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CallPilot

Enterprise Networking Implementation and Administration Guide

Product release 2.02 Standard 1.0 October 2003

NORTEL NETWORKS™

CallPilot

Enterprise Networking Implementation and Administration Guide

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chapter 1

About CallPilot

This chapter introduces CallPilot, the powerful multimedia messaging system from Nortel Networks. CallPilot offers a single solution for managing many types of information, including voice mail, fax-mail, e-mail, telephone calls, conferencing, calendars, directories, and call logs.

CallPilot enables you to get all the information you need from one source, whether through display-based telephone sets, your wireless set, your Windows desktop computer, a speech recognition interface, or another personal communications device.

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Overview

Introduction

The *Enterprise Networking Implementation and Administration Guide* provides the information and procedures that are necessary to implement Enterprise Networking.

Assumptions

This guide assumes that the Meridian Application Server has been correctly installed and is operational. If the application has not been installed, then install it before proceeding. For installation instructions, refer to the hardware installation guide appropriate to your server type.

If the server has been installed but is not operational, refer to the *Maintenance and Diagnostics Guide* for information on troubleshooting your system.

Skills you need

Introduction

You need certain skills and knowledge to use this guide effectively.

Nortel Networks product knowledge

Knowledge of, or experience with, the following Nortel Networks products will assist you:

- previous releases of CallPilot
- Meridian Mail

PC experience or knowledge

Knowledge of, or experience with, the following PC products will be of assistance. This guide does not document the following functionality:

- Microsoft Windows NT
- Microsoft Windows 95
- Microsoft Windows 2000

Other experience or knowledge

Other types of experience or knowledge that may be of use include the following:

- switch configuration and operation (especially trunk group access restrictions [TGARs] and network classes of service [NCOS])
- network management
- client-server systems
- flowcharting
- troubleshooting

How this guide is organized

Introduction

The *Enterprise Networking Implementation and Administration Guide* is organized in the sequence of tasks required to successfully implement Enterprise Networking for CallPilot. Start at the beginning of the guide and work your way through it until all required tasks are completed.

Contents

This guide contains the following chapters:

Chapter title	Description
Chapter 1, About CallPilot	This chapter describes how to work with the CallPilot interface and how to use this guide.
Chapter 2, Getting started	This chapter provides an overview of Enterprise Networking. This chapter describes the features supported by Enterprise Networking and how Enterprise Networking works. This chapter also provides a high-level overview of the tasks that are performed during implementation.
Chapter 3, Gathering information	This chapter explains how to gather the information required to implement Enterprise Networking.
Chapter 4, Configuring the switch for Enterprise Networking	This chapter explains how to configure the switch for Enterprise Networking.
Chapter 5, Configuring CallPilot for Enterprise Networking	This chapter describes how to configure CallPilot for Enterprise Networking. This chapter describes every box that must be completed and provides detailed procedures.

Chapter title	Description
Chapter 6, Adding sites to Enterprise Networking	This chapter describes how to configure the local site. This chapter also describes how to add and configure every site in the messaging network that uses Enterprise Networking to exchange messages with local site. This chapter describes every box that must be completed and provides detailed procedures.
Chapter 7, Testing and backing up Enterprise Networking	This chapter describes how to test the implementation of Enterprise Networking to ensure that it is properly configured. This chapter also describes how to perform a backup of the system.
Chapter 8, Maintaining Enterprise Networking	This chapter explains how to perform both regularly scheduled maintenance tasks and as-required maintenance tasks.
Chapter 9, Troubleshooting Enterprise Networking	This chapter provides information to identify and solve problems with Enterprise Networking.

Related information products

Introduction

The following CallPilot technical documents are stored on the CD-ROM that you receive with your system. The documents are also available from the following sources:

- CallPilot Manager
- My CallPilot
- the Nortel Networks Partner Information Center (PIC) at http://my.nortelnetworks.com

  You require a user ID and a password to access the PIC. If you do not have a PIC account, click Register to request an account. It can take up to 72 hours to process your account request.

You can print part or all of a guide, as required.

Note: To order the documents that are available in printed format, contact your Nortel Networks sales representative.

