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4655 Great America Parkway
Santa Clara, CA 95054

Introducing Nortel Enterprise Network Management System

NORTEL

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Contents

Chapter 1	
Getting Started	9
About this guide	9
Audience	9
Acronyms	10
Symbols and text conventions	11
How to get Help	13
Getting Help from the Nortel Web site	13
Getting Help over the phone from a Nortel Solutions Center	14
Getting Help from a specialist by using an Express Routing Code	14
Getting Help through a Nortel distributor or reseller	14
Chapter 2	
Introduction to Enterprise NMS	15
Flexible architectural approach	15
What's new in Enterprise NMS 10.4	17
Management tools	19
InfoCenter	20
OmniView	20
Path Trace	21
Device Inventory Viewer	21
TD Continuity Test	22
Fault Summary/Fault Correlator	22
Expanded View	22
Call View	22
Administrative functions	23
Access Control	23
Community Strings Editor	23
Monitor Level	24

8 Contents

Database Admin Tool	24
AutoTopology Manager	24
DIT Administration Tool	24
Disdevice and dislink	24
Legacy applications	25
Enterprise NMS documentation suite	26
Starting point	28
Obtaining technical manuals	29
Online Help	29
Integration with Communication Server 1000 Telephony Manager	31
Send us feedback	31
Index	33

Chapter 1

Getting Started

About this guide

Introducing Nortel Enterprise Network Management System provides an overview of the architecture, tools, functions, documentation, and on-line help that comprise Nortel's Enterprise Network Management System (NMS). This document also provides a brief description of the new features and functions in Enterprise NMS 10.4.

Audience

This guide is intended for network managers working with Enterprise NMS in a UNIX or Windows-based environment. This guide assumes that you have the following background:

- Working knowledge of your operating system environment: Solaris*, HP-UX, Windows 2000 client/server, Windows XP, or Windows 2003 server.
- Familiarity with managing and troubleshooting large, complex networks.
- Experience with working with Nortel and standards-based networking devices.
- Working knowledge of the transmission and management protocols used on your network.
- If Enterprise NMS is installed with HP* OpenView* Network Node Manager or Tivoli* TME 10* Netview), familiarity with the network management applications.

Acronyms

The following is a list of acronyms used in this guide:

ATM	Asynchronous Transfer Mode
IP	Internet Protocol
LAN	Local Area Network
MIB	Management Information Base
NMS	Network Management System
SNMP	Simple Network Management Protocol
DIT	Device Integration Toolkit
VLAN	Virtual LAN
WAN	Wide Area Network

Symbols and text conventions

These symbols are used to Highlight critical information for the Enterprise NMS system:



Caution: Alerts you to conditions where you can damage the equipment.



Danger: Alerts you to conditions where you can get an electrical shock.



Warning: Alerts you to conditions where you can cause the system to fail or work improperly.



Note: A Note alerts you to important information.



Tip: Alerts you to additional information that can help you perform a task.



Security note: Indicates a point of system security where a default should be changed, or where the administrator needs to make a decision about the level of security required for the system.



Warning: Alerts you to ground yourself with an antistatic grounding strap before performing the maintenance procedure.



Warning: Alerts you to remove the Enterprise NMS main unit and expansion unit power cords from the ac outlet before performing any maintenance procedure.

These text conventions are used in this guide to indicate the information described:

