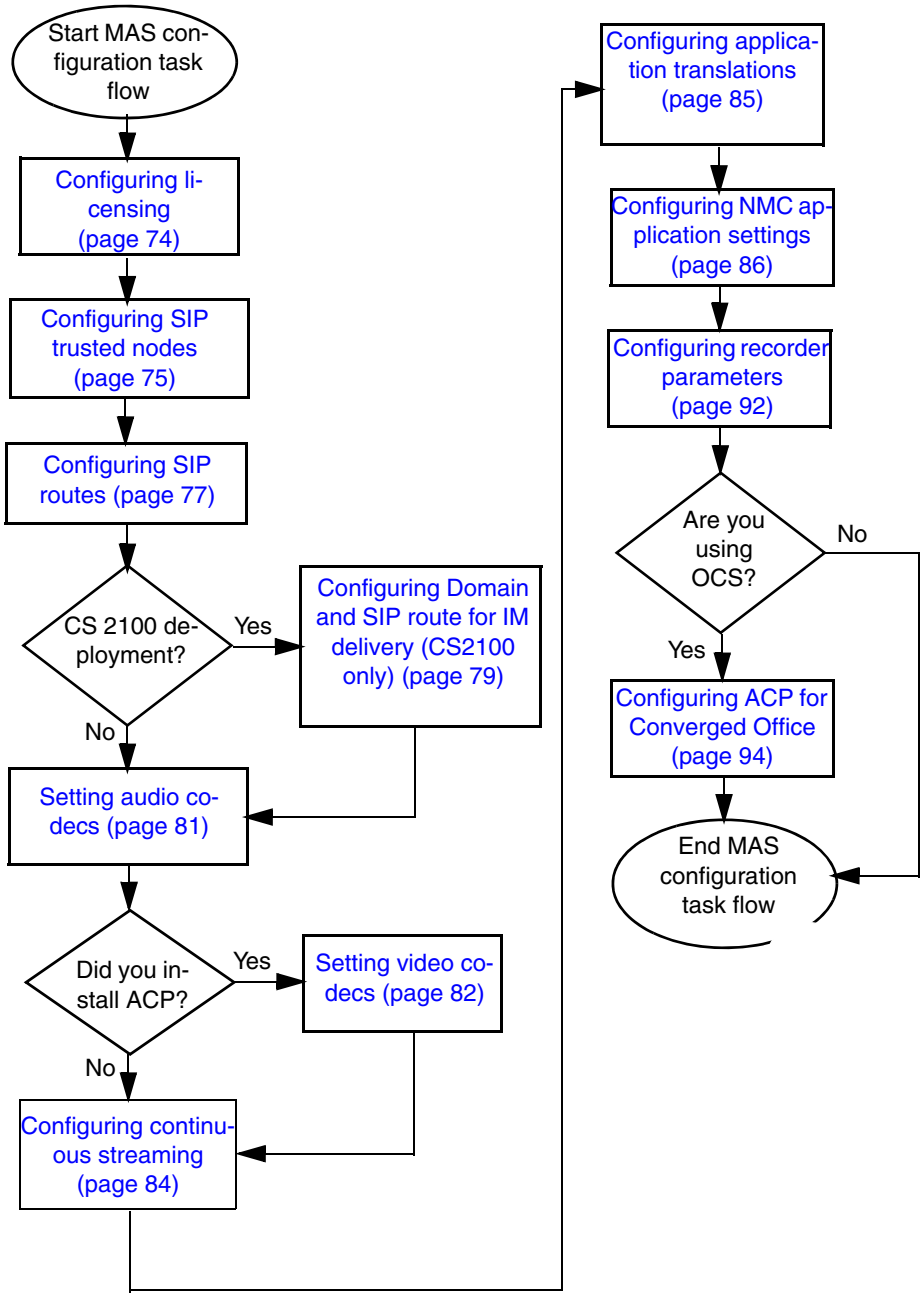
  For more information about logging into Element Manager, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

Media Application Server configuration task flow

Use the following task flow to help you configure the Media Application Server.

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Figure 15 MAS task flow



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Navigation

- Configuring licensing (page 74)
- Configuring SIP trusted nodes (page 75)
- Configuring SIP routes (page 77)
- Configuring Domain and SIP route for IM delivery (CS2100 only) (page 79)
- Setting audio codecs (page 81)
- Setting video codecs (page 82)
- Configuring continuous streaming (page 84)
- Configuring application translations (page 85)
- Configuring NMC application settings (page 86)
- Configuring recorder parameters (page 92)
- Configuring ACP for Converged Office (page 94)

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Configuring licensing

Perform the following steps to configure licensing for the MAS. For detailed procedures, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

Procedure steps

Step	Action
1	Plan your license requirements.
2	Install your primary license key on the primary node.
3	If you have more than one node, install the backup license key on the secondary node.
4	If you are installing a single-node NMC, configure node locked licensing. **OR** If you are installing an NMC cluster, configure cluster licensing.

--End--

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Configuring SIP trusted nodes

In a CS 1000 network, you must configure all servers from the CS 1000 installation that participate in communications with the NMC servers as SIP trusted nodes. This configuration includes the following:

- CS 1000 NRS (SRS/SPS) IP address
- CS 1000 Internal SIP Gateway IP address (Signaling Server NODE IP address) for SRS only

In a CS 1000 Converged Office deployment with Office Communications Server (OCS) 2007, you must also configure the following:

- OCS 2007 front-end server IP address
- OCS 2007 Mediation server IP address
- OCS 2007 Application Proxy (running CS 1000 MCM 3.0 application) IP address

In a CS 2100 network, this configuration includes the following:

- SST IP address
- OCS 2007 FE address (Converged Office deployment only)
- SSL IP address (only required if utilising the instant messages feature of NMC for entry/exit notifications)

In a cluster configuration, you do not need to configure the NMC nodes as trusted nodes.

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Configuration > Signaling > SIP > Nodes and Routes**.
2	On the **SIP Nodes and Routes** page, in the **Trusted Nodes** section, click **Add**.
3	On the **Add SIP Trusted Node** page, in the **Host or Server Address** box, type the IP address of the server you want to add as a trusted node.
4	Click **Save**.
5	Repeat step 1 to step 4 for each SRS, SPS, and Signaling Server (as well as any redundant SRS, SPS, or Signaling Server).
6	If you are configuring trusted nodes for a Converged Office solution with OCS 2007, repeat step 1 to step 4 for the OCS front end server, the OCS Mediation server, and the OCS Application Proxy.
7	Restart the MAS.

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--End--

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Configuring SIP routes

Configure SIP routes so the MAS server can make outgoing calls on behalf of NMC. The SIP route defines the domain a call is placed to, the address of the server where the call request is sent, the transport type, and the port to use. In a redundant CS 1000 or CS 2100 installation, create multiple routes that point to all servers involved.

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Configuration > Signaling > SIP > Nodes and Routes**.
2	On the **SIP Nodes and Routes** page, in the **Routes** section, click **Add**.
3	On the **Add SIP Route** page, ensure the **Enabled** check box is selected.
4	From the **Domain** list, select the wildcard SIP domain (*).
5	From the **Trusted Node** list, in a CS 1000 deployment, select the IP address of the NRS. In a CS 2100 deployment, select the IP address of the SST.
6	From the **Transport** list, select **TCP**.
7	In the **Remote Port** box, type **5060**.
8	In the **Priority** box, type **0** for a primary SRS or SPS. **OR** Type **1** for a redundant SRS or SPS.
9	In the **Weight** box, type **10**.
10	In the **Roles** section, select the **Proxy** check box.
11	Click **Save**. The new route appears on the SIP Nodes and Routes page.
12	On the **SIP Nodes and Routes** page, in the **Routes** section, select the route you just added.
13	Click **Edit**.
14	On the **Edit SIP Route** page, in the Properties section, from the **SIP Route Type** list, make a selection based on the CS 1000 NRS type. For SPS, select **CS1K SPS Home**. For SRS, select **CS1K SRS**. In a CS 2100 deployment, select **Standard SIP**.
15	Click **Save**.
16	Restart the MAS.

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--End--

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Configuring Domain and SIP route for IM delivery (CS2100 only)

Configure a SIP domain and SIP routes so the MAS server can deliver instant messages on behalf of NMC. The SIP route defines the domain a message is destined for, the address of the server where the call request is sent, the transport type, and the port to use.

In a redundant CS 2100 installation, create multiple routes that point to all SSL servers involved.

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Configuration > Signaling > SIP > Domains and Accounts**.
2	On the **SIP Nodes and Accounts** page, in the **Domains** section, click **Add**.
3	On the **Add SIP Domain** page, enter the **Name** of the domain used by SIP addresses registered against chairperson profiles.
4	Click **Save**.
5	In the Element Manager navigation, click **System Configuration > Signaling > SIP > Nodes and Routes**.
6	On the **SIP Nodes and Routes** page, in the **Routes** section, click **Add.**
7	On the **Add SIP Route** page, ensure the **Enabled** check box is selected.
8	From the **Domain** list, select the SIP domain configured in step **3**.
9	From the **Trusted Node** list, select the IP address of the CS 2100 SSL.
10	From the **Transport** list, select **UDP**.
11	In the **Remote Port** box, type **5060**.
12	In the **Priority** box, type **0** for a primary SSL **OR** Type **1** for a redundant SSL.
13	In the **Weight** box, type **10**.
14	In the **Roles** section, select the **Proxy** check box.
15	Click **Save**.

Configuring a SIP response code for when the system or application is locked

In a CS 2100 deployment, perform the following procedure to configure a SIP response code, which is returned by the MAS platform when the system or application is in Pending Lock or Locked state.

In a cluster configuration, perform this procedure on each node in the cluster.

If NMC is deployed with CS 1000, skip this procedure.

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Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Configuration > Signaling > SIP > General Settings**.
2	On the General Settings page, in the **SIP Response Code When System/ Application Locked** box, type **503**.
3	Click **Save**.
4	Restart the MAS.

--End--

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Setting audio codecs

NMC supports all audio codecs that are supported on the MAS. Perform the steps in the following procedure to set your audio codecs.

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Configuration** > **Media** > **Audio Codecs**.
2	On the **Audio Codecs** window, in the **Available** list, select the codecs that you want to enable.
3	Click **Add**.
4	Set the packet times (**PTimes** and **Default**) for each codec that you require.
5	Click **Save**.

--End--

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Setting video codecs

Set the video codecs to allow video-enabled clients to establish video conferencing.

The codecs that should be enabled depend upon the mix of supported video-enabled SIP clients that will be used to participate in video conferences on NMC.

- If one or more clients other than the Nortel MCS PC Client will be used, only the H.263 codec should be enabled. (The Nortel MCS PC Client will also operate with this codec, provided that this codec is also enabled in the users' Service Package on MCS.)
- If only the Nortel MCS PC Client will be used, the NNVC codec should be enabled. This codec offers better video quality than H.263, but is not available with the other supported video-enabled SIP clients.

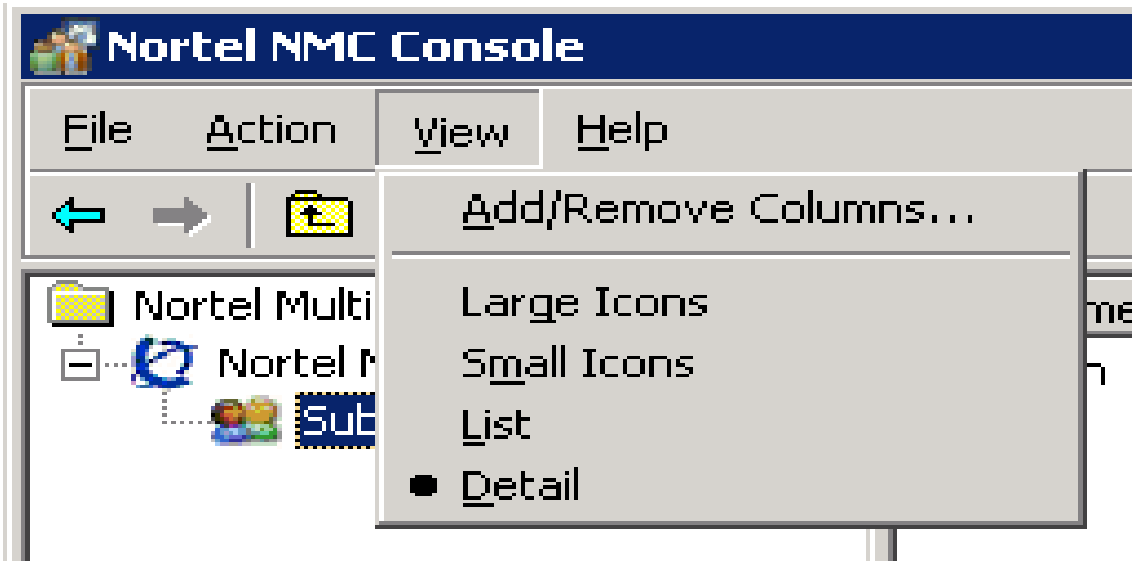
Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Configuration > Media > Video Codecs**.
2	On the Video Codecs window, disable all codecs except H.263 or NNVC depending on the video clients being utilised.
3	Set the Allowed Frame Rates, Default Frame Rate, Preferred Format, and Annex Profile for each codec as required.

- Note: If the Nortel MCS PC Client is to be used with H.263, set the H.263 Annex profile to 0 and enable the 'Enforce Annex X Profiles' option (See image below).

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Figure 16



4 Click **Save**.

5 Restart the MAS.

--End--

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Configuring continuous streaming

Configure continuous streaming to allow applications to give sessions music on hold streaming or connect them to Internet streaming radio servers.

For detailed procedures for the following tasks, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

Procedure steps

Step	Action
1	Create a local directory for the Directory Provider.
2	Configure the RSS URL.
3	Configure advanced RSS properties.
4	Configure the SHOUTcast primary server.
5	If you installed a backup SHOUTcast server, configure the SHOUTcast backup server.
6	Configure advanced SHOUTcast properties.
7	Adjust the continuous streaming volume.

--End--

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Configuring application translations

Perform the following steps to configure a translation for the Service Directory Number (SDN).

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Configuration > Translations.**
2	On the **Application Translations** window, click **Add**.
3	On the **New Application Translation** window, from the **Application Name** list, select **Nortel Multimedia Conferencing**.
4	From the **Mode** list, select either **SIP Request URI** or **SIP Request URI User**.
5	From the **Algorithm** list, select **Substring Match**.
6	In the **Pattern** box, type the SDN (the CDP code in the CS1000 that points to the PBX SIP route).
7	In the **Rank** box, type **1**.
8	Click **Save**.
9	If multiple SDNs are assigned (for example, for public access or toll-free), repeat step 1 to step 8 for each number.