Planning and migration guides

Use these guides before you install CallPilot to help plan your system, or to plan a migration of data from Meridian Mail to CallPilot:

Document title	NTP number
Installation and Configuration Planner	—
Planning and Engineering Guide	555-7101-101
What's New Guide	555-7101-901

Installation and configuration guides

The following guides describe how to install the following:

- CallPilot server hardware and software
- desktop messaging and My CallPilot software

Document title	NTP number
Desktop Messaging and My CallPilot Installation Guide	555-7101-505
Installation and Configuration Guide for your server model This is a binder that contains the following five documents: ■ *Part 1: Installation and Maintenance Overview* ■ *Part 2: <Server model> Server Hardware Installation* ■ *Part 3: <Switch name> and CallPilot Server Configuration* ■ *Part 4: Software Installation and Maintenance* ■ *Part 5: <Server model> Server Maintenance and Diagnostics*	Refer to the *CallPilot Installation and Configuration* binder for NTP numbers.

Administration guides

The following guides provide specialized information to help you configure administer and maintain CallPilot, and use its features:

Document title	NTP number
Administrator's Guide	555-7101-301
Reporter Guide	555-7101-310
Application Builder Guide	555-7101-325

Document title	NTP number
Desktop Messaging and My CallPilot Administration Guide	555-7101-503
Meridian Mail to CallPilot Migration Utility Guide	555-7101-801

Networking guides

The following guides describe how to plan, install, set up, and troubleshoot the CallPilot networking services:

Document title	CallPilot release	NTP number
Networking Enhancements Guide	2.0	555-7101-507
Networking Planning Guide	1.0	555-7101-100
NMS Implementation and Administration Guide	1.0	555-7101-302
AMIS Networking Implementation and Administration Guide	1.0	555-7101-303
Enterprise Networking Implementation and Administration Guide	1.0	555-7101-304
Integrated AMIS Networking Implementation and Administration Guide	1.0	555-7101-305
VPIM Implementation and Administration Guide	1.0	555-7101-306

Note: For instructions on how to configure the networking services on CallPilot, refer to the CallPilot Manager online Help.

End user guides

The following guides are intended for CallPilot end users, such as telephone set users and desktop messaging users:

Document titles
Unified Messaging Quick Reference Card
Unified Messaging Wallet Card
Unified Messaging What's New Card
Command Comparison Cards
Menu Interface Quick Reference Card
Alternative Command Interface Quick Reference Card
Multimedia Messaging User Guide
Speech Activated Messaging User Guide
Desktop Messaging User Guides
My CallPilot User Guide

Troubleshooting

The *CallPilot Troubleshooting Reference* describes symptoms that can appear on all CallPilot server platforms, and describes ways to resolve them.

The *CallPilot Troubleshooting Reference* is intended for Nortel Networks distributors and technical support representatives; therefore, it is not part of the customer documentation package. Nortel Networks continually updates the *CallPilot Troubleshooting Reference*, which is available from the Nortel Networks Partner Information Center (PIC) at http://my.nortelnetworks.com.

You require a user ID and a password to access the PIC. If you do not have a PIC account, click Register to request an account. It can take up to 72 hours to process your account request.

Note: If you are not a Nortel Networks distributor, then contact your Nortel Networks technical support representative for assistance.

Using online sources

CallPilot administration online Help

The CallPilot Manager and CallPilot Reporter software contain administration online Help areas that provide access to

- technical documentation in Acrobat PDF format
- online Help topics in HTML format

To access online information, use either of the following methods:

- Click the orange Help button at the top of any page to access the Administration Help area.
- Click the grey Help button on any page to display a topic that relates to the contents of the page.

For more information about using these Help systems, access the CallPilot Manager Help, open the Getting Started book, and click “Navigating CallPilot Manager Help.”

The Application Builder software contains a Windows Help system as well as context-sensitive Help (available by clicking the ? button and then a field or label).

CallPilot end-user online Help

The My CallPilot software contains a Useful Information area that provides access to the end-user guides in PDF format.

To access online Help for the currently selected My CallPilot tab, click the Help button on the upper-right corner of the My CallPilot page.

Desktop messaging provides product-specific Windows Help for groupware clients (Microsoft Outlook, Novell GroupWise, and Lotus Notes). The stand-alone version of CallPilot Player also provides addressing and troubleshooting information for Internet mail clients.

Contacting technical support

Contact your distributor's technical support organization to get help with troubleshooting your system.

Conventions

Commands documented in procedures

As in many other Windows-based applications, in CallPilot you can execute a command in several ways. For example, to copy text you can choose any of the following methods:

- Select Copy from the Edit menu.
- Click the Copy button on the toolbar.
- Type the keyboard shortcut Control + C.

The procedures in this guide use only the first method: selecting a command from a menu.

Navigation information in procedures

A **Getting there** statement precedes each procedure in this guide. This statement summarizes the steps you must take to navigate to the window or tab where you carry out the procedure.