angle brackets (< >)	Indicate that you choose the text to enter based on the description inside the brackets. Do not type the brackets when entering the command. Example: If the command syntax is <code>ping <ip_address></code> , you enter <code>ping 192.32.10.12</code>
bold Courier text	Indicates command names and options and text that you need to enter. Example: Use the dinfo command. Example: Enter show ip {alerts routes} .
braces ({})	Indicate required elements in syntax descriptions where there is more than one option. You must choose only one of the options. Do not type the braces when entering the command. Example: If the command syntax is <code>show ip {alerts routes}</code> , you must enter either <code>show ip alerts</code> or <code>show ip routes</code> , but not both.
brackets ([])	Indicate optional elements in syntax descriptions. Do not type the brackets when entering the command. Example: If the command syntax is <code>show ip interfaces [-alerts]</code> , you can enter either <code>show ip interfaces</code> or <code>show ip interfaces -alerts</code> .
ellipsis points (. . .)	Indicate that you repeat the last element of the command as needed. Example: If the command syntax is <code>ethernet/2/1 [<parameter> <value>] . . .</code> , you enter <code>ethernet/2/1</code> and as many parameter-value pairs as needed.

<i>italic text</i>	Indicates new terms, book titles, and variables in command syntax descriptions. Where a variable is two or more words, the words are connected by an underscore. Example: If the command syntax is <code>show at <valid_route></code> , <i>valid_route</i> is one variable and you substitute one value for it.
plain Courier text	Indicates command syntax and system output, for example, prompts and system messages. Example: <code>Set Trap Monitor Filters</code>
separator (>)	Shows menu paths. Example: <code>Protocols > IP</code> identifies the IP option on the Protocols menu.
vertical line ()	Separates choices for command keywords and arguments. Enter only one of the choices. Do not type the vertical line when entering the command. Example: If the command syntax is <code>show ip {alerts routes}</code> , you enter either <code>show ip alerts</code> or <code>show ip routes</code> , but not both.

How to get Help

This section explains how to get help for Nortel products and services.

Getting Help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support Web site:

<http://www.nortel.com/support>

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. More specifically, the site enables you to:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues

- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting Help over the phone from a Nortel Solutions Center

If you don't find the information you require on the Nortel Technical Support Web site, and have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following Web site to obtain the phone number for your region:

<http://www.nortel.com/callus>

Getting Help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

<http://www.nortel.com/erc>

Getting Help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

Chapter 2

Introduction to Enterprise NMS

Nortel Enterprise Network Management System (NMS) 10.4 is a Nortel integrated suite of applications that delivers system-level management for converging campus and enterprise networks.

Enterprise NMS is a primary component of Unified Networks*, a solution set from Nortel designed to create greater value for customers worldwide through the integration of voice, video, and data networking. Through Unified Networks, enterprises can leverage LAN and WAN convergence, application and infrastructure convergence, and voice and data convergence to achieve greater efficiency and reduce operating costs. Unified Networks provides a systematic transition from today's disparate networks to a single, seamlessly-converged network.

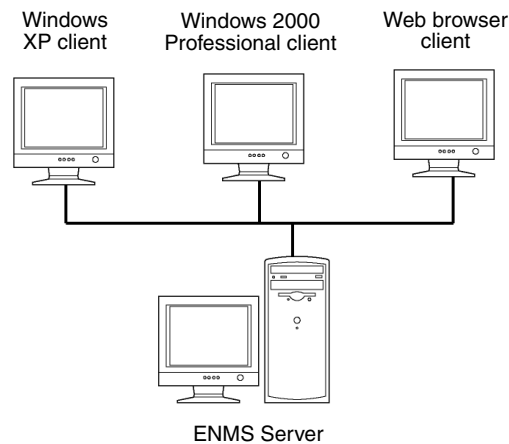
Enterprise NMS common graphical interfaces and proven technology provide the tools necessary to manage the converging Unified Network. Enterprise NMS provides graphical views that range from physical connections between LAN and WANs to the logical connections of a VLAN. This breadth encompasses the scope required for the management of Unified Networks.

Flexible architectural approach

The tools used to access network data are as critical as the data itself. This premise defines the rationale behind Enterprise NMS 10.4 architecture and underlies the intent of its ongoing development. By combining web-based clients with a comprehensive toolset, complete management of the entire network can be achieved from virtually anywhere.