--End--

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Configuring NMC application settings

Use Element Manager to configure the application settings for NMC.

Prerequisites

- For information about the parameters that you can configure, see Procedure job aid (page 86).

Procedure steps

Step	Action
1	In the Element Manager navigation, click **Products and Applications > Multimedia Conferencing > Conferencing Configuration**.
2	On the **Multimedia Conferencing Configuration** window, configure NMC as required.
3	Click **Save**.

--End--

Procedure job aid

Use the following table to help you configure the NMC application settings.

Parameter	Value	Description
Allow Audio Recording	Required Valid values—enabled or disabled Default—enabled	Enable to make audio recording available.
Allow Passcodes	Required Valid values—enabled or disabled Default—enabled	Whether a chairperson can add a passcode to the conference bridge that participants must enter after they enter the access code for the bridge.
Allow Video Capability	Required Valid values—enabled or disabled Default—enabled	When enabled and properly licensed, video capability is available.

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Parameter	Value	Description
Answer Delay	Required Valid values—0 to 100 Default—1	The number of rings before an incoming SIP call is answered. An entry of 0 implies an immediate answer. This option depends on the ring interval which is set to 1500 ms by default.
Default Locale	Required Valid values—string Default—English (United States)	Select the language of the prompts (only one language is supported at a time). Supported languages are English, French (France), Spanish (Spain), German (Germany), Japanese (Japan), Chinese (Taiwan), Chinese (China), Korean (Korea), Portuguese (Portugal), and Russian (Russia).
Default SIP Domain	Required Valid values—string (maximum 128 characters) Default—blank	Enter the user domain configured on the CS 1000 or CS 2100.
Entry/Exit Notification	Required Valid values: • None or Tones only • None, Tones or Names Default—None, Tones or Names	Controls whether tones, participant names, or no notification is played to indicate participants joining or leaving the conference. If Names is enabled for the conference and for the subscriber, participants are prompted to speak their name when entering the conference.
First Digit Timer	Optional Valid values—1000 ms (1 second) to 300000 ms (5 minutes) Default—7000 ms (7 seconds)	The duration (in milliseconds) to wait for the first dual-tone multi-frequency (DTMF) tone from the caller.
	(2 of 6)	

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Parameter	Value	Description
Instant Messages	Required Valid values—enabled or disabled Default—disabled	Controls the delivery of IM notifications at a global level. If enabled, the chair person receives IMs only if IMs are enabled for their profiles. If disabled, IMs are not issued regardless of the subscriber profile setting. For a chairperson to receive IMs, an outbound route must be configured on the MAS for the domain name of the chairperson's preconfigured SIP address. For information about routes, see Configuring SIP routes (page 77).
Instant Messages From User	Required Valid values—string Default—NMC	A string that contains the name provided within the From address of the IM sent.
Inter Announcement Wait Time	Optional Valid values—5000 (5 seconds) to 7200000 (120 minutes) Default—120 000 (2 minutes)	The duration (in milliseconds) between the chairperson has not arrived announcements.
Inter Digit Timer	Optional Valid values—1000 ms (1 second) to 300000 ms (5 minutes) Default—5000 ms (5 seconds)	The duration (in milliseconds) to wait between DTMF tones before timing out.

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Parameter	Value	Description
Key for Load Reporting	Required Valid values—string	Application key for load reporting. In a CS 1000 deployment, enter the exact string as it is entered for the name of the NMC endpoint in CS 1000 endpoint configuration (this entry is case-sensitive). **Attention:** You must configure this option on every node because this option is different for every node in the cluster. In a CS 2100 deployment, leave this parameter blank.
Long Call Duration	Required Valid values—0 to 10080 minutes Default—1440 minutes	Terminates any session in progress after the specified time.
Maximum Chairperson Pin Attempts	Optional Valid values—1 to 25 Default—3	The number of retry attempts allowed after an invalid PIN entry. An entry of 1 means that no retry attempts are allowed.
Maximum Participant Access Code Attempts	Optional Valid values—1 to 25 Default—3	The number of retry attempts allowed after an invalid access code entry. An entry of 1 means that no retry attempts are allowed.
Maximum Participant Passcode Attempts	Optional Valid values—1 to 25 Default—3	The number of retry attempts after an invalid passcode entry. An entry of 1 means that no retry attempts are allowed.
Maximum Wait Segments	Optional Valid values—1 to 100 Default—10	The number of times to play the chairperson has not arrived announcement before disconnecting the caller.

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Parameter	Value	Description
Outbound Call Treatment	Optional Valid values–None or Detect Voicemail and drop. Default–Detect Voicemail and Drop.	Defines behavior for outbound calls. If Detect Voicemail and drop is selected and NMC dials out to a participant, the call is not immediately connected to the bridge. NMC waits for the call to be answered and attempts to determine if the remote party is a voice mail system. If NMC determines that the remote party is a voice mail system, the call is dropped and the chairperson is notified by a voice prompt and instant message (if enabled).
SIP Operator	Optional Valid values—string	In a CS 1000 deployment, the format for this entry is: <DN>@<service_domain> where <DN> is a dialable number to reach the NMC operator and <service_domain> matches the parameter Default SIP Domain. Example: 3111@interop.com In a CS 2100 deployment, the format for this entry is sip:<DN>@<IP address of the SST> Example: sip:64445001@47.11.100.101
SMTP Server IP Address	Optional Valid values—string	The IP address of the SMTP server, which is used to deliver conference recording e-mail messages to the chairperson. The conference recording is sent as a .wav file. SMTP does not use any authentication to send messages. Any SMTP server provisioned must be configured to allow standard SMTP messaging to be sent from the MAS. User e-mail addresses are not validated against given domains. A user can enter any valid e-mail address.
(5 of 6)		

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Parameter	Value	Description
Softswitch Type	Required Valid values—CS 1000, CS 2x00, Other Default—CS 1000	The switch type with which NMC is deployed. For a CS 1000 network, select CS 1000. For a CS 2100 network, select CS 2x00
Star First Digit Timer	Optional Valid values—1000 ms (1 second) to 300000 ms (5 minutes) Default—3000 ms (3 seconds)	The duration (in milliseconds) to wait for the caller to press the star (*) key.
Star Inter Digit Timer	Optional Valid values—1000 ms (1 second) to 300000 ms (5 minutes) Default—3000 ms (3 seconds)	The duration (in milliseconds) to wait for DTMF tones before timing out.
User Static Subscriber Domain	Required Valid values—enabled or disabled Default—enabled	Indicates whether the Static Subscriber Domain is used. Ensure that this value is enabled.
(6 of 6)		

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Configuring recorder parameters

Configure the recorder parameters to enable audio recording of NMC conferences.

Although this procedure enables audio recording for your system, all conferences are not automatically recorded. To record a conference, the chairperson must have audio recording enabled on their profile and must issue a command during the conference to invoke the recording.

When a conference is recorded, the chairperson receives the recording as a .wav file in an e-mail message.

Prerequisites

- For information about the parameters you can configure, see Procedure job aid (page 92).
- Ensure Allow Audio Recording is enabled. See Configuring NMC application settings (page 86).

Procedure steps

Step	Action
1	In the Element Manager navigation, click **Products and Applications** > **Multimedia Conferencing** > **Recorder Configuration**.
2	On the **Recorder Configuration** window, configure the values for **Audio Recording Collection Interval**, **Maximum Recording Time**, and **Record Beep**.
3	Click **Save**.

--End--

Procedure job aid

Use the following table to help you configure the recorder parameters.

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Parameter	Values	Description
Audio Recording Collection Interval	Required Valid values—10 to 30 minutes Default—30 minutes	The number of minutes contained in each audio recording e-mail message (30 minutes equals approximately 6 MB).
Maximum Recording Time	Required Valid values—30 to 600 minutes Default—600 minutes	The maximum number of minutes to record (provided that the conference lasts that long). Nortel recommends that you set this value as a multiple of the Audio Recording Collection Interval value. Because the recording always happens in increments of the Audio Recording Collection Interval, using a value that is not a multiple of the Audio Recording Collection Interval value can cause the actual total recording time to exceed the value specified in this setting.
Record Beep	Required Valid values—enabled or disabled Default—enabled	If enabled, a tone plays every 12 to 15 seconds when a conference is being recorded. Check your local legislation related to recording conversations before you disable this feature.

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Configuring ACP for Converged Office

Configure Audio Conferencing Provider (ACP) if you are installing NMC as part of a Converged Office solution. In a cluster configuration, you configure the ACP parameters only on the primary node.

Prerequisites

- For information about the parameters you can configure, see Procedure job aid (page 94).

Procedure steps

Step	Action
1	In the Element Manager navigation, click **Products and Applications > Multimedia Conferencing > ACP Server Configuration**.
2	In the **Audio Conferencing Provider Configuration** window, configure each parameter that you want to configure.
3	After you configure each required options, click **Save**.
4	Restart the MAS.

Attention: Changes to any of the parameters in the ACP Server window require that you restart the MAS. You do not need to restart after each change. You can make all required changes and restart the MAS once.

--End--

Procedure job aid

Use the following table to help you configure the ACP server parameters.

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Parameter	Field	Description
ACP Domain	Required Values—string (maximum length: 1024) Default—empty string	The ACP domain as provisioned in the OCS static route related to the ACP server. For most conferencing scenarios, this value is the fully qualified domain name (FQDN) of the server where ACP resides.
Cache Synchronization Time	Required Values—1AM to 12AM (select from the list) Default—1AM	The time of the day when the Active Directory cache synchronization takes place.
Microsoft Communication Server	Required Value—OCS	The type of Microsoft Communication Server used in deployment of the Converged Office feature (OCS 2007)
Network Dialing Plan	Required Values—CDP or UDP Default—CDP	The Network Dialing Plan used for deployment of the Converged Office feature. Select CDP for Coordinated Dialing Plan or UDP for Uniform Dialing Plan. In a CS 2100 installation, if a private dialing plan is not deployed, this parameter is not required. Leave it at the default value.
Password	Required Values—string (maximum length: 1024) Default—empty string	The password for the service account to log on to the Active Directory.
Phone Context	Required Values—string (maximum length: 1024) Default—empty string	The value of the phone-context parameter as configured in the CS 1000 Converged Office MCM component Phone Context. This parameter is not used in an OCS configuration.

(1 of 3)

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Parameter	Field	Description
Phone Field	Required Values—string (maximum length: 1024) Default—empty string	The name of the Active Directory attribute where the user phone number is stored, as entered in the CS 1000 MCM component under Active Directory Mapping > Phone Field (for most installations, this value is telephoneNumber). This parameter is not used for OCS configuration.
Phone Format	Required Values—string (maximum length: 1024) Default—empty string	The filter used to extract phone numbers from the Active Directory Phone Field entry, as configured in the CS 1000 MCM component under Active Directory Mapping > Phone Format (for example, ESN ???-????). This parameter is not used for OCS configuration.
Port Number	Optional Values—string (maximum length: 1024) Default—empty string	Microsoft Active Directory port number. Leave this parameter empty unless the standard Active Directory port has been changed.
Query Configuration	Required Values—1–Use AD Cache; 2–Use AD Cache Then AD Server; 3–Query AD Server (select from the list) Default—Use AD Cache	Active Directory Query Configuration.
Server Address	Required Values—string (maximum length: 1024) Default—empty string	Microsoft Active Directory Server IP address.

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Parameter	Field	Description
Server Security Certificate Issuer Name	Optional Values—string (maximum length: 1024) Default—empty string	Security certificate issuer name (not used in this release).
Server Security Certificate Serial Number	Optional Values—string (maximum length: 1024) Default—empty string	Security certificate serial number (not used in this release).
Server TCP Port	Required Values—1 to 65535 (integer) Default—5040	The port that the ACP server listens to if TCP is used.
Server TLS Port	Optional Values—1 to 65535 (integer) Default—5041	The port that the ACP server listens to if TLS is used (not used for this release).
Soap Servers	Required Values—string (maximum length: 1024) Default—127.0.0.1	List of the Simple Object Access Protocol (SOAP) servers that ACP connects to. One SOAP server exists for each node in the cluster. The SOAP server for the node where ACP resides populates automatically during the installation. For a multinode cluster, add the IP addresses of the remaining servers, separated by semicolons (for example, 127.0.0.1;147.2.4.7).
UDP Access Code	Required Values—string (maximum length: 1024) Default—empty string	For UDP, enter the prefix used to make a directory UDP number dialable. For CDP, leave this parameter blank.
User Name	Required Values—string (maximum length: 1024) Default—empty string	The name of the service account used to log on to the Active Directory (format: WINDOWS_DOMAIN\user_name).

(3 of 3)

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Nortel Multimedia Conferencing configuration

This section explains the tasks you must perform to configure subscribers for the NMC application.

Prerequisites

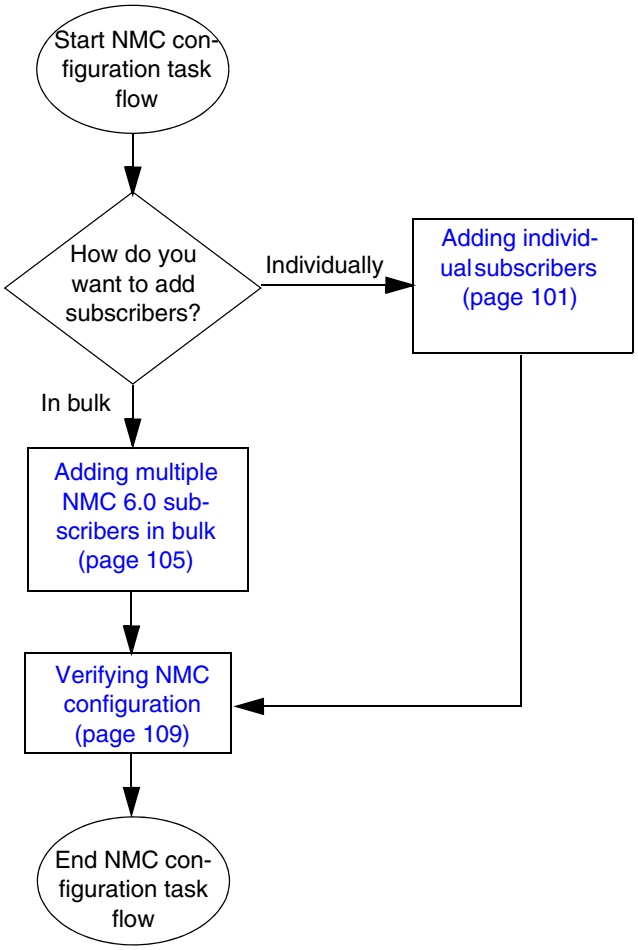
- You installed the MAS 6.1 platform.
- You installed the NMC 6.0 software.
- For information about logging into Element Manager, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

NMC configuration task flow

Use the following task flow to help you configure the NMC subscribers.