All **Getting there** statements start at the Nortel System Management Interface (SMI) window. This assmues that you logged on and selected the appropriate system. Eac item mentioned after the Nortel SMI window represents an icon, window or tab that makes up the path to the final destination.

Example

To define special mailboxes, such as the broadcast mailbox, you must be on the Mailboxes tab.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Message Administration

After you double-click Messaging Administration, the Message Administration Properties sheet displays. Click the Mailboxes tab.

Finding your way around CallPilot

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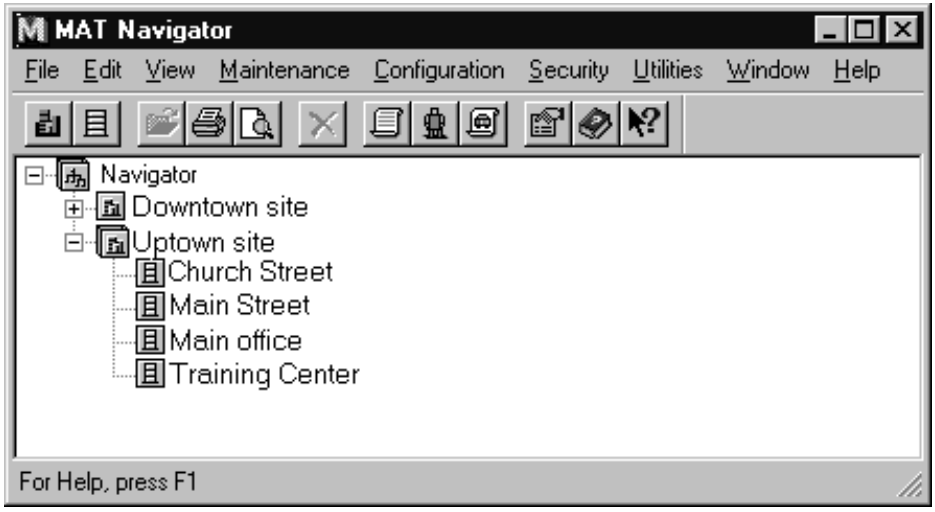
Connecting to CallPilot

Introduction

To perform administrative tasks, or to build or work with CallPilot applications, you must first connect to the Meridian Application Server (the MAS server). The MAT Navigator and the System Management Interface (SMI) work together to give you access to your system and sites.