The Enterprise NMS 10.4 client application can be loaded onto a Microsoft Windows 2000 Server, a Windows 2000 Advanced Server, a Windows 2003 Server, or a Solaris* workstation (Figure 1). By using the Sun Microsystems Java programming language, the clients maintain the same look and feel, functionality, and breadth of features across all supported operating systems while access through the World Wide Web provides the same application interface. This consistency reduces the time and resources associated with adapting to an unfamiliar user environment.

Figure 1 Accessing Enterprise NMS 10.4 client applications



Complementing the Java-based client utilities, a set of powerful network management services (Windows) and daemons (UNIX) reside on a centralized Enterprise NMS 10.4 server. The server is supported on Solaris and HP-UX* UNIX* operating systems, as well as Windows* 2000 and Windows* 2003 operating systems.

The services/daemons do not need to be colocated with the client utilities, allowing remote access across the intranet. Unlike many client/server pairs, the Enterprise NMS 10.4 client application is not bound to a single server, thus providing access to several Enterprise NMS 10.4 servers from one client installation.

Applications within Enterprise NMS 10.4 are engineered to be “data driven.” This allows Nortel to deliver Enterprise NMS 10.4 support files with new products. The Enterprise NMS Device Integration Tool integrates these files with the existing database, providing “Day One” support for strategic new products.

What's new in Enterprise NMS 10.4

Enterprise NMS 10.4 includes the following new features and functions:

- **IP Service Manager: an advanced IP telephony troubleshooting module**
IP Service Manager is an advanced IP management module that allows network administrators to manage and troubleshoot IP telephony networks. IP Service Manager operates within the framework of Enterprise NMS to provide integrated discovery, visualization, and troubleshooting of Nortel IP Telephony end points that are registered with the Nortel Communication Server 1000 IP telephony system.
- **Logical and physical views of the IP telephony network**
IP Service Manager provides graphical views of the IP telephony network that show all physical devices in the path between two devices, or only the IP telephony devices in the path, that is, only the logical devices.
- **Proactive Voice Quality Management of IP telephony systems**
Multiple levels of fault monitoring, path trace and traceroute tools, and a comprehensive suite of statistics are all readily available through the IP Service Manager graphical user interface. Together, they provide continuous passive monitoring of voice quality at the IP client. This proactive voice quality management provides a call-by-call analysis that alerts network management personnel to potential trouble spots before users are even aware that a problem exists, ensuring that the users of IP telephony solutions remain satisfied.
- **IPv6 protocol compliance**
Enterprise NMS can now communicate with a device using IPv6 when that device is the seed router or when OmniView or Expanded View are opened on a supported device using an IPv6 address.
- **Enhanced routerless discovery**
Enterprise NMS can now discover multiple routerless subnets or IP ranges with a single seed.
- **Display of port / slot information**
Fault Summary, OmniView, InfoCenter, and Path Trace now support the display of slot and port information for all physical interfaces of monitored devices.

- Enhanced SNMPv3 support
Unique user IDs can now be assigned to devices that support SNMPv3.
- Mozilla* Firefox* browser support
Mozilla Firefox is now supported on Windows, Solaris, and HP-UX operating systems.
- Solaris 9 support
SUN Solaris 2.9 is now supported along with SUN Solaris 2.8.
- Software on DVD or by download
Enterprise NMS software is now delivered on one DVD, or it can be downloaded from the Internet.
- Deleting objects from custom folders
Objects can now be deleted from custom folders without removing them from the Enterprise NMS database.
- Background images for custom maps
Enterprise NMS 10.4 provides a graphical user interface for adding and deleting files used as background images.
- Import / export topology seeds
Topology seeds can now be imported and exported.
- Documentation suite restructure
The Enterprise NMS 10.4 documentation suite has been restructured. The information has been redeployed in multiple documents, with each document focusing on a single management activity; for example, installation, administration, security, fault management, protocol management, etc.
- New devices
The following new devices are supported in Enterprise NMS 10.4:
 - Alteon 2216
 - BCM50
 - Ethernet Routing Switch 5520-24/48T
 - Ethernet Routing Switch 5530-24TFD
 - Ethernet Services Unit 1850
 - VPN Router 221

- VPN Router 251
- Wireless Gateway 7250
- Wireless Bridge 7230
- Wireless Security Switch 2270

For a complete list of all devices and agents supported by Enterprise NMS 10.4, refer to “Supported devices” in the *Managing Device Configuration with Nortel Enterprise NMS* (part number 321535-A).