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Figure 17



Navigation

- Adding individual subscribers (page 101)
- Adding multiple NMC 6.0 subscribers in bulk (page 105)
- Adding multiple NMC 5.0 subscribers in bulk (page 107)
- Verifying NMC configuration (page 109)

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Adding individual subscribers

Use the following procedure to add an individual subscriber.

Prerequisites

- You installed the MAS 6.1 platform.
- You installed the NMC 6.0 application software.
- For information about the subscriber parameters, see Procedure job aid (page 101).
- You can perform this procedure again to add new subscribers at any time.

Attention: In a cluster configuration, you need to perform subscriber configuration on only one node. You can access the Subscriber Management from any node in a cluster.

Procedure steps

Step	Action
1	In the Element Manager navigation pane, click **Products and Applications > Multimedia Conferencing > Subscriber Management**.
2	On the **Nortel Multimedia Conferencing Subscriber Management** window, click **New Subscriber**.
3	On the **Subscriber Profile** dialog box, type the required information.
4	Click **Ok**.

--End--

Procedure job aid

Use the following table to help you configure NMC subscribers.

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Parameter	Value	Description
Access Code	Numeric—any unique number in the domain, 4 to 14 digits in length. You can use something that is easy to remember, such as the telephone number of the subscriber (as long as it is unique to the subscriber). Example: 4456453	The access code to open the conference bridge (mandatory)
Audio Emoticons	Enabled or disabled Default—enabled	Controls whether audio emoticons are enabled (optional)
Audio Recording Email	Alphanumeric—any valid e-mail address@domain, up to 320 characters in length. Example: jdoe@xyz.com	The e-mail address to which audio recordings are sent (mandatory if Audio Record Enabled is selected)
Audio Recording	Enabled or disabled Default—disabled	Controls whether conference recording is enabled for this user (optional)
Chair Ends Conference	Enabled or disabled Default—enabled	Controls whether the conference ends when the chairperson exits (optional)
Chair PIN	Numeric—any number from 4 to 10 digits in length Example: 1234	The personal identification number (PIN) the chairperson uses to open the conference bridge (mandatory)
Confirm Chair Pin	Numeric—any number from 4 to 10 digits in length	Retype the Chair PIN to confirm the PIN.
Entry/Exit Notification	None, Names, or Tones Default—Tones	Controls whether a name, tone, or no notification is played to indicate participants joining or leaving the conference (mandatory)
Fast Start	Enabled or disabled Default—disabled	Controls whether the conference can start before the chairperson arrives (optional)

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Parameter	Value	Description
First Name	Alphanumeric—maximum of 80 characters Example: John	The first name of the subscriber (mandatory)
Ignore Bridge Time Limit	Enabled or disabled Default—disabled	If enabled, conferences started with this feature enabled do not end after the specified time limit. Conferences remain open until all participants, including the chairperson, disconnect.
IM Notification	Enabled or disabled Default—disabled	Controls whether instant message (IM) notifications are sent to the chair person
Language	Predefined values—English, French, Spanish, German, Japanese, Cantonese, Chinese (Simplified), Korean, Portuguese, and Russian. Default—English	The default language of the chair, which determines the language used in conference recording e-mail messages (optional)
Last Name	Alphanumeric—maximum of 80 characters Example: Doe	The last name of the subscriber (mandatory)
Max Bridge Size	Numeric—from 2 to 300 Default—32	The maximum number of participants (including the chairperson) allowed in a conference for the user (optional)
SIP User Id	Alphanumeric—any valid SIP user name up to a maximum of 320 characters Example: jdoe@xyz.com	The SIP user name in the format username@domain (mandatory)
Status	Active or inactive Default—Active	The state of the account (inactive accounts cannot open a conference bridge) (optional)
Subscriber Id	Alphanumeric—any number in the domain, up to a maximum of 80 characters Example: A1234567	An identifier for the subscriber, such as a global employee ID (optional)

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Parameter	Value	Description
Timezone	Predefined set of time zones Default—Eastern (GMT -05:00)	The time zone used for the subscriber, used in recording e-mail messages to indicate the start time and end time of recording (optional)
Video Conferencing	Enabled or disabled Default—disabled	Controls whether conferencing is enabled for the user (optional)
(3 of 3)		

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Adding multiple NMC 6.0 subscribers in bulk

Use the NMC bulk import tool to add multiple NMC 6.0 subscribers at one time. The bulk import tool copies subscriber data from a comma-separated value (CSV) file.

Prerequisites

- You installed and configured the MAS.
- You installed the NMC application.
- You have a comma-separated value (CSV) file containing subscriber information.
- For an example of how to format the CSV file, see the sample file (sampleSubscriberData.csv) provided by Nortel. To view this file, navigate to D:\Program Files\Nortel\Multimedia_Applications\MAS\platdata\Applications\NMC\BulkProvisioning.

Attention: In a cluster configuration, you need to perform subscriber configuration on only one node. Use the NMC bulk import tool on the first node of the cluster.

Procedure steps

Step	Action
1	On the Media Application Server, select **Start > All Programs > Nortel Multimedia Conferencing > Tools > Nortel Multimedia Conferencing - Bulk Import Tool**. The system prompts you for a file name: `Please enter the import csv filename or press q to quit:`
2	Enter the location and name of the csv file that you want to import (for example C:\MyDocuments\MyNMCsubscribers.csv). The system validates the data in the csv file and then prompts you to proceed with the import. `Enter 'y' to proceed with import or any other key to quit.`
3	Enter **`y`**.
4	If duplicate subscribers exist, enter **`y`** to overwrite them. **OR** Enter **`n`** to skip the duplicate subscribers.

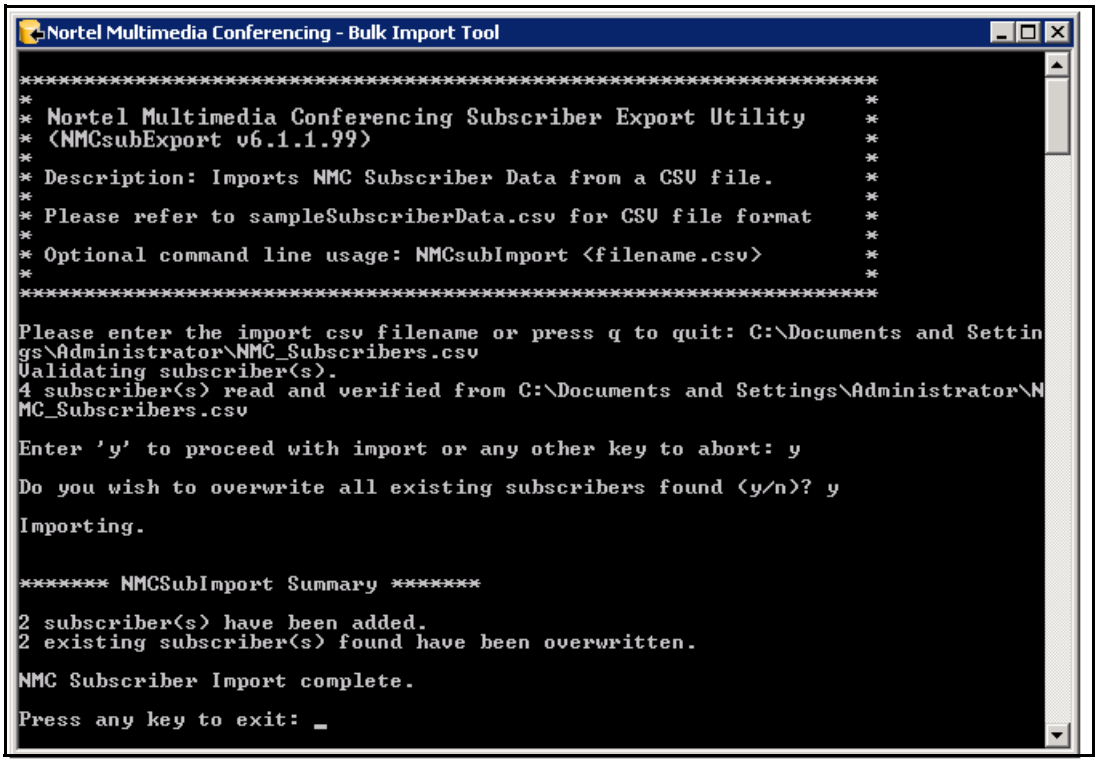
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5 Press any key to exit the bulk import tool.

--End--

Procedure job aid

The following figure shows the NMC bulk import tool screen.



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Adding multiple NMC 5.0 subscribers in bulk

You can optionally use the NMC bulk import tool to import multiple NMC 5.0 subscribers to NMC 6.0 at one time. You do not have to complete this procedure during an upgrade from NMC 5.0 to NMC 6.0 since subscriber data contained in the service data archive is automatically imported. The bulk import tool copies subscriber data from a comma-separated value (CSV) file.

Prerequisites

- You have a comma-separated value (CSV) file containing NMC 5.0 subscriber information.
- For an example of how to format the CSV file, see the sample file (sampleSubscriberData.csv) provided by Nortel. To view this file, navigate to D:\Program Files\Nortel\Multimedia_Applications\MAS\platdata\Applications\NMC\BulkProvisioning.

Attention: In a cluster configuration, you need to perform subscriber configuration on only one node. Use the NMC bulk import tool on the first node of the cluster.

Procedure steps

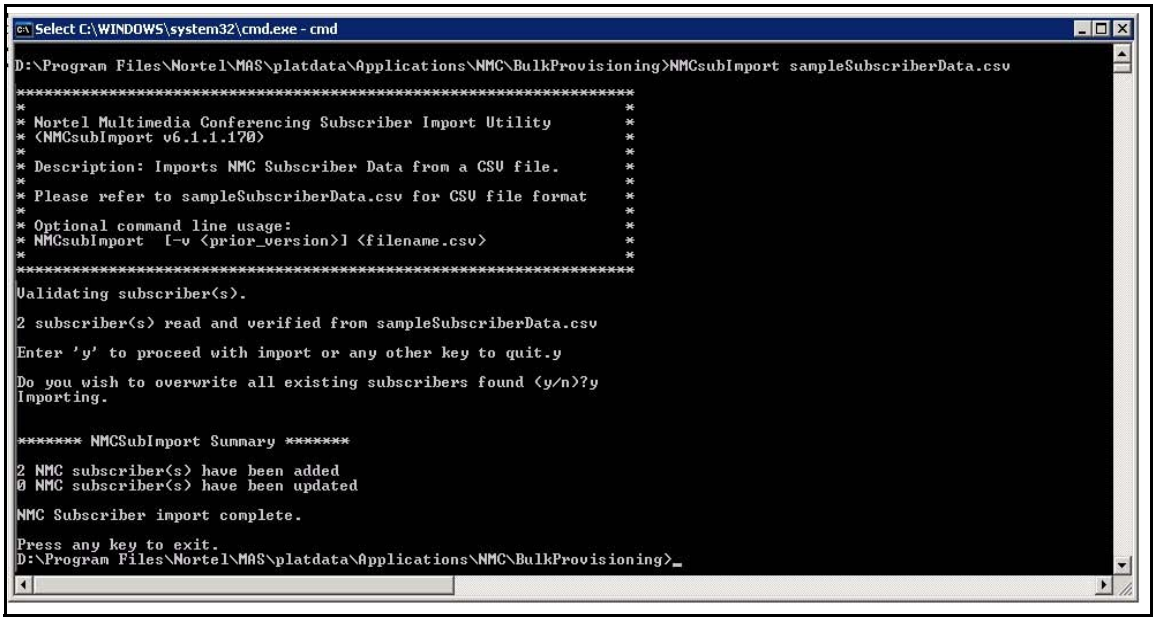
Step	Action
1	At a command prompt, type the following command: **NMCsubImport -v <version number> <filename.csv>** For example: `NMCsubImport -v 5.0 C:\MyDocuments\MyNMCsubscribers.csv`
2	The system validates the data in the csv file and then prompts you to proceed with the import. `Enter 'y' to proceed with import or any other key to quit.`
3	If duplicate subscribers exist, enter **y** to overwrite them. **OR** Enter **n** to skip the duplicate subscribers.
4	Press any key to exit the bulk import tool.

--End--

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Procedure job aid

The following figure shows the NMC bulk import tool screen.



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Verifying NMC configuration

Verify the NMC configuration to ensure your system can host a conference.

Prerequisites

- You installed and configured the MAS.
- You installed and configured NMC.
- You added subscribers to NMC.

Procedure steps

Step	Action
1	Verify that you can place a call to the conferencing number.
2	Verify that you can create a conference with 2 or 3 participants.
3	Verify that all participants can hear each other.
4	Issue the command to count the number of participants (*#).
5	Verify that the system correctly counts the number of participants.

Attention: If verification fails, check the parameters listed in Common configuration problems (page 169).

--End--

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Nortel Multimedia Conferencing administration

This module describes the tasks you must perform to administer the Nortel Multimedia Conferencing application.

Prerequisites

- You installed the MAS 6.1 platform.
- You installed the NMC 6.0 software.
- You configured NMC.
- For information about logging into Element Manager, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

Navigation

- Searching for subscribers (page 112)
- Modifying a subscriber (page 113)
- Deleting a subscriber (page 114)
- Exporting bulk subscriber information (page 115)
- Generating on demand reports (page 117)
- Scheduling reports (page 121)
- Uninstalling the NMC application software (page 126)
- Loading emoticons (page 127)

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Searching for subscribers

Use the following procedure to search for NMC subscribers.

Prerequisites

- You added subscribers to NMC.

Attention: In a cluster configuration, you can perform subscriber administration on any node.

Procedure steps

Step	Action
1	In the Element Manager navigation pane, click **Products and Applications > Multimedia Conferencing > NMC Subscriber Management**.
2	On the **Nortel Multimedia Conferencing Subscriber Management** window, from the **Query** list, select the property by which you want to search (Access Code, First Name, Last Name, Subscriber ID, SIP Userid, or Status).
3	In the **Criteria** box, type the information to search for and click **Search**. You can use an asterisk (*) as a wildcard. A list of subscribers who meet the criteria you searched for appears below.

--End--

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Modifying a subscriber

Use the following procedure to modify subscriber information (such as changing the chairperson's pin number).

Attention: Changes you make on the Subscriber Management window do not affect conferences in progress. Changes can only affect future conferences.

Prerequisites

- You added subscribers to NMC.
- You know how to search for a subscriber. See Searching for subscribers (page 112).

Attention: In a cluster configuration, you need to perform subscriber administration on only one node.

Procedure steps

Step	Action
1	Search for the subscriber whose information you want to modify.
2	From the list of results, click the **Select** list for the subscriber you want to modify.
3	Click **Modify Subscriber**.
4	On the **Subscriber Profile** dialog box, make the necessary changes.
5	Click **Ok** to save your changes.