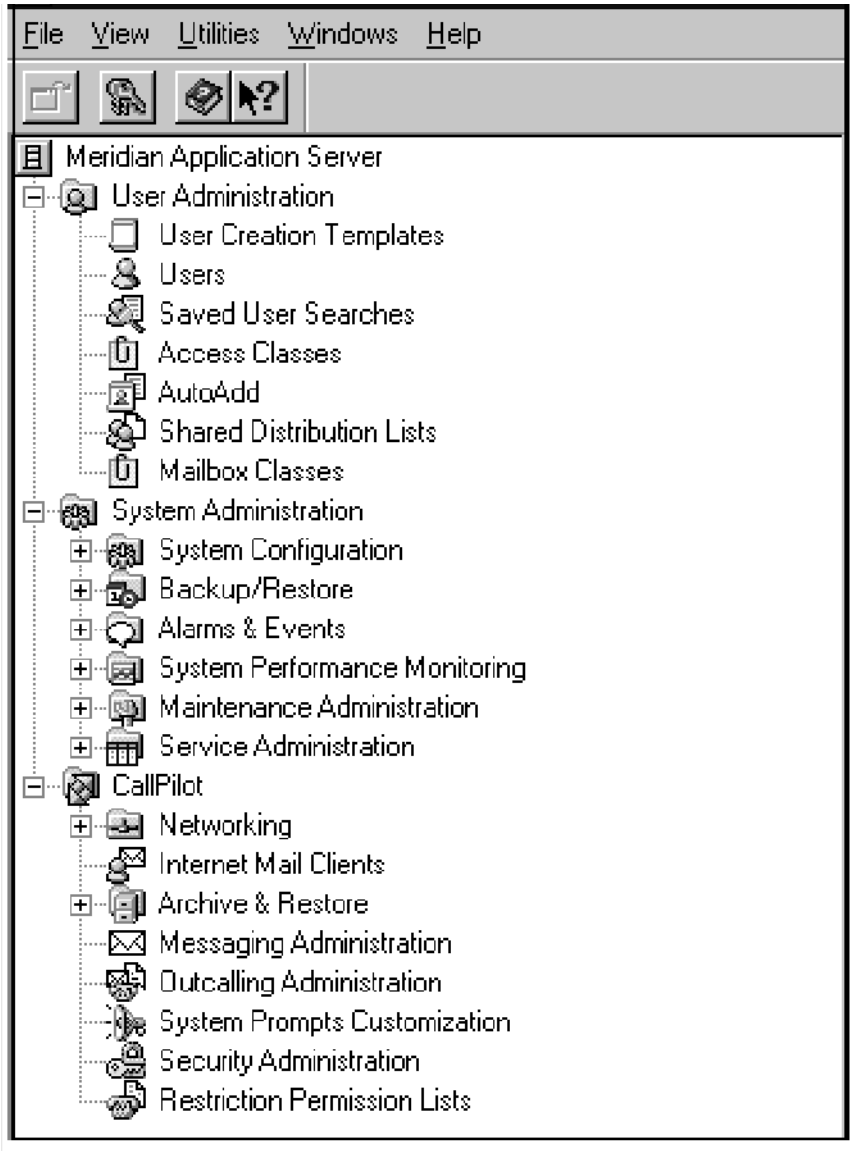
Selecting a system-the MAT Navigator

The first step in logging in is to launch the MAT Navigator, which has its own password. The MAT Navigator connects your administration client to the MAS server. It displays all your sites and systems and enables you to select one to work on.



Selecting a program—the System Management Interface (SMI)

When you select a system from the MAT Navigator, you are prompted for a second password. At this point, the SMI window for the selected system or site displays.



The SMI gives you quick and easy access to your system or sites. The SMI uses a navigation tree to display the system's hierarchy. In the tree, icons represent the folders and programs. Double-click a folder icon to view its contents. Folders can contain programs and other folders. Double-click a program icon to run the associated program.

Selecting an object-list views

When you launch certain programs, the first thing you see is a list view. The list view displays all the objects of a certain type (such as mailbox classes) that are currently defined in the system. The list view includes predefined objects as well as those defined by an administrator. From the list view window, you can select a specific object to work on.



Viewing and changing properties

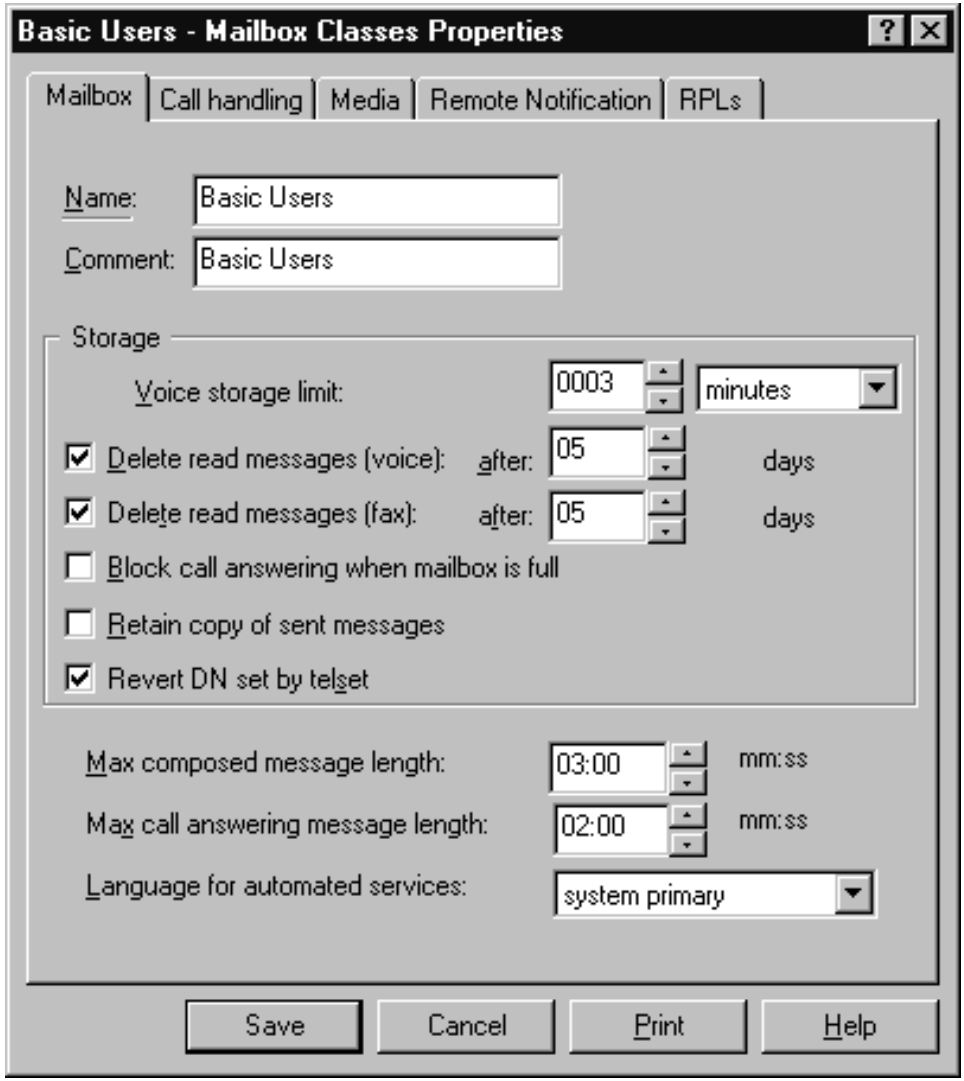
Select an object and display its properties by