- New devices supported by IP Service Manager
 - CS 1000
 - CS 1000M
 - Nortel 2001, 2002, 2004, and 2007 IP telephones
 - Nortel 2050 Softphone

Management tools

Enterprise NMS 10.4 management tools include:

- [“InfoCenter,” next](#)
- [“OmniView” on page 20](#)
- [“Path Trace” on page 21](#)
- [“Device Inventory Viewer” on page 21](#)
- [“TD Continuity Test” on page 22](#)
- [“Fault Summary/Fault Correlator” on page 22](#)
- [“Expanded View” on page 22](#)
- [“Call View” on page 22](#)

A mapping of these tools to the documentation suite is provided under [“Enterprise NMS documentation suite”](#) on page 26.

InfoCenter

InfoCenter provides a centralized location for you to view your network resources and launch local or Web-based applications. InfoCenter also provides a central launch point for other network resource management products such as Device Manager for Ethernet (formerly Passport) Routing Switches (ERS). Using an intuitive, folder-based interface, you can group your devices into logical groups by device type, location, criticality, fault status, or any number of other pertinent attributes.

The InfoCenter display lets you choose from one of two viewing formats:

- Graphical view lets you view the contents of a folder as icons, but with the added feature of physical and logical connections.
- Tabular view displays the contents of a folder in text format, allowing a large amount of data to be displayed in a small window space.

InfoCenter also lets you move through the logical layers of the network—from Internet down to physical—displaying intranetwork devices, logical concepts (such as VLANs), and end nodes.

Fault status is instantly displayed in all views within InfoCenter. In addition, the Alarms folders themselves reflect the fault status of the devices within them, letting you spot potential problems in the network at a glance.

OmniView

The OmniView performance monitoring application uses a tree-structured interface to simplify navigation. OmniView simplifies the process of moving between network concepts—from subnets down to ports on a device, or from the port level to the VLAN or subnet level—making it easy for you to launch the appropriate software needed to gather intelligent data reports.

You can display information gathered by OmniView in tabular or graphical format. Tabular output is grouped by “panes” of information containing the data objects that you need most often. You can easily graph these queries by selecting a group of data points from the pane and choosing the type of graph. You can select from pie chart, line graph, or bar graph output.

OmniView users can also create customized panes of information to query the data that is most important to them. Using an intuitive MIB browser-like interface, you can select any supported MIB object as an attribute of the pane. In addition, you can perform simple mathematical functions upon multiple MIB objects, letting you set up MIB equations for statistics such as utilization or bandwidth computation.

Path Trace

The InfoCenter Path Trace tool lets you view and troubleshoot paths between devices. You can also use Path Trace to focus on a potentially faulty device attached to a single end node. This feature lets you use Path Trace to diagnose issues with clients, servers or other devices in the network. Path Trace also indicates fault status of objects with the standard colors used in InfoCenter.

Path Trace is designed to help you localize the source of network problems. By using Path Trace and InfoCenter together, you can establish a monitoring baseline for link or device characteristics by saving data into InfoCenter folders for retrieval and comparison at a later date. You can then use InfoCenter’s tool set to further isolate the issue down to the data link or physical level, or to expand the trace to view the logical topology around the problem.

Device Inventory Viewer

Device Inventory Viewer lets you view and manage information about your network assets, including information about modules installed inside hubs, switches, and chassis. It also lets you view and edit information about the versions of agent software running on devices in the inventory.