--End--

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Deleting a subscriber

Use the following procedure to delete a subscriber from NMC.

Prerequisites

- You added subscribers to NMC.
- You know how to search for a subscriber. See Searching for subscribers (page 112).

Attention: In a cluster configuration, you need to perform subscriber administration on only one node.

Procedure steps

Step	Action
1	Search for the subscriber you want to delete.
2	From the list of results, click the **Select** list for the subscriber you want to delete.
3	Click **Delete Subscriber**.
4	On the **Confirm Delete** dialog box, click **Ok**.

--End--

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Exporting bulk subscriber information

You can use the bulk export tool to export subscriber information in bulk.

Prerequisites

- You added subscribers to NMC.

Attention: In a cluster configuration, you need to perform subscriber administration on only one node. Use the NMC bulk export tool on the first node of the cluster.

Procedure steps

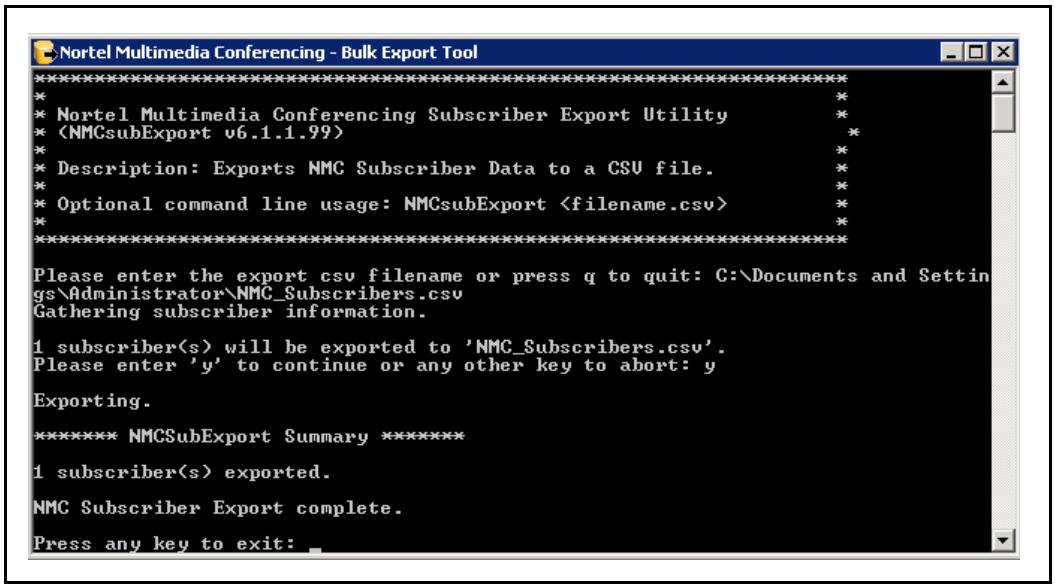
Step	Action
1	On the Media Application Server, select **Start > All Programs > Nortel Multimedia Conferencing > Tools > Nortel Multimedia Conferencing - Bulk Export Tool**. The system prompts you for a file name: `Please enter the export csv filename or press q to quit:`
2	Enter a location and file name to export the subscriber information to (for example, C:\Documents and Settings\Administrator\NMC_Subscribers.csv). If you do not enter a location, by default, NMC exports the file to D:\Program Files\Nortel\Multimedia_Applications\MAS\bin. The system calculates the number of subscribers to export and prompts you to continue with the operation. `Please enter y to continue or any other key to abort:`
3	Enter **`y`**.
4	Press any key to exit the bulk export tool.

--End--

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Procedure job aid

The following figure shows the NMC bulk export tool screen.



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Generating on demand reports

Use the following procedure to generate NMC usage reports. NMC usage reports calculate minutes used by each subscriber for each conference, average R-Factor, number of parties, number of video parties, and date and time. You can generate these reports in comma-separated value (CSV) format. For an example of NMC usage reports, see Procedure job aid (page 113). For more information about reports, see *Nortel Media Application Server and Interactive Communications Portal Performance Management - Operational Measurements and Reporting* (NN44471-701).

You can also schedule NMC usage reports to generate on a daily or weekly basis. For more information, see Scheduling reports (page 121).

NMC Usage reports use the Jasper reporting engine to generate useful reports on conference activity that can be exported to multiple formats. These reports display details of all conferences over a specified time period, with information such as the date and time, the number of participants present, the total number of minutes, and the number of video sessions.

Reports can be exported to the following formats:

- Adobe PDF
- Microsoft Excel
- Rich Text Format (rtf)
- CSV (Comma Separated Values)
- Adobe Flash Format

These exporting options are available as clickable icons shown at the top of the generated report.

Prerequisites

- You can create the following NMC reports:
  - Nortel MeetMe Multimedia Conferencing Usage Export
  - Nortel MeetMe Multimedia Conferencing Usage Export Recurring
  - Nortel MeetMe Multimedia Conferencing Usage
  - Nortel MeetMe Multimedia Conferencing Usage Recurring

Procedure steps

Step	Action
1	In the Element Manager navigation pane, click **Tools > Reports**.

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2 On the **Reporter Login** window, in the **Username** box, type **nortelmasadmin**.

3 In the **Password** box, type **nortel**.

4 Click **Login**.

5 On the Reporter **Getting Started** page, click **view your reports**.

6 On the **Reports** page, click the report that you want to generate.

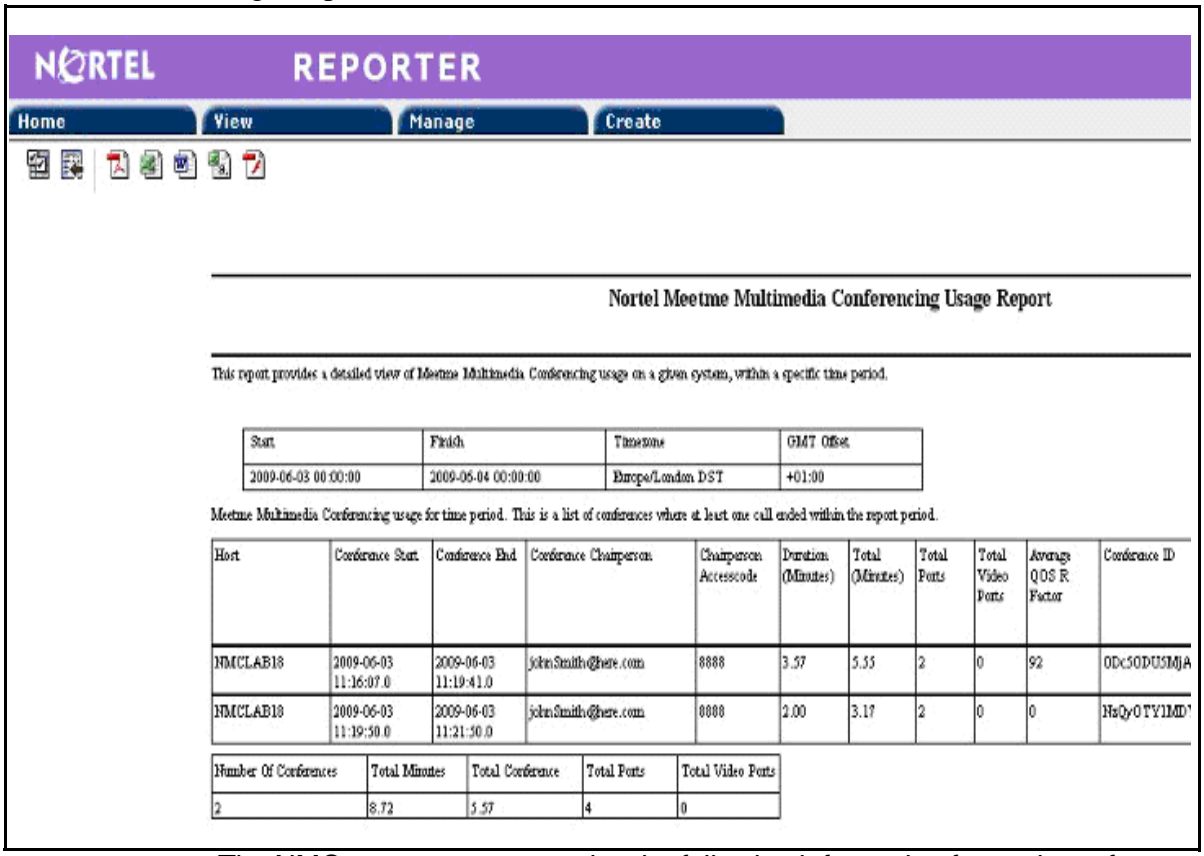
7 On the report page that appears, configure the **Start Date Time**, **Duration**, **Report Time Zone**, and **Report Locale** for the report.

8 Click **Run Report**.

--End--

An example of an NMC Usage report is shown below:

Figure 18 NMC usage Report


NORTEL REPORTER

Home View Manage Create

Nortel Meetme Multimedia Conferencing Usage Report

This report provides a detailed view of Meetme Multimedia Conferencing usage on a given system, within a specific time period.

Start	Finish	Timezone	GMT Offset
2009-06-03 00:00:00	2009-06-04 00:00:00	Europe/London DST	+01:00

Meetme Multimedia Conferencing usage for time period. This is a list of conferences where at least one call ended within the report period.

Host	Conference Start	Conference End	Conference Chairperson	Chairperson Accesscode	Duration (Minutes)	Total (Minutes)	Total Ports	Total Video Ports	Average QOS R Factor	Conference ID
NMCLAB18	2009-06-03 11:16:07.0	2009-06-03 11:19:41.0	johnSmith@here.com	8888	3.57	5.55	2	0	92	ODc5ODUSMjA
NMCLAB18	2009-06-03 11:19:50.0	2009-06-03 11:21:50.0	johnSmith@here.com	8888	2.00	3.17	2	0	0	NzQyOTY1MD'

Number Of Conferences	Total Minutes	Total Conference	Total Ports	Total Video Ports
2	8.72	5.57	4	0

The NMC usage report contains the following information for each conference in the selected time period:

- Host - (Name of NMC Server)

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- Conference Start - (Date and Time)
- Conference End - (Date and Time)
- Conference Chairperson - (Chairperson SIP address)
- Chairperson Accesscode
- Duration (Minutes)
- Total (Minutes) - (Total combined minutes for all participants)
- Total Ports - (No. of Sessions Started, no. of participants)
- Total Video Ports - (Video Sessions Started, no. of participants using video)
- Average QoS RFactor - (Quality of Service measure)
- Conference ID - (ID of conference, can be used to find log entries)

The NMC usage report contains the following general information for the time period requested:

- Start - (Start time, selected by user)
- Finish - (Finish time, selected by user)
- Timezone
- GMT Offset - (Hours difference from GMT)
- Number Of Conferences - (Total number of conferences held)
- Total Minutes - (Total time of all conference sessions)
- Total Conference - (Total minutes of conferences, sum of conference duration)
- Total Ports - (Total sessions, conference participants)
- Total Video Ports (Total number of video sessions)

For more information about reports, see Nortel Media Application Server Performance Management - Operational Measurements and Reporting (NN44471-704).

The NMC usage report contains the following information for each conference:

- Conference Chairperson
- Chairperson Accesscode
- Conference Start
- Conference End
- Duration (Minutes)

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- Total Session Minutes
- Sessions Started
- Video Sessions Started
- Average QoS RFactor
- Conference ID

The NMC usage report contains the following information for the time period requested:

- Sessions Terminated Before Conference Started
- Video Sessions Started (Not in Conference)
- Total Session Minutes (Not in Conference)
- Total Sessions Started
- Total Session Minutes
- Number Of Conferences
- Total Conference Minutes
- Total Video Sessions Started

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Scheduling reports

Schedule NMC reports to automatically generate on a daily or weekly basis.

Prerequisites

- Fields marked with an asterisk (*) are mandatory.
- You can create the following NMC reports:
  - Nortel MeetMe Multimedia Conferencing Usage Export
  - Nortel MeetMe Multimedia Conferencing Usage Export Recurring
  - Nortel MeetMe Multimedia Conferencing Usage
  - Nortel MeetMe Multimedia Conferencing Usage Recurring

Procedure steps

Step	Action
1	In the Element Manager navigation pane, click **Tools > Reports**.
2	On the **Reporter Login** window, in the **Username** box, type **nortelmasadmin**.
3	In the **Password** box, type **nortel**.
4	Click **Login**.
5	On the Reporter **Getting Started** page, click **view your reports**.
6	On the **Reports** page, click the **Schedule Report** icon beside the report that you want to generate.
7	On the **Jobs scheduled** window, click **Schedule Job**.
8	On the Job page, in the **Label** box, type a label for your report.
9	Click **Next**.
10	On the **Schedule** page, configure the report scheduling options.
11	Click **Next**.
12	On the **Parameters** page, configure the report parameter options.
13	Click **Next**.
14	On the **Output** page, configure the report output options.
15	Click **Save**.

--End--

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Variable definitions

Variable	Value	Description
Report	Required Default–the report you selected.	The selected report.
Label	Required Valid values–string (maximum 100 characters) Default–blank	The report label to identify the report.
Description	Optional Valid values–string Default–blank	Description of the report.
Time Zone	Required Valid values–predefined set of time zones Default–Eastern Standard Time	The time zone used for the report time stamp.
Start	Required Valid values–Immediately or On Default–Immediately	The time to start generating the report. Select Immediately to begin the report generation now. Select On to configure a date and time to start generating the report. You can click Pick a date to select a date and time or type a date and time in the format MM-DD-YYYY hh:mm. For example 02-03-2009 13:55.

(1 of 4)

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Variable	Value	Description
Recurrence	Required Valid value–No Recurrence, Simple Recurrence, or Calendar Recurrence Default–No Recurrence	Controls how often the report is generated. Select No Recurrence to generate a single report. Select Simple Recurrence to schedule a report generation indefinitely, until a specific date, or a specific number of times. You must also configure the report frequency. Select Calendar Recurrence to schedule report generation for specific dates and times.
Start Date Time	Required Valid value–date and time in the format MM-DD-YYYY hh:mm Default–Midnight (00:00) of the previous day	The report start date and time of the reporting period.
Duration	Required Valid value–predefined set of time increments Default–24 Hours	The report duration for the reporting period.
Report Time Zone	Required Valid value–predefined set of time zones Default– GMT +0:00	The report time zone.
Report Locale	Required Valid value–predefined set of locales Default–English US	The language the report is generated in.
Base output file name	Required Valid value–string Default–the report name	Defines the report file name.