- double-clicking it or
- single-clicking it and selecting Properties from the File menu
- right-clicking it and selecting Properties from the popup menu

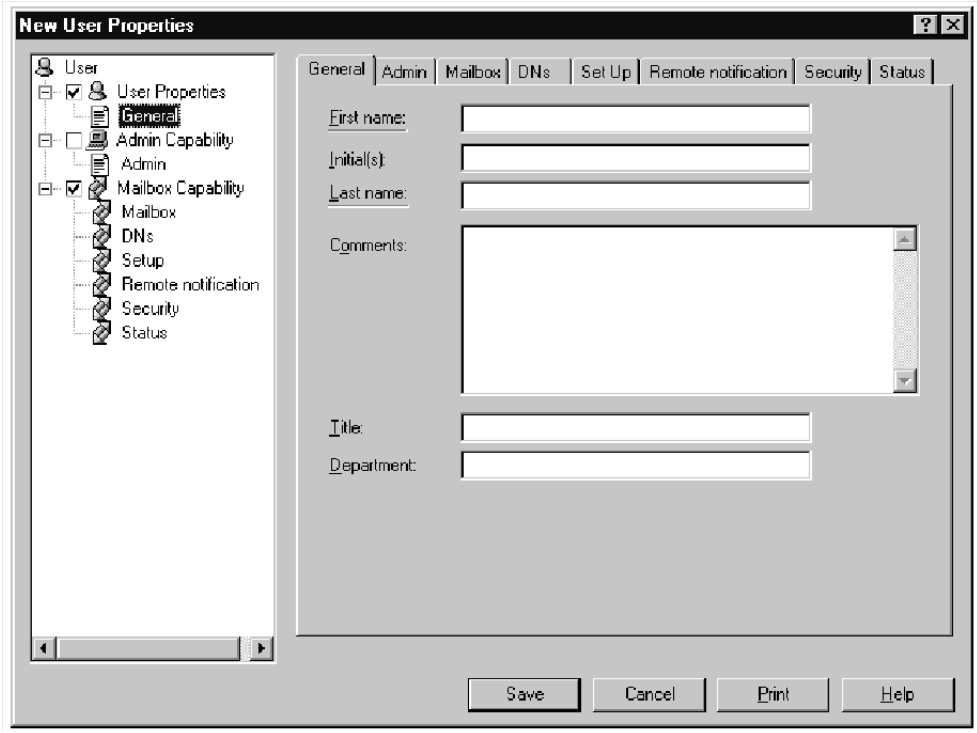
Entering data and choosing options-property sheets

A property sheet is displayed when you view an object selected from a list view. Certain programs, such as Messaging Administration, display a property sheet immediately after launching. Property sheets have one or more tabs. Each tab has fields, referred to as boxes, in which you can type data or from which you can select options.

Most CallPilot property sheets look like the following:



Some property sheets are divided into two panes. When a box is checked in the left pane, the selected capabilities are enabled and you can access the associated tabs. Select a tab by clicking its name in the left pane or by clicking the tab in the right pane. These property sheets look like this:



Mandatory boxes

If the name of a box is underlined, the box is mandatory, and you must fill it in. You cannot save if any mandatory boxes are empty.

Common buttons

The following buttons appear on most property sheets:

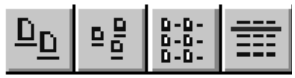
Button	Description
Save	Saves all changes made on any of the tabs in a property sheet and closes the property sheet. Therefore, save only when you have made the necessary changes on all tabs.
Cancel	Closes the property sheet without saving any changes.
Print	Prints the contents of all tabs in the property sheet.
Help	Displays Help for the current tab. From this overview Help topic, you can access other Help topics, the index, and the search function.