TD Continuity Test

Transport Domain (TD) Continuity Test provides a powerful set of tools for troubleshooting internetworking traffic for TLS services. TD continuity testing lets you simulate the customer's data path traffic. The test sends and receives test packets and reports test results. It also lets you can also check for misconfiguration on the local and remote ports.

TD Continuity Test is both a debugging tool and Service Level Agreement (SLA) tool. You can use it to validate all end points, test connectivity, and determine round trip delay measurements for SLA purposes. You can also configure TD Continuity Test to automatically perform periodic checks of all endpoints of the VPN (source UNI to the far end UNI).

Fault Summary/Fault Correlator

Enterprise NMS 10.4 provides an intelligent fault engine that links into the topology database to provide true correlation and aggregation of faults. These faults are then summarized in a graphically-oriented viewer that offers solutions to the faults displayed.

In addition to using the Fault Summary application, you can also customize the operation of the Fault Correlator engine by editing the Fault Correlator startup files.

Expanded View

Expanded View presents a physical graphical view of a given network device, letting you monitor, configure, and retrieve statistics from the device.

Call View

Call View provides a graphical display of all ATM entities and virtual circuits included in dynamically configured Centillion* ATM networks.

Administrative functions

Enterprise NMS 10.4 administration includes a number of functions that provide better control over the data collected, how the data is collected, and who has access to the data. The administrative functions are:

- [“Access Control,”](#) next
- [“Community Strings Editor”](#) on page 23
- [“Monitor Level”](#) on page 24
- [“Database Admin Tool”](#) on page 24
- [“AutoTopology Manager”](#) on page 24
- [“DIT Administration Tool”](#) on page 24
- [“Disdevice and dislink”](#) on page 24

A mapping of these functions to the documentation suite is provided under [“Enterprise NMS documentation suite”](#) on page 26.

Access Control

Access Control lets you limit access to applications and application functions on a per-user basis. You can use this tool to limit Enterprise NMS users to read-only or read/write access, or restrict them from accessing sensitive applications and/or functions.

In addition, you can create a customized group of access permissions, allowing quick and easy assignment of access privileges to specific users.

Community Strings Editor

The Community Strings Editor lets you [add](#), [delete](#), [modify](#), or [rearrange](#) entries that specify device access via SNMPv1, SNMPv3, SSL, and Telnet. The Community Strings Editor stores information about community strings in the Enterprise NMS 10.4 topology database.

Monitor Level

The levels of monitoring in Enterprise NMS 10.4 become much more refined as you gain full control over how you want your networks managed. The InfoCenter Monitor Level window lets you control fault correlation, ICMP polling, trap registration, and topology on a subnet, segment, device, or router interface.

Database Admin Tool

The Database Admin Tool provides you with a quick, effective method of backing up critical Enterprise NMS 10.4 application and user databases. You can also use the Database Admin tool to configure the views that will be most useful to users of the Enterprise NMS 10.4 applications.

AutoTopology Manager

The AutoTopology Manager lets you monitor and manage the topology discovery process running on the Enterprise NMS server. Use the AutoTopology Manager to start and stop the discovery process and observe the status of the discovery process.

DIT Administration Tool

The DIT Administration Tool provides a graphical interface that lets you administer device support. You can install new, upgrade current, and view all devices that are installed on the Enterprise NMS server.

Disdevice and dislink

Disdevice and dislink are command-line topology utilities that you can use to discover single devices or links on single devices, or multiple devices and links. You can also use these commands to do a full discovery on portions of the network, and also debug topology issues.