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Variable	Value	Description
Output description	Optional Valid value–string Default–blank	A description of the report output.
Output formats	Required Valid value–PDF, HTML, Excel, RTF, or CSV Default–PDF	Controls the format of the report.
Locale	Required Valid value–predefined set of locales Default–(Default)	The report locale.
Folder	Required Valid value–predefined set of folders Default–blank	Defines where the report generated is saved.
Sequential File Names	Optional Valid value–enabled or disabled Default–disabled	Enables or disabled sequential file names for the generated reports.
Timestamp Pattern	Optional Valid value–YYYYMMDDhhmmss Default–default	The timestamp pattern on generated reports. This option is available only if you enable Sequential File Names.
Overwrite Files	Optional Valid value–enabled or disabled Default–disabled	Controls if reports are overwritten or not.
To	Optional Valid value–valid e-mail address Default–blank	E-mail address to send report notification to.

(3 of 4)

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Variable	Value	Description
Subject	Optional Valid value–string Default–blank	Subject of report notification e-mail.
Message Text	Optional Valid value–string Default–blank	Message text of report notification e-mail.
Attach Files	Optional Valid value–enabled or disabled Default–disabled	Enables or disables attachments for the report notification e-mail.
Skip empty reports	Optional Valid value–enabled or disabled Default–disabled	Empty reports are not produced. If there is no data available, a report with the words No Data Available is created. Leave the default value for this option since blank reports are not possible for NMC.
(4 of 4)		

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Uninstalling the NMC application software

Perform the steps in the following procedure to uninstall the NMC software.

Attention: If you perform a complete uninstall (Preserve Configuration Data and all Subscriber Data is cleared) on one of the master nodes in a cluster, configuration and subscriber data is removed from the entire cluster. If you need to preserve the data, Nortel recommends that you back up all data and export the subscribers before you perform this procedure. For information about backing up data, see *Nortel Media Application Server Administration and Security* (NN44471-600). For information about exporting subscribers, see Exporting bulk subscriber information (page 115).

Prerequisites

- You installed the NMC application software.
- Check for active sessions. If active sessions exist, they are taken down when you uninstall NMC.

Procedure steps

Step	Action
1	Click **Start > Settings > Control Panel**.
2	Click **Add or Remove Programs**.
3	From the list of currently installed programs, select **Nortel Multimedia Conferencing 6.0.xxx**.
4	Click **Remove**.
5	If you want to preserve configuration and subscriber data, on the **Ready to Uninstall Program** dialog box, ensure that **Preserve Configuration Data and all Subscriber Data** is selected.
6	On the **InstallShield Wizard Complete** dialog box, click **Finish**.

--End--

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Loading emoticons

Perform the steps in the following procedure to load emoticons on to the system. You can load up to 10 emoticons.

Prerequisites

- You installed the MAS 6.1 platform.
- You installed the NMC 6.0 application software.
- You configured NMC.
- You know how to install the NMC application. See Installing the NMC application software (page 55).
- You know how to uninstall the NMC application. See Uninstalling the NMC application software (page 126).

Procedure steps

Step	Action
1	Record the emoticons in linear 16-bit PCM 8 KHZ format.
2	Name the emoticon files as follows: • **emotSE0.wav** • **emotSE1.wav** • **emotSE2.wav** • **emotSE3.wav** • **emotSE4.wav** • **emotSE5.wav** • **emotSE6.wav** • **emotSE7.wav** • **emotSE8.wav** • **emotSE9.wav**
3	On the MAS, navigate to the directory **D:\Program Files\Nortel\Multimedia_Applications\MAS\platdata**.
4	Place your emoticon files in the following directory in Linear 16-bit PCM:MAS\platdata\Announcements\meetme\default\us\en\l16.
5	Make a copy of the **Announcements** folder.
6	Rename the copied folder to **AnnouncementsCustom**.

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Attention: By placing the files in the AnnouncementsCustom folder, you ensure that they are not overwritten during an upgrade. When you reinstall NMC, the system automatically copies the files from the AnnouncementsCustom folder to the Announcements folder.

--End--

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Nortel Multimedia Conferencing 5.0 Upgrade

MAS and NMC upgrade work flow

This section explains how to upgrade the Media Application Server (MAS) 5.1 to MAS 6.1 and Nortel Multimedia Conferencing 5.0 to 6.0.

Attention: These procedures are based on a scenario in which you designate two master CStore servers within the cluster as Master A and Master B, and you designate any additional servers in the cluster as idle CStore servers.

In MAS 6.1, Master A is called Primary, Master B is called Secondary, and Idle CStore servers are called Standard.

If you have single node configuration, complete the procedures in MAS B and NMC upgrade and server backup (page 143) only.

You perform this operation in a live (production) situation, which reduces system capacity. Select a time during a maintenance period or traffic is extremely low.

Prerequisites

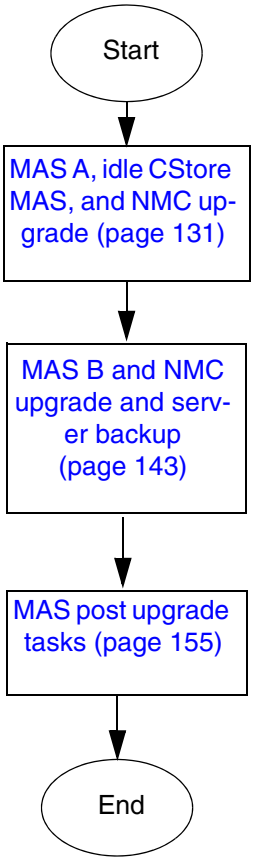
- A previous version of NMC 5.0 and MAS 5.1 must be installed.

MAS and NMC upgrade tasks

This work flow shows you the sequence of tasks you perform to upgrade from MAS 5.1 to MAS 6.1 and NMC 5.0 to 6.0. To link to any task, go to Navigation (page 130).

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Figure 19 Media Application Server upgrade tasks



Navigation

- MAS A, idle CStore MAS, and NMC upgrade (page 131)
- MAS B and NMC upgrade and server backup (page 143)
- MAS post upgrade tasks (page 155)

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MAS A, idle CStore MAS, and NMC upgrade

Upgrade the MAS A and idle CStore MAS to update most of your system to MAS 6.1 while retaining capacity on the MAS B server.

Prerequisites

- A previous version of MAS 5.1 must be installed.

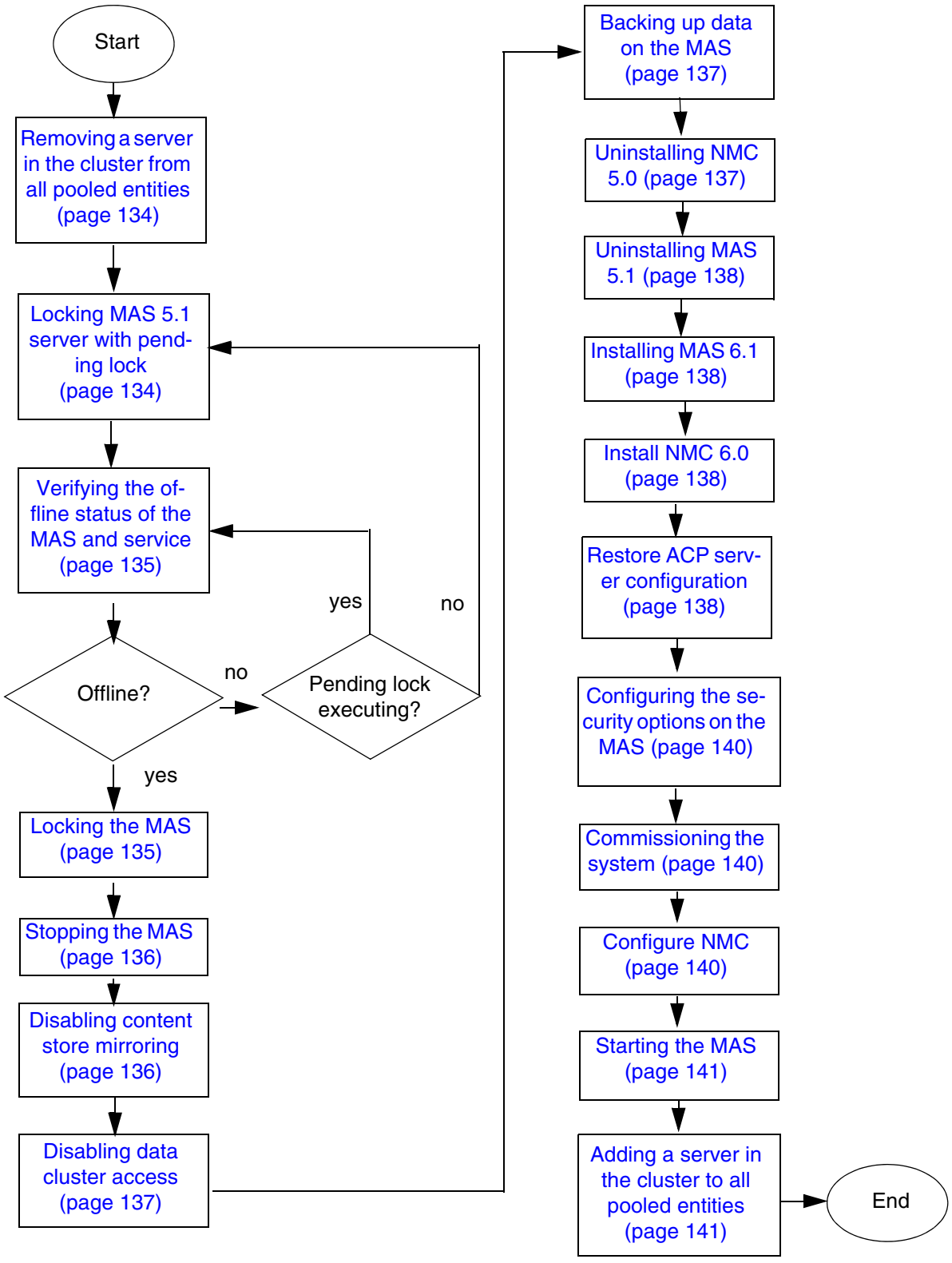
Attention: In NMC 6.0, the ACP server must be installed on the primary node (MAS A) in a multi-node cluster. If the ACP server is not installed on the primary node in the NMC 5.0 cluster, the configuration for this is not automatically restored after upgrading to NMC 6.0. The configuration details for the ACP server should be noted manually to ease configuration restoration after the upgrade process is complete.

MAS A and idle CStore MAS upgrade tasks

This task flow shows you the sequence of procedures you perform to upgrade the MAS A and idle CStore MAS servers. To link to any procedure, go to Navigation (page 133).

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Figure 20 MAS A and idle CStore MAS upgrade tasks



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Navigation

- Removing a server in the cluster from all pooled entities (page 134)
- Locking MAS 5.1 server with pending lock (page 134)
- Verifying the offline status of the MAS and service (page 135)
- Locking the MAS (page 135)
- Stopping the MAS (page 136)
- Disabling content store mirroring (page 136)
- Disabling data cluster access (page 137)
- Backing up data on the MAS (page 137)
- Uninstalling NMC 5.0 (page 137)
- Uninstalling MAS 5.1 (page 138)
- Installing MAS 6.1 (page 138)
- Install NMC 6.0 (page 138)
- Restore ACP server configuration (page 138)
- Upgrading data on the MAS (optional) (page 139)
- Configuring the security options on the MAS (page 140)
- Commissioning the system (page 140)
- Configure NMC (page 140)
- Starting the MAS (page 141)
- Adding a server in the cluster to all pooled entities (page 141)

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Removing a server in the cluster from all pooled entities

Remove the MAS A and idle CStore MAS servers in the cluster from all pooled entities to decouple the servers so that you can upgrade them independently.

For more information, refer to the MAS 5.1 documentation.

Locking MAS 5.1 server with pending lock

Lock the MAS using pending lock function to prevent interrupting current service when you lock the MAS. In the pending lock state, MAS does not accept incoming calls. However, the pending lock state allows current processes to end gracefully.

Procedure steps

Step	Action
1	In the console tree, right-click the **Control Panel** icon.
2	On the shortcut menu, select **Operations > Pending Lock**. The system places the MAS in the Pending Lock state.

--End--

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Verifying the offline status of the MAS and service

Verify the Offline status of the MAS 5.1 server and service to ensure that you do not interrupt customer service.

Procedure steps

Step	Action
1	In the console tree, right-click the **Control Panel.**
2	On the shortcut menu, select **View System Components**.
3	Ensure that the status of all appropriate subcomponents indicates Offline.

--End--

Locking the MAS

Lock the MAS 5.1 server to stop the servers from accepting incoming calls.

The MAS does not accept incoming calls and abruptly terminates all current processes after a user selects the Lock function.

Procedure steps

Step	Action
1	In the console tree, right-click the **Control Panel** icon.
2	On the shortcut menu, select **Operations > Lock**. The system places the MAS in the Locked state.

--End--

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Stopping the MAS

Stop the MAS to deactivate the MAS and service.

Procedure steps

Step	Action
1	In the console tree, right-click the **Control Panel**.
2	On the shortcut menu, select **Operations**.
3	Select **Stop**.
4	Ensure that the status indicates Offline.

--End--

Disabling content store mirroring

Disable content store mirroring on MAS A to decouple the servers so that you can upgrade them independently.

Attention: Complete this procedure on MAS A only.

Procedure steps

Step	Action
1	From the Nortel MAS console on MAS A, select **Configuration > Clustering**.
2	Double-click **Content Store Peer Master Server**.
3	On the **Content Store Peer Master Server** window, ensure the **Value** box is cleared.
4	Click **Ok**.

--End--

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Disabling data cluster access

Disable the Data Cluster Access parameter to decouple the servers so that you can upgrade them independently.

Attention: Complete this procedure on the idle CStore node only.

Procedure steps

Step	Action
1	From the idle CStore servers, select **Configuration > Clustering**.
2	Select the **Content Store Remote Server(s)** parameter.
3	Clear the value of the Content Store Remote Server(s) parameter.

--End--

Backing up data on the MAS

Back up data on the MAS A and idle CStore MAS servers to ensure that you can restore your data. Nortel recommends backing up your data into a folder on your desktop. Do not back up your data into a folder in the MAS or NMC installation directory.

For detailed information, see *Nortel Media Application Server 5.1 Administration and Security* (NN44450-600).

Uninstalling NMC 5.0

Uninstall NMC 5.0 on the MAS A and idle CStore MAS servers.

For detailed information. see the NMC 5.0 version of *Nortel Multimedia Conferencing* (NN44460-100).

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Uninstalling MAS 5.1

Uninstall MAS 5.1 on the MAS A and idle CStore MAS servers to remove MAS 5.1 software in preparation for installing MAS 6.1.