Using the toolbar buttons

For easier access, some of the more common tasks, such as Print and Save, are represented as buttons on the toolbar.

The following buttons are used throughout CallPilot. Buttons or icons specific to certain CallPilot functions, such as backups and archives, are documented in the relevant chapters.

Toolbar button	Description
	Saves any changes you have made and then transfers all the application's data to the server.
	Opens the Print dialog box and prints the active file or the objects you specify.
	Deletes the object you select.

Toolbar button	Description
	Displays the properties of the object you select.
	Displays the Help topics window.
 	Explains the next menu item or screen object you click. In a window, there is an arrow. On tabs or in dialog boxes, there is no arrow.
 	Opens the New dialog box, where you identify the properties of the object you are creating. The button looks different in different applications.
 	Displays the Open dialog box, where you select an object to open. The button is different in different applications.
	Reloads the current page and displays the changes you have made.
	Enables you to select how the system displays icons.

Multi-administrator access

Introduction

You can create multiple administrator accounts to make administering CallPilot easier and more efficient. Multiple accounts enable administration responsibilities to be distributed among a number of people. Therefore, certain administrators can specialize in certain tasks, such as maintaining users, performing backups, analyzing reports, or creating multimedia services.

Access classes

For security reasons, administrators should be given access only to those parts of the system that relate to their role. For example, an administrator who is responsible only for creating multimedia services should have access only to Application Builder and the Service Directory Number Table.

Each administrator account is assigned an access class. An access class is a list of the parts of the system and the level of access allowed. The access levels are as follows:

- create/delete (enables an administrator to delete objects such as users and services)
- edit
- view
- none

For example, an administrator may be able to create or delete objects in Application Builder but only view User Templates.

Simultaneous access

Multiple administrators can log in to CallPilot at the same time without overwriting other work.

If you are the first to log in to a particular resource, such as a specific mailbox class or user profile, and another administrator tries to access the same resource, a dialog box appears to inform you of the other administrator. At this point, you can do one of the following:

- Keep editing.
- Save your changes, and release the resource to the other administrator.
- Cancel your changes, and release the resource to the other administrator.

If you do not respond to this prompt within two minutes—because you are away from the terminal, for example—the system releases the resource so that others can access it. If this happens, all your unsaved changes are lost.

An administrator who accesses a resource that is currently being edited sees a read-only view of the property sheet in which all boxes are dimmed. This indicates that the resource is currently locked. The administrator is not notified when the resource is released, but must try to access the property sheet again to see whether its status has changed.

If a user tries to log on to a mailbox while an administrator is changing the profile, the user is unable to log on and receives a message that says the mailbox is in use.

Refreshing screens

Because multiple administrators can access the same database at the same time, a Refresh command is available from the View menu to ensure that the view you are seeing is the most up-to-date.

For example, if you are viewing a list of users when another administrator deletes a user, the only way to see the change is to refresh the screen. You should, therefore, refresh the screen regularly.

Error handling in property sheets

Introduction

If you make certain types of errors while entering data, you are not able to save your changes until you correct the errors. For example, if you leave a mandatory box empty, you receive a message prompting you to fix it.

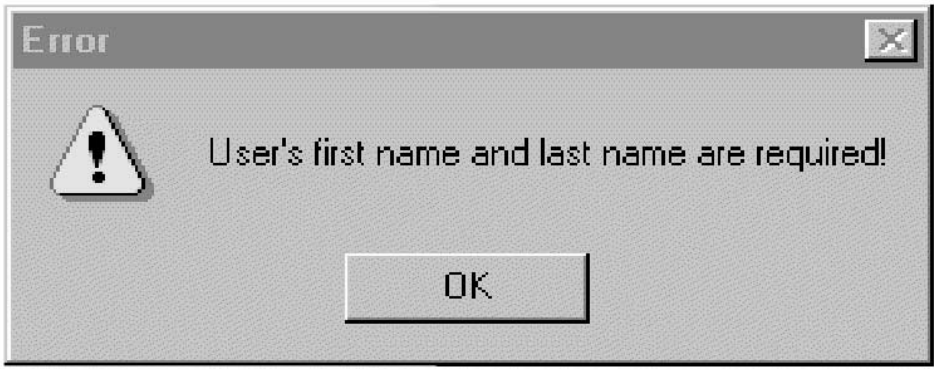
Note: These errors do not show up in the Event Browser or Alarm Monitor because the errors relate only to data entry and are not operational problems.