Legacy applications

In addition to the tools described previously, Enterprise NMS 10.4 retains a number of legacy applications. These applications are not supported or certified in the Enterprise NMS program, but can be installed (optionally) on the Enterprise NMS server:

Table 1 Enterprise NMS 10.4 legacy applications

Legacy Application	Executable	Where installed
LANarchitect	UNIX: <code>./vlan_vv -l <ip_address></code> Windows, for System 5000: <code>vlanui.exe /5k -n<ip_address></code> Windows, for 28000-Series switch: <code>vlanui.exe /28k -n<ip_address></code>	<ul style="list-style-type: none"> Windows server: <code>\opt\lnms\unsupported</code> UNIX server: <code>/opt/lnms/unsupported</code>
Threshold Manager	UNIX: <code>./thman -l<ip_address></code> Windows: <code>thldmgr.exe -n<ip_address></code>	
Expanded View for System 2000 and System 3000 hubs	UNIX: <code>./ev -l <ip_address></code> Windows: <code>expview.exe -n<ip_address></code>	
PCAP/TAP	UNIX: 1. <code>cd \$LNMSHOME/unsupported/walts</code> 2. <code>run WALTS_ENABLE</code> 3. <code>run ./pcap</code> Windows: To install, double-click on PCAPTAP.EXE from Windows NT Explorer. The installation will put PCAP Config and Network Tap into your Start menu under Programs.	<ul style="list-style-type: none"> UNIX: <code>\$LNMSHOME/unsupported/walts</code> Windows: <code>\$LNMSHOME/unsupported/PCAPTAP</code>

Table 1 Enterprise NMS 10.4 legacy applications (continued)

Legacy Application	Executable	Where installed
Redundant Link Manager	<code>./rlink -l <ip_address></code>	<ul style="list-style-type: none">• UNIX server only: /opt/lnms/unsupported
Conversation Steering Control	<code>./css -l <ip_address></code>	
BaySecure LAN Access	UNIX: <code>./baysec -l <ip_address></code> Windows: <code>baysec.bat -l <ip_address></code>	<ul style="list-style-type: none">• Windows client: \\opt\\lnms\\bin• UNIX client: /opt/lnms/bin

These legacy applications (with the exception of BaySecure LAN Access) are not Java- or Web-based, and you must start them locally from the Enterprise NMS 10.4 server.

Enterprise NMS documentation suite

The Enterprise NMS documentation suite has been restructured for Release 10.4. Except for new functionality, the content is the same and chapter and appendix titles remain the same. However, the chapters and appendices have been organized into a number of new documents, according to management activity.

This section describes each document in the new suite, along with a list of the management tools covered in each document.

Title and Part Number	Description	Tools
<i>Administering Nortel Enterprise NMS</i> (part number 205969-J)	Describes and provides instructions for administering services and daemons, databases, and devices	Database Admin Tool Device Integration Toolkit
<i>Implementing Nortel Enterprise NMS Security</i> (part number 321536-A)	Provides instructions for establishing server, user, and device security	Access Control Community Strings Editor

Title and Part Number	Description	Tools
<i>Installing Nortel Enterprise NMS</i> (part number 321537-A)	Describes licensing options Provides installation instructions for the Enterprise NMS server, client, and database Catalogues the installed files and directories	
<i>Introducing Nortel Enterprise NMS</i> (part number 321538-A)	Introduces the Enterprise NMS Describes the restructured documentation suite	
<i>Managing Device Configuration with Nortel Enterprise NMS</i> (part number 321535-A)	Provides instructions for using Enterprise NMS device configuration tools	Expanded View Device Inventory Viewer
<i>Managing Faults with Nortel Enterprise NMS</i> (part number 321539-A)	Provides instructions for using Enterprise NMS fault management tools	Info Center Monitor Options Fault Summary Path Trace
<i>Managing IP Services with Nortel Enterprise NMS</i> (part number 321540-A)	Provides instructions for using the IP Services Manager application	IP Services Manager
<i>Managing Performance with Nortel Enterprise NMS</i> (part number 321541-A)	Provides instructions for using Enterprise NMS performance management tools	OmniView MView Call View
<i>Managing Protocols with Nortel Enterprise NMS</i> (part number 321542-A)	Provides instructions for using Enterprise NMS to manage multicast sessions and protocols, IP-VPNs, IP telephony systems, and VPLSs, and testing transport domain continuity	TD Continuity Test
<i>Nortel Enterprise NMS Documentation Roadmap</i> (part number 321543-A)	Provides a list of documents in the Enterprise NMS 10.4 documentation suite	
<i>Quick Installation and Startup for Nortel Enterprise NMS for HP-UX</i> (part number 217234-A)	Provides core installation procedures for installing Enterprise NMS 10.4 on an HP-UX machine.	
<i>Quick Installation and Startup for Nortel Enterprise NMS for Solaris</i> (part number 217233-A)	Provides core installation procedures for installing Enterprise NMS 10.4 on a Solaris machine.	
<i>Quick Installation and Startup for Nortel Enterprise NMS for Windows</i> (part number 217232-A)	Provides core procedures for installing Enterprise NMS 10.4 on a Windows machine.	