Procedure steps

Step	Action
1	On the MAS, select select **Start > Control Panel > Add or Remove Programs**.
2	On the **Add or Remove Programs** window, select **Nortel Media Application Server Platform**.
3	Click **Remove**.
4	On the **Ready to Uninstall Program** dialog box, ensure that **Preserve Configuration** data is not selected.
5	Click **Uninstall**.
6	On the **Uninstall Complete** dialog box, click **Finish**.

--End--

Installing MAS 6.1

Install MAS 6.1 on the MAS A and idle CStore MAS servers to update your system to a new MAS software version.

For detailed information, see *Nortel Media Application Server and Interactive Communications Portal Installation* (NN44471-300).

Install NMC 6.0

Install Nortel Multimedia Conferencing (NMC) 6.0 on the MAS and configure licensing.

For more information, see Nortel Multimedia Conferencing installation (page 49) and Configuring licensing (page 74).

Restore ACP server configuration

If the ACP server was not configured on the primary node for NMC 5.0, you must restore the ACP server configuration manually.

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Upgrading data on the MAS (optional)

Upgrade data on the MAS to populate most of the system configuration settings in the MAS 6.1 system.

Attention: Complete this procedure only if you did not migrate data from NMC 5.0 back up archives during the NMC installation process.

Use the NMCUpgrade.bat command line tool to provision Service Data and System Configuration data from MAS 5.1 to MAS 6.1.

Run the NMCUpgrade.bat tool with backup files from an older release as input. This tool upgrades all the Service data so the data is ready to use. However, not all the System Configuration data is applicable to or compatible with the new MAS 6.1 system. As a result, you must follow the normal Installation and Commissioning procedure after a System Configuration upgrade to ensure that you fill in new options and you configure areas that the system does not upgrade automatically. The upgrade procedure populates most of the system configuration settings in the new system, greatly streamlining the Installation and Commissioning.

Attention: SDR records are not imported into MAS 6.1 as part of the service data archive import process.

Procedure steps

Step	Action
1	Transfer the old backup files to the newly installed MAS 6.1 system.
2	In Element Manager, select **System Status > Element Status** to stop the MAS.
3	From a command line on the MAS, run the upgrade tool for both Service and System Configuration data using the following command: **`NMCUpgrade configuration_Data_Backup_Filename.zip service_Data_Backup_Filename.zip`**
4	To proceed with the upgrade, confirm the following prompt with 'y' and press Enter. `All services will be stopped to perform the upgrade. Continue [y|n]? y` It takes less than a minute to upgrade the System Configuration data. The time to complete the Service Data upgrade depends on the amount of service data in the backup file. It can take a significant amount of time. After you run the NMCUpgrade tool, it removes overlapping System Configuration

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data and replaces all Service data. The upgrade procedure is similar to a data restore procedure.

--End--

Configuring the security options on the MAS

Configure the security options on the MAS A and idle CStore MAS servers to protect resources from unauthorized or detrimental access and use.

For detailed information, see *Nortel Media Application Server Administration and Security* (NN44471-600).

Commissioning the system

Commission the system to put the system into place.

For detailed information, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

Configure NMC

Configure NMC on the MAS 6.1 server.

For more information, see Nortel Multimedia Conferencing configuration (page 99).

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Starting the MAS

Start the MAS to activate the MAS and service.

Prerequisites

- Log into Element Manager. For more information, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).
- The Service Status of the MAS must be set to Stopped before you can start the MAS.

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Status > Element Status**.
2	Click **Start**. If the MAS is already active, the Start button appears dimmed.
3	Read the warning that appears and click **Confirm** to start the system.

--End--

Adding a server in the cluster to all pooled entities

Add servers in the cluster to all pooled entities to join the servers so that they can work as a cluster.

For more information, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

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MAS B and NMC upgrade and server backup

Upgrade the MAS B to update the remainder of your system to MAS 6.1 while retaining capacity on the MAS A and idle CStore MAS servers. After MAS A, idle CStore MAS and MAS B servers are upgraded, you must backup your system.

Prerequisites

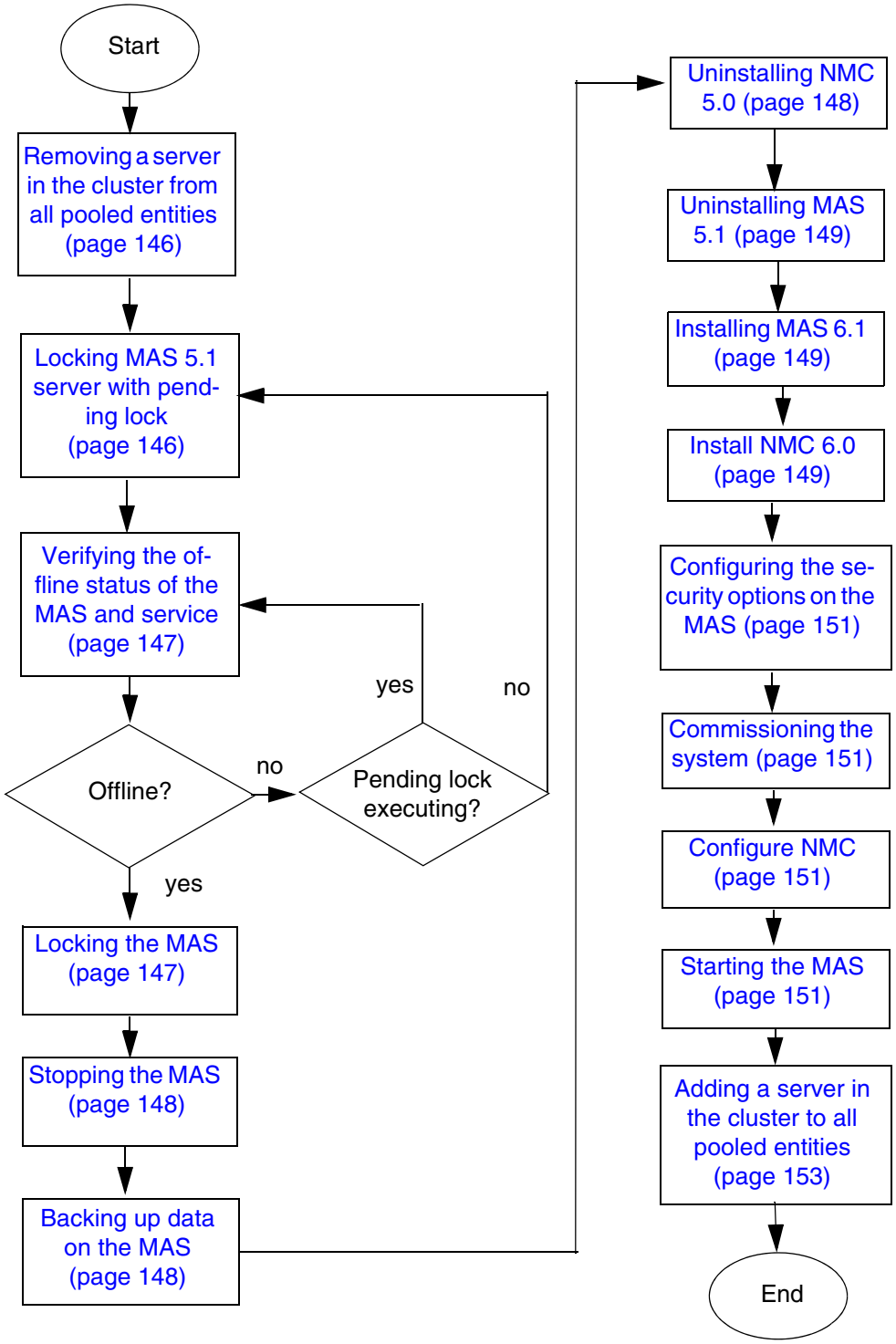
- Upgrade MAS A and CStore MAS servers. See MAS A, idle CStore MAS, and NMC upgrade (page 131).

MAS B upgrade tasks

This task flow shows you the sequence of procedures you perform to upgrade the MAS B server. To link to any procedure, go to Navigation (page 145).

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Figure 21 MAS B upgrade tasks



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Navigation

- Removing a server in the cluster from all pooled entities (page 146)
- Locking MAS 5.1 server with pending lock (page 146)
- Verifying the offline status of the MAS and service (page 147)
- Locking the MAS (page 147)
- Stopping the MAS (page 148)
- Backing up data on the MAS (page 148)
- Uninstalling NMC 5.0 (page 148)
- Uninstalling MAS 5.1 (page 149)
- Installing MAS 6.1 (page 149)
- Install NMC 6.0 (page 149)
- Upgrading data on the MAS (optional) (page 150)
- Configuring the security options on the MAS (page 151)
- Commissioning the system (page 151)
- Configure NMC (page 151)
- Starting the MAS (page 151)
- Adding a server in the cluster to all pooled entities (page 153)

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Removing a server in the cluster from all pooled entities

Remove MAS B server in the cluster from all pooled entities to decouple the servers so that you can upgrade them independently.

For more information, refer to the MAS 5.1 documentation.

Locking MAS 5.1 server with pending lock

Lock the MAS using pending lock function to prevent interrupting current service when you lock the MAS. In the pending lock state, MAS does not accept incoming calls. However, the pending lock state allows current processes to end gracefully.

Attention: Locking a simplex deployment with pending lock causes a temporary loss of service because a simplex deployment has only one Media Application Server. After an administrator locks or stops the MAS in a simplex deployment, service is not available until an administrator starts and/or unlocks the MAS.

Procedure steps

Step	Action
1	In the console tree, right-click the **Control Panel** icon.
2	On the shortcut menu, select **Operations > Pending Lock**. The system places the MAS in the Pending Lock state.

--End--

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Verifying the offline status of the MAS and service

Verify the Offline status of the MAS 5.1 server and service to ensure that you do not interrupt customer service.

Procedure steps

Step	Action
1	In the console tree, right-click the **Control Panel.**
2	On the shortcut menu, select **View System Components**.
3	Ensure that the status of all appropriate subcomponents indicates Offline.

--End--

Locking the MAS

Lock the MAS 5.1 server to stop the servers from accepting incoming calls.

The MAS does not accept incoming calls and abruptly terminates all current processes after a user selects the Lock function.

Procedure steps

Step	Action
1	In the console tree, right-click the **Control Panel** icon.
2	On the shortcut menu, select **Operations > Lock**. The system places the MAS in the Locked state.

--End--

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Stopping the MAS

Stop the MAS to deactivate the MAS and service.

Procedure steps

Step	Action
1	In the console tree, right-click the **Control Panel**.
2	On the shortcut menu, select **Operations**.
3	Select **Stop**.
4	Ensure that the status indicates Offline.

--End--

Backing up data on the MAS

Back up data on the MAS B server to ensure that you can restore your data. Nortel recommends backing up your data into a folder on your desktop. Do not back up your data into a folder in the MAS or NMC installation directory

For detailed information, see *Nortel Media Application Server 5.1 Administration and Security* (NN44450-600).

Uninstalling NMC 5.0

Uninstall NMC 5.0 on the MAS A and idle CStore MAS servers.

For detailed information. see the NMC 5.0 version of *Nortel Multimedia Conferencing* (NN44460-100).

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Uninstalling MAS 5.1

Uninstall MAS 5.1 on the MAS server to remove MAS 5.1 software in preparation for installing MAS 6.1.

Procedure steps

Step	Action
1	On the MAS, select select **Start > Control Panel > Add or Remove Programs**.
2	On the **Add or Remove Programs** window, select **Nortel Media Application Server Platform**.
3	Click **Remove**.
4	On the **Ready to Uninstall Program** dialog box, ensure that **Preserve Configuration** data is not selected.
5	Click **Uninstall**.
6	On the **Uninstall Complete** dialog box, click **Finish**.

--End--

Installing MAS 6.1

Install MAS 6.1 on the MAS B server to update your system to a new MAS software version.

For detailed information, see *Nortel Media Application Server and Interactive Communications Portal Installation* (NN44471-300).

Install NMC 6.0

Install Nortel Multimedia Conferencing (NMC) 6.0 on the MAS.

For more information, see Nortel Multimedia Conferencing installation (page 49).

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Upgrading data on the MAS (optional)

Upgrade data on the MAS to populate most of the system configuration settings in the MAS 6.1 system.

Attention: Complete this procedure only for a simplex upgrade and if you did not migrate data from NMC 5.0 back up archives during the NMC installation process.

Use the NMCUpgrade.bat command line tool to provision Service Data and System Configuration data from MAS 5.1 to MAS 6.1.

Run the NMCUpgrade.bat tool with backup files from an older release as input. This tool upgrades all the Service data so the data is ready to use. However, not all the System Configuration data is applicable to or compatible with the new MAS 6.1 system. As a result, you must follow the normal Installation and Commissioning procedure after a System Configuration upgrade to ensure that you fill in new options and you configure areas that the system does not upgrade automatically. The upgrade procedure populates most of the system configuration settings in the new system, greatly streamlining the Installation and Commissioning.

Attention: SDR records are not imported into MAS 6.1 as part of the service data archive import process.

Procedure steps

Step	Action
1	Transfer the old backup files to the newly installed MAS 6.1 system.
2	In Element Manager, select **System Status > Element Status** to stop the MAS.
3	From a command line on the MAS, run the upgrade tool for both Service and System Configuration data using the following command: **`NMCUpgrade configuration_Data_Backup_Filename.zip service_Data_Backup_Filename.zip`**
4	To proceed with the upgrade, confirm the following prompt with 'y' and press Enter. `All services will be stopped to perform the upgrade. Continue [y|n]? y` It takes less than a minute to upgrade the System Configuration data. The time to complete the Service Data upgrade depends on the amount of service data in the backup file. It can take a significant amount of time. After

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you run the NMCUpgrade tool, it removes overlapping System Configuration data and replaces all Service data. The upgrade procedure is similar to a data restore procedure.

--End--

Configuring the security options on the MAS

Configure the security options on the MAS B server to protect resources from unauthorized or detrimental access and use.

For detailed information, see *Nortel Media Application Server Administration and Security* (NN44471-600).

Commissioning the system

Commission the MAS B server to put the system into place.

For detailed information, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

Configure NMC

Configure NMC on the MAS B 6.1 server.

For more information, see Nortel Multimedia Conferencing configuration (page 99).

Starting the MAS

Start the MAS to activate the MAS and service.

Prerequisites

- Log into Element Manager. For more information, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).
- The Service Status of the MAS must be set to Stopped before you can start the MAS.

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Status > Element Status**.
2	Click **Start**. If the MAS is already active, the Start button appears dimmed.

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3	Read the warning that appears and click **Confirm** to start the system.

--End--

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Adding a server in the cluster to all pooled entities

Add the MAS B server in the cluster to all pooled entities to join the servers so that they can work as a cluster.

For more information, see *Nortel Media Application Server and Interactive Communications Portal Commissioning* (NN44471-301).