How error handling works

There are two types of error messages.

Type 1

If you get this type of error message, click OK, and then fix the problem described in the message before you try to save again.

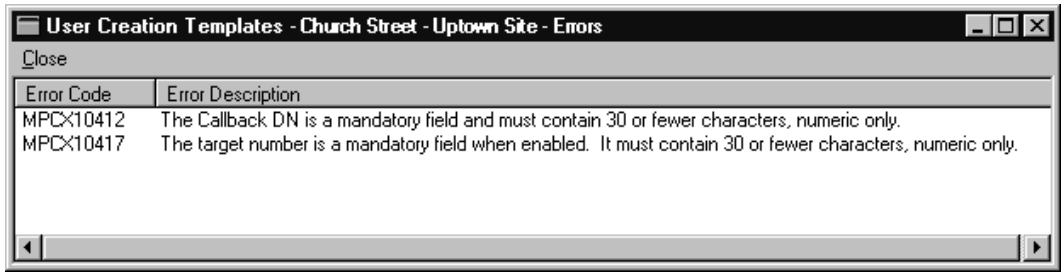


Type 2

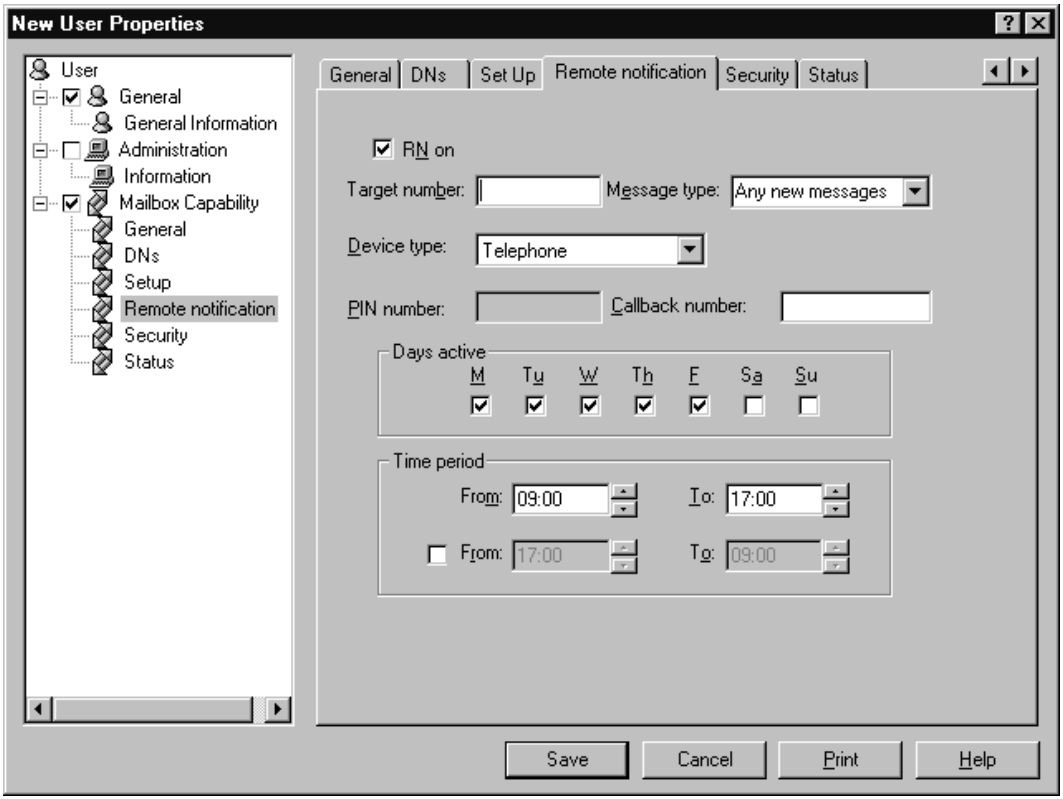
If you get this type of error message, click OK to see a list of errors.



Double-click an error from the list. Your cursor is automatically placed in the box where the error was made so that you can correct it.



For example, if you double-click the second error, the Remote notification tab is displayed, with the cursor in the Target number box.



Using the online Help

Introduction

While administering or maintaining CallPilot, you may have questions about the purpose of certain boxes and buttons, or need more information about completing certain tasks. Online Help provides brief answers to the questions "What's this?" and "How do I...?"