Title and Part Number	Description	Tools
<i>Release Notes for Nortel Enterprise NMS</i> (part number 205970-J)	Contains the latest information about nms, including informational notes, known problems, and bug fixes.	
<i>Troubleshooting Nortel Enterprise NMS</i> (part number 321546-A)	Provides problem resolution and troubleshooting guidelines Describes two topology discovery command line utilities	disdevice dislink
<i>Using Nortel Enterprise NMS</i> (part number 207569-G)	Provides instructions for discovering the network Introduces InfoCenter and provides instructions for organizing your network with InfoCenter	Autotoplogy Manager InfoCenter
<i>Using Nortel Enterprise NMS Customization and Open Interfaces</i> (part number 321544-A)	Provides instructions for configuring applications, trap properties, fault properties, and BCM devices	Application Launch Fault Correlator NetIQ Vivinet Manager

Starting point

Before beginning to install Enterprise NMS, Nortel recommends that you familiarize yourself with the following documents, in the given order:

- 1 *Release Notes for Nortel Enterprise NMS* (part number 205970-J)
- 2 *Installing Nortel Enterprise NMS* (part number 321537-A)
- 3 *Implementing Nortel Enterprise NMS Security* (part number 321536-A)
- 4 *Using Nortel Enterprise NMS* (part number 207569-G).

Obtaining technical manuals

You can print selected technical manuals and release notes free, directly from the Internet. Go to the www.nortel.com/documentation URL. Find the product for which you need documentation. Then locate the specific category and model or version for your hardware or software product. Use Adobe* Acrobat Reader* to open the manuals and release notes, search for the sections you need, and print them on most standard printers. Go to Adobe Systems at the www.adobe.com URL to download a free copy of Acrobat Reader.