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MAS post upgrade tasks

After you complete the required upgrade tasks, you must verify the upgrade and back up the MAS 6.1 server.

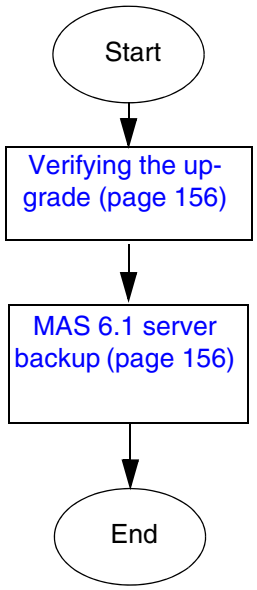
Prerequisites

- NMC 6.0 and MAS 6.1 must be installed.

Post upgrade tasks

This task flow shows you the sequence of procedures you perform to complete the upgrade process. To link to any procedure, go to Navigation (page 155).

Figure 22 Post upgrade tasks



Navigation

- Verifying the upgrade (page 156)
- MAS 6.1 server backup (page 156)

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Verifying the upgrade

Verify the upgrade to ensure the system is operating properly.

Procedure steps

Step	Action
1	Log on to Unified Communications Manager (UCM) on all nodes.
2	Navigate to Element Manager for all nodes to ensure the system is operating.
3	In the navigation pane, select **System Configuration > Software Inventory** to verify the version of software that is installed on the node.
4	In the navigation pane, select **System Status > Element Status** to verify that the node is started.
5	Place calls to NMC to validate that they work.

--End--

MAS 6.1 server backup

After you upgrade the MAS A, idle CStore MAS, and MAS B servers, you must back up the new MAS 6.1 servers. For information about backing up your system, see *Nortel Media Application Server Administration and Security* (NN44471-600).

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Nortel Multimedia Conferencing 6.0 upgrade

This section explains how to prepare the server for an upgrade and how to upgrade the NMC software from a previous version of the NMC 6.0 software.

Prerequisites

- A previous version of NMC 6.0 must be installed.
- Ensure you back up your system before completing the upgrade. For more information, see *Nortel Media Application Server Administration and Security* (NN44471-600).

Navigation

- Preparing for an NMC upgrade (page 158)
- Upgrading the NMC software (page 159)

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Preparing for an NMC upgrade

Perform the steps in the following procedure before you upgrade NMC.

If you installed NMC on multiple nodes, you can perform this procedure on one node at a time, while the other nodes remain in service.

Prerequisites

- You installed and configured NMC.
- In a Converged Office solution, participants cannot use the dial-out feature of the Live Meeting Console 2007 client during the upgrade of the node where ACP is installed.

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Status > Monitoring > Active Sessions** to check for active sessions on the server.
2	Click **System Status > Element Status**.
3	On the **Element Status** page, in the **More Actions** list, select **Pending Lock**.
4	On the **Element Status Confirmation** window, click **Confirm** to continue.
5	Wait for any active sessions to end and the Operational State to change to Locked.

Attention: If you place the MAS in a locked state while active sessions still exist, all calls are immediately released.

6	On the **Element Status** page, click **Stop**.
7	Close Element Manager.

--End--

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Upgrading the NMC software

Perform an upgrade of the NMC 6.0 software by running a newer installer over your existing installation. Any errors during the upgrade result in a rollback to the previous installed version. All configuration data is preserved during the upgrade.

Prerequisites

- You performed the procedure Preparing for an NMC upgrade (page 158).
- Ensure that you exit all instances of Element Manager.
- If you are upgrading the MAS 6.1 software, see *Media Application Server and Interactive Communications Portal Upgrades and Patches* (NN44471-400).

Procedure steps

Step	Action
1	Obtain the latest software version from Nortel.
2	Run the installation program of the latest software version (see Installing the NMC application software (page 55)).
3	When the installation is complete, log in to Element Manager.
4	In the Element Manager navigation, click **System Status > Element Status.**
5	On the **Element Status** page, click **Start**.
6	In the **More Actions** list, select **Unlock**.

--End--

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Nortel Multimedia Conferencing 6.0 Dashboard and Subscriber Management

This section describes the dashboard, menus, dialog boxes, and conference controls for Nortel Multimedia Conferencing (NMC) 6.0.

Navigation

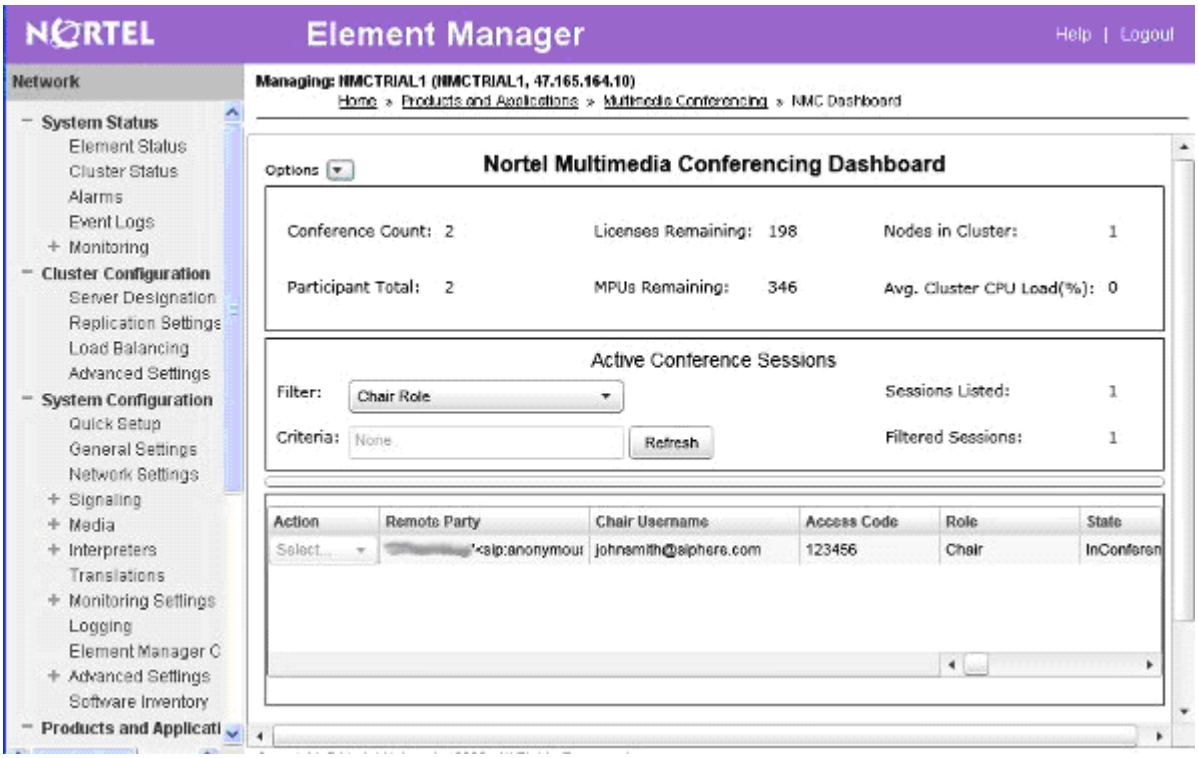
- NMC dashboard (page 161)
- NMC Subscriber Management (page 165)

NMC dashboard

This section describes the features of the NMC dashboard. The NMC dashboard provides a real-time cluster wide view of conferencing activity across all active nodes in an NMC cluster. In Element Manager, the NMC Dashboard is located at Products and Applications > Multimedia Conferencing > NMC Dashboard. The following figure shows the NMC Dashboard.

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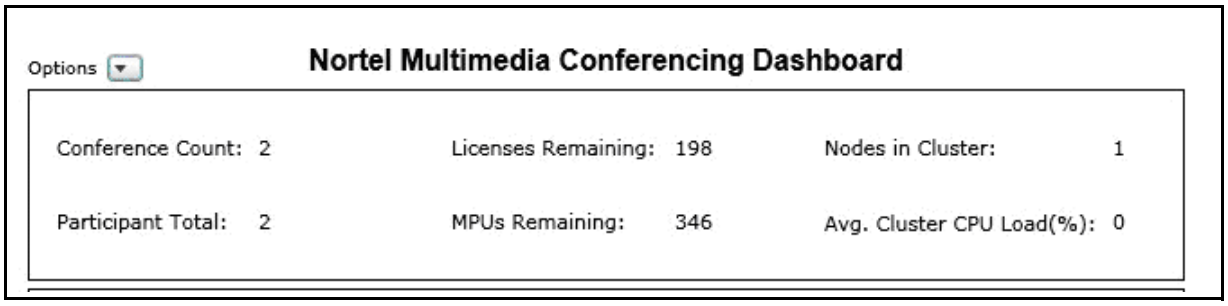
Figure 23 NMC dashboard



NMC dashboard description

The NMC dashboard components are as follows.

Figure 24 NMC dashboard details

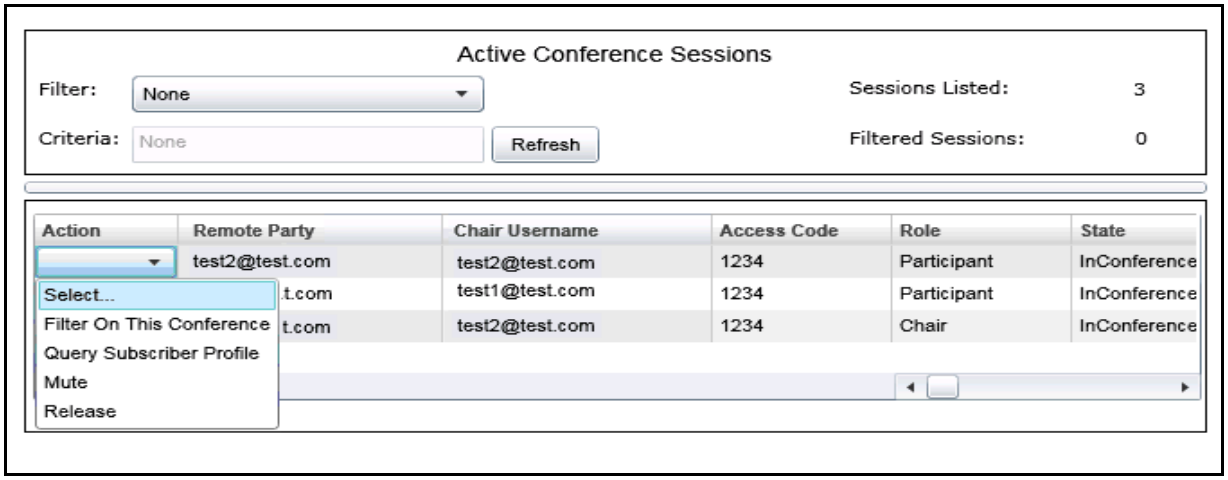


The following table describes the dashboard features.

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Option	Description
Conference Count	The number of active conferences
Avg.Cluster CPU Load(%)	The average CPU load of the NMC cluster
Licenses Remaining	The number of available licenses.
MPUs Remaining	The number of remaining MPUs.
Nodes in Cluster	The number of nodes in the cluster.
Options	Changes to the view of the dashboard. The options available are: • Auto Refresh Every (number) Seconds–If enabled, the NMC dashboard refreshes automatically at the specified intervals (5,10,15,30,45,1 minute). • Convert To Local Time–If enabled, date and time values for the active sessions are converted to the local timezone.
Participant Total	The number of participants.
Session Count	The number of active sessions.

Figure 25 Active Conference Sessions



In the Active Conferencing Sessions area, you can view all active chairperson conferencing sessions in the cluster and you can filter the active sessions by various criteria. In the Active Conferencing Sessions area, the Actions, Remote Party, Chair Username, and Access Code fields are always visible. You can change the order of the columns by dragging and dropping. Changes made to the column order are saved and retained for future sessions. The following table describes the Active Conference Sessions features.

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Option	Description
Access Code	The participants access code.
Action	Click Action to perform a task for the selected user. The options are: • Filter On This Conference • Query Subscriber Profile • Mute • Release There is no unmute option to unmute a participant. Participants who want to remain muted cannot be unmuted for privacy considerations.
Audio Codec	The audio codec used for the conference session.
Chair Username	The chairperson user name.
Criteria	Specify specific criteria to refine search results. This field is enabled if one of the following filter options is selected in the Filter list: • Access Code • Chair Userid • Calling Id • Device
Device	The type of device the participant or chairperson is using.
Filter	Select an option in the Filter list to refine search results.
Filtered Sessions	The number of filtered sessions displayed.
Locale	The participant or chairperson locale.
Local IP	The participant or chairperson IP address.
Local Port	The local port number.
Mute Status	Identifies if the participant or chairperson is muted or unmuted in the conference.
QOS Jitter	The Quality of Service (QoS) jitter. If jitter is high, whole groups of packets can be late or lost, and output can contain muted segments. All networks have some jitter, due to differences in delay at each network node, as packets are queued. If jitter is contained within specified limits, QoS can be maintained.

(1 of 2)

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Option	Description
QOS Local Packet Loss	The local packet loss for the conference.
QOS Remote Packet Loss	The remote packet loss for the conference.
QOS R-Factor	The QoS R-factor threshold.
QOS Round Trip Delay (msec)	The QoS round trip delay threshold in milliseconds.
Remote IP	The remote IP address.
Remote Party	The participant information.
Remote Port	The remote port number.
Role	The role of the conference user. For example, Participant or Chair.
Start Timestamp	The start time of the user's conference.
Video Codec	The video codec used for the conference.
(2 of 2)	

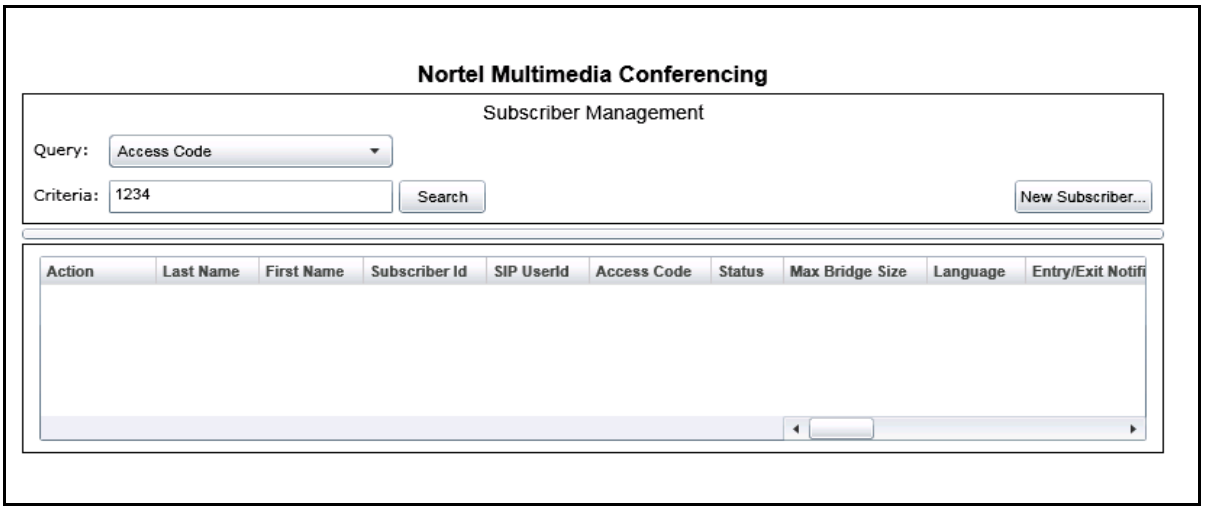
NMC Subscriber Management

This section describes the Subscriber Management feature of NMC 6.0. You can access the Subscriber Management feature in Element Manger under Products and Applications > Multimedia Conferencing > Subscriber Management.

Subscriber Management

You can use the Subscriber Management feature to view, create, update, and delete conference user accounts. The following figure shows the Subscriber Management window.

Figure 26 Subscriber Management window



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The following table describes the fields of the Subscriber Management window.

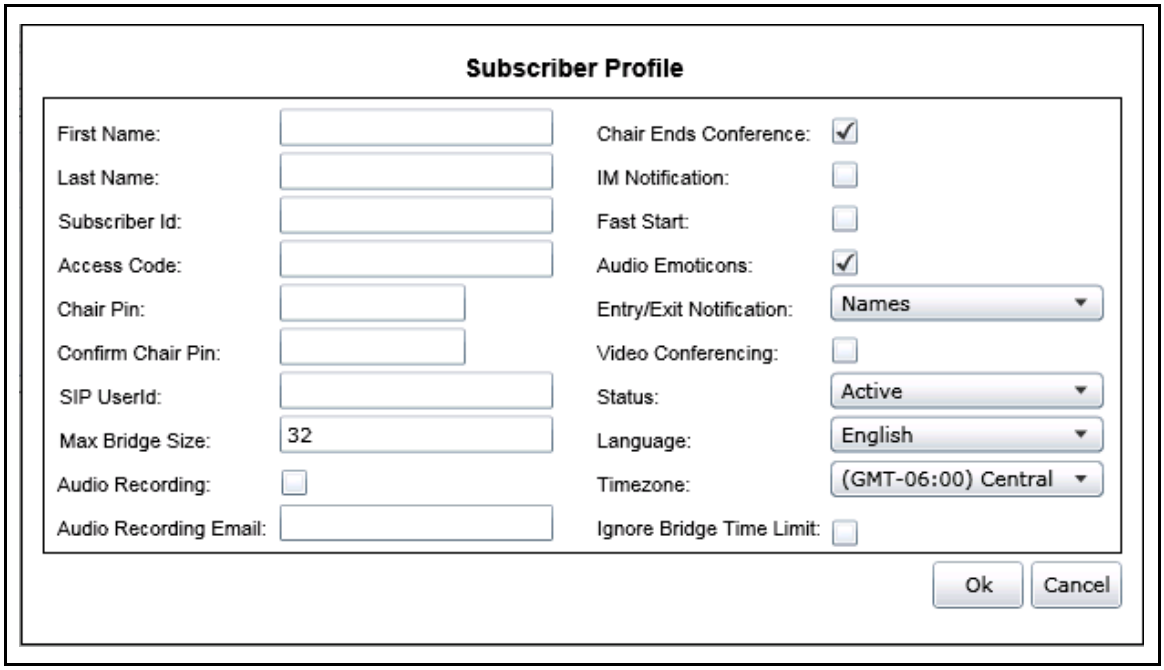
Option	Description
Criteria	Specify specific criteria to refine search results.
New Subscriber	Click New Subscriber to create a new subscriber profile.
Query	Choose an option to specify search criteria for. The options available are: • Access Code • First Name • Last Name • Subscriber Id • SIP Userid • Status

Subscriber Profile

The following figure shows Subscriber Profile dialog box that is used for creating a new subscriber.

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Figure 27 Subscriber Profile dialog box



The following table describes the Subscriber Profile fields.

Parameter	Description
Access Code	The access code to open the conference bridge (mandatory)
Audio Emoticons	Controls whether audio emoticons are enabled (optional)
Audio Recording Email	The e-mail address to which audio recordings are sent (mandatory if Audio Record Enabled is selected)
Audio Recording	Controls whether conference recording is enabled for this user (optional)
Chair Ends Conference	Controls whether the conference ends when the chairperson exits (optional)
Chair PIN	The personal identification number (PIN) the chairperson uses to open the conference bridge (mandatory)
Confirm Chair Pin	Retype the Chair PIN to confirm the PIN.
Entry/Exit Notification	Controls whether a name, tone, or no notification is played to indicate participants joining or leaving the conference (optional)

(1 of 2)

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Parameter	Description
Fast Start	Controls whether the conference can start before the chairperson arrives (optional)
First Name	The first name of the subscriber (mandatory)
Ignore Bridge Time Limit	Controls whether the conference bridge remains open until all participants exit the conference. If this option is not enabled, the conference bridge is closed when the Long Call Duration parameter is exceeded.
IM Notification	Controls whether instant message (IM) notifications are sent to the chair person
Language	The default language of the chair, which determines the language used in conference recording e-mail messages (optional)
Last Name	The last name of the subscriber (mandatory)
Max Bridge Size	The maximum number of participants (including the chairperson) allowed in a conference for this user (optional)
SIP User Id	The SIP user name in the format username@domain (mandatory)
Status	The state of the account (inactive accounts cannot open a conference bridge) (optional)
Subscriber Id	A unique identifier for the subscriber, such as a global employee ID (optional)
Timezone	The time zone used for the subscriber, used in recording e-mail messages to indicate the start time and end time of recording (optional)
Video Conferencing	Controls whether conferencing is enabled for the user (optional)

(2 of 2)

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Common configuration problems

This module describes common configuration problems that can cause issues with NMC.

Navigation

- General configuration (page 169)
- CS 1000 configuration (page 169)
- CS 2100 configuration (page 169)
- OCS 2007 configuration (page 169)
- NMC configuration (page 170)

General configuration

Check the following general configuration items if you are experiencing issues with NMC:

- Ensure that all servers are properly registered with Domain Name Server (DNS).

CS 1000 configuration

Check the following to ensure the CS 1000 is configured properly:

- Ensure that the CS 1000 Release 5.0 or 5.5 is properly patched.
- Check NRS configuration for missing routes or errors in endpoint names.

CS 2100 configuration

Check the following to ensure the CS 2100 is configured properly:

- Ensure that the CS 2100 Release SN10 or SE 11 is properly patched.

OCS 2007 configuration

Check the following to ensure that the Office Communications Server (OCS) is properly configured:

- Ensure that trust and authentication is set up properly.
- Ensure that the ACP route is set up properly.

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NMC configuration

Check for the following items to ensure NMC is configured properly:

- Check for errors in trusted nodes and SIP Route Type.
- Ensure that port 5040 is open (for the ACP server).
- Ensure that the Key for Load Reporting matches the NMC endpoint name as configured on the CS 1000.
- Ensure that the NMC clusters are configured properly.

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MAS downgrade reference

If required, downgrade the MAS 6.1 software release to use the previously installed MAS 5.1 software release.

Prerequisites

- Back up your system before you downgrade to a previous software release. If something unexpected occurs during the downgrade, you can use the back up to restore your system to its previous configuration. For more information about backing up and restoring your system, see *Nortel Media Application Server Administration and Security* (NN44471-600).

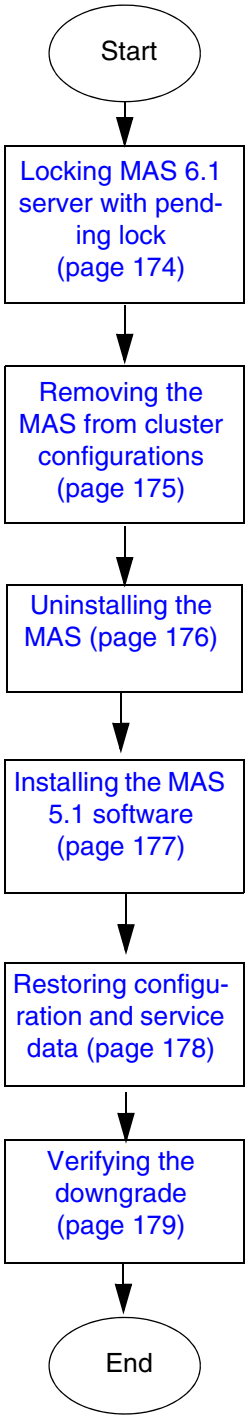
  Note: This procedure does not allow you to downgrade the system with current configuration and service data in NMC 6.0, it is required that you have a prior back-up of NMC 5.0 configuration and service data to restore.

Rollback of MAS upgrade procedures

This task flow shows you the sequence of procedures you perform to rollback to an earlier software release. To link to any procedure, go to Navigation (page 173).

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Figure 28 Rollback of MAS upgrade tasks



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Navigation

- Locking MAS 6.1 server with pending lock (page 174)
- Removing the MAS from cluster configurations (page 175)
- Uninstalling the MAS (page 176)
- Installing the MAS 5.1 software (page 177)
- Restoring configuration and service data (page 178)
- Verifying the downgrade (page 179)

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Locking MAS 6.1 server with pending lock

Lock the MAS using pending lock function to prevent interrupting current service when you lock the MAS. In the pending lock state, MAS does not accept incoming calls. However, the pending lock state allows current processes to end gracefully.

Attention: Locking a simplex deployment with pending lock causes a temporary loss of service because a simplex deployment has only one Media Application Server. After an administrator locks or stops the MAS in a simplex deployment, service is not available until an administrator starts and/or unlocks the MAS.

Procedure steps

Step	Action
1	In the Element Manager navigation, click **System Status > Element Status**.
2	On the **Element Status** page, in the **More Actions** list, select **Pending Lock**.

--End--

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Removing the MAS from cluster configurations

Remove MAS to be rolled back from any cluster configurations. Complete this procedure only if your system has a cluster configuration.

Prerequisites

- Lock the system with a pending lock and wait for all active sessions to terminate before downgrading the software.

Procedure steps

Step	Action
1	In the Element Manager of each MAS, navigate to **Cluster Configuration** > **Server Designation**
2	Select the node and click **Remove** to remove this nodes entry from the list.
3	Click **Save**.
4	Click **Confirm** to remove the server.

--End--

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Uninstalling the MAS

Uninstall the current release to roll back to an earlier MAS 5.1 release of the software.

Note: MAS cannot be uninstalled without first uninstalling NMC.

Prerequisites

- Lock the system with a pending lock and wait for all active sessions to terminate before downgrading the software.

Procedure steps

Step	Action
1	Uninstall the current software version and ensure that you select the Remove option when asked if you want to remove or preserve data. For information about uninstalling the MAS, *Nortel Media Application Server and Interactive Communications Portal Installation* (NN44471-300).

--End--

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Installing the MAS 5.1 software

Install the MAS 5.1 software.

Prerequisites

- Obtain the MAS 5.1 software.
- Lock the system with a pending lock and wait for all active sessions to terminate before downgrading the software.

Procedure steps

Step	Action
1	Launch the desired installer and follow the instructions from the MAS 5.1 release software documentation.
	--End--

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Restoring configuration and service data

Restore the compatible MAS 5.1 release backup.

Procedure steps

Step	Action
1	Follow the restore instructions in the MAS 5.1 documentation. See *Nortel Media Application Server 5.1 Administration and Security* (NN44450-600)
	--End--

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Verifying the downgrade

Verify the downgrade to ensure the system is operating properly.

Procedure steps

Step	Action
1	On the MAS, select **Start > Control Panel > Add or Remove Programs**.
2	Ensure that the correct version of the MAS platform is installed.
3	Place calls to your applications to validate that they work.

--End--

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Terminology

A

access code

A published access code for a chairperson to start and for participants to join conferences. This code is unique for subscribers. This code is not secure but allows for easier dissemination of conference credentials.

account

The configuration of the service in a system for a particular subscriber.

audio codec

A computer program that compresses and decompresses digital audio data according to a given audio file format or streaming audio format.

C

chairperson

The individual who successfully enters the PIN identifying the conference participant as the chairperson. The chairperson has additional audio control of the conference.

chairperson PIN

The unique personal identification number (PIN) used in conjunction with an access code to identify the chairperson.

cluster

Two or more nodes grouped together. Subscribers are homed to a cluster for resource management. Subscribers cannot reserve conference ports outside of their home cluster.

conference ports

Audio or video channels available for use with Nortel Multimedia Conferencing. For example, a system with 400 ports can support *n* number of conferences with a total of 400 participants (including chairpersons).

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continuation statement

Indicates whether the conference can continue after the chairperson hangs up. This can be an important billing consideration for the user.

D

dial-in number

The number that routes the call to the Nortel Multimedia Conferencing servers.

DTMF

See dual-tone multi-frequency.

dual-tone multi-frequency

A system of signal tones used in telecommunications. Also known as touch-tone.

E

Element Manager

A web-based administration tool that facilitates the Operation, Administration, and Maintenance (OAM) of multimedia applications products running on the Multimedia Application Server (MAS). Element Manager serves as a common management utility for configuring and managing a media server and the products (such as NMC) that run on it.

M

MAS

See Media Application Server.

Media Application Server

A media services platform that supports a diverse range of multimedia services and applications.

N

node

A single server containing the MAS platform and the Nortel Multimedia Conferencing application.

P

participant

Any individual invited to a conference. This person does not have to be a subscriber. A subscriber can join another person's conference as an ordinary participant as well.

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pass code

Additional participant authentication that can be used with reservationless conferences. The chairperson can define the pass code when they start the conference. In this scenario, participants must enter the pass code to join the conference.

Personal Identification Number

A code used to establish authorization for access to certain functions or information.

PIN

See Personal Identification Number.

S

Session Initiation Protocol

An application-layer control protocol that can establish, modify, and terminate multimedia sessions or calls.

Simple Network Time Protocol

An Internet protocol used to synchronize computer clocks on the Internet.

SIP

See Session Initiation Protocol.

SNTP

See Simple Network Time Protocol.

subscriber

A person who has a service or account that is managed by the management system. In general, a subscriber represents an employee or person. Only subscribers can be given services in the system. In some cases, a subscriber is used to represent a non-human entity, such as a conference room. This is necessary to provide service to these entities (for example, a conference room telephone).

V

video codec

A computer program that compresses and decompresses digital video data according to a given video file format or streaming video format.

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Nortel Multimedia Conferencing

Fundamentals

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