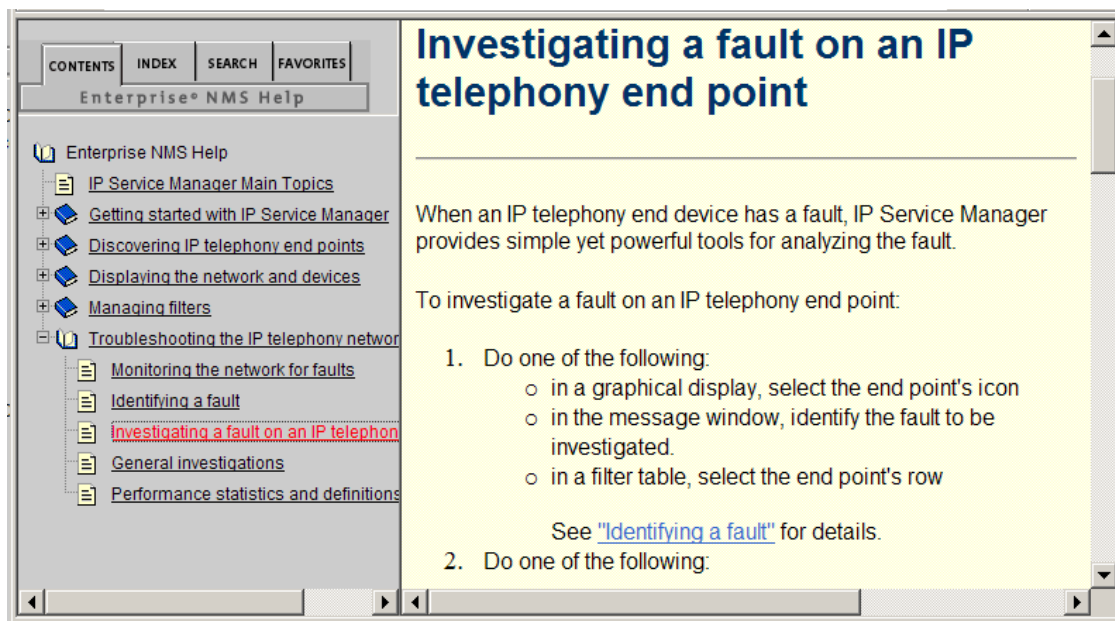
Online Help

All Enterprise NMS 10.4 tools contain extensive context-sensitive online Help systems. The Help system and the information in the documentation suite are strongly related, the primary difference being the presentation format, not the content.

Help is available while you work, by choosing Help > Using [application name], or by clicking the Help button in a dialog box.

The Enterprise NMS 10.4 Help systems are in the form of Web pages that you view using the default browser on your system. [Figure 2](#) shows a typical Enterprise NMS 10.4 Help system opened in a Netscape Navigator* Web browser window.

Figure 2 Typical Enterprise NMS 10.4 online Help system



When you run Enterprise NMS 10.4 applications at an Enterprise NMS 10.4 client station, the Web pages for Help topics are retrieved from directories on that station. When you run Enterprise NMS 10.4 applications in a Web browser window, the Help pages are served from the Enterprise NMS 10.4 server where you are logged in.

The Enterprise NMS 10.4 online Help systems display Help content in the right frame of the browser, and four navigation tabs in the left frame:

- Contents - Shows a table of contents for the Help system.
 - Click the (+) or (-) symbols to expand or collapse headings.
 - Click the book or page icons to view Help topics.
- Index - Shows an alphabetical index of keywords and common terms.
- Search - Lists topics containing a given word or phrase. Enter a word or phrase in the text box and press [Enter].
- Favorites - Lets you bookmark Help topics for later reference. Click Add Current to add the current Help topic to the list. To remove a topic, select a topic and click Delete.

You can also view descriptions of toolbar buttons and menu commands in the application window status bars. Point to the button or command, and read the description in the status bar.

Integration with Communication Server 1000 Telephony Manager

If you use Communication Server 1000 Telephony Manager (OTM), you can integrate OTM with Enterprise NMS. Integrating OTM with Enterprise NMS lets you manage Meridian* voice switches from Enterprise NMS InfoCenter.

For more information about integrating OTM with Enterprise NMS, see *Communication Server 1000 Telephony Manager Installation and Configuration* (part number 553-3001-230).

Send us feedback

We would like to hear from you if you have any comments, questions, or concerns about this or other items of Enterprise documentation. Please email us at tssdocfeedback@innovatia.net with any feedback you would like to offer.

Index

A

[administrative functions](#) 23

[Autotopology Manager window](#) 24

C

[Centillion](#) 22

[conventions, text](#) 12

F

[feedback on Enterprise documentation](#) 31

H

[Help](#)

[using](#) 29

L

[legacy applications](#) 25

P

[publications](#)

[hard copy](#) 29

Q

[Quickhelp](#) 31

T

[technical publications](#) 29

[text conventions](#) 12