Context-sensitive Help

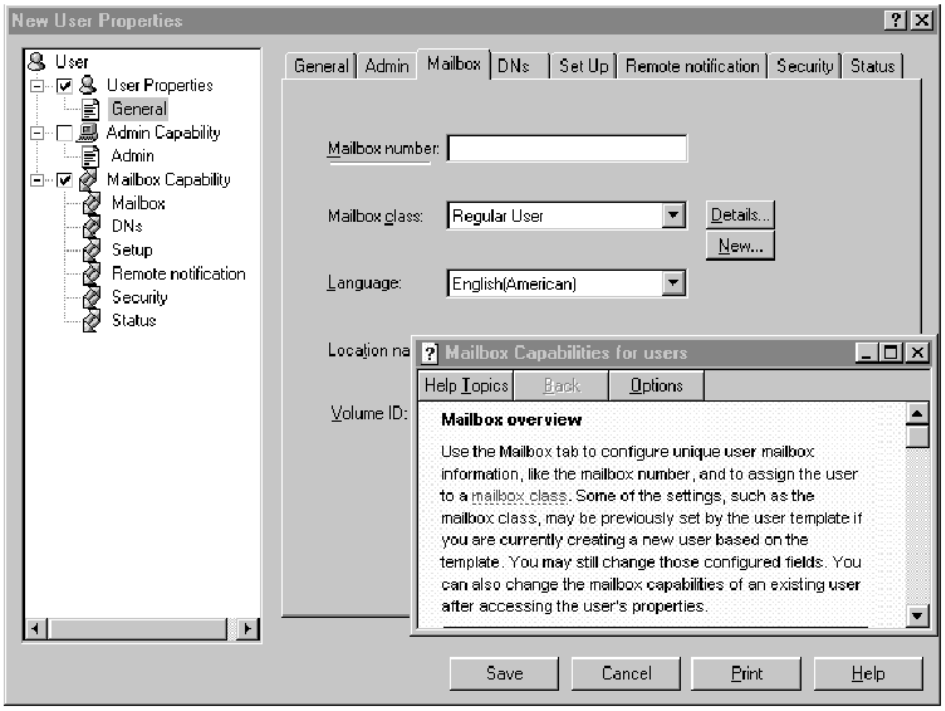
If you need to know the purpose of a particular box or button, use context-sensitive Help.

To access context-sensitive Help

1 Click the  icon in a window or the  icon on a tab or in a dialog box.

2 Point to the box or button for which you want more information, and click.

Result: A pop-up description of the selected object is displayed.



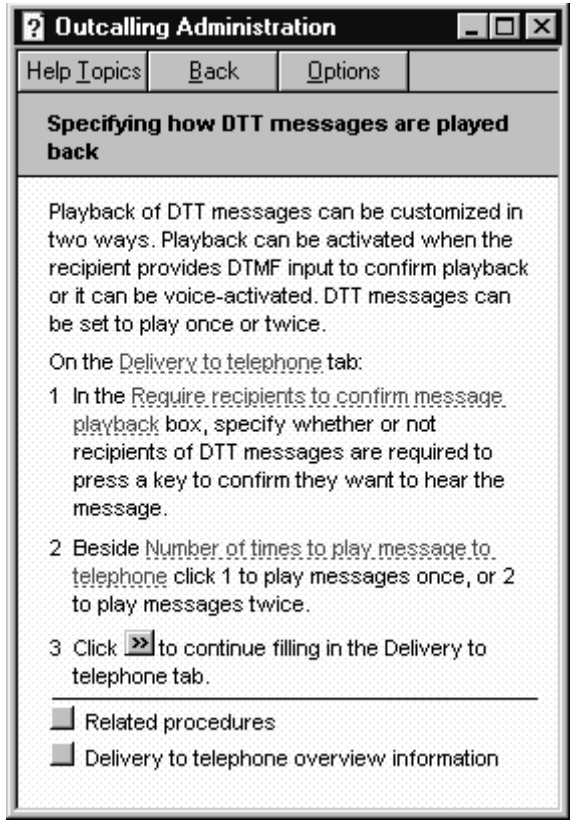
Procedures

If you need to know how to do something, you can access procedures to lead you through a task.

High-level tasks

In some cases, high-level tasks take you through longer procedures. These tasks also provide you with navigation to the step-by-step procedures they include.

For example, setting up Delivery to Telephone requires several procedures. The high-level task summarizes these procedures. You click the gray buttons within the task to open the step-by-step procedures. The high-level task remains on your screen so that you can continue to use it to move through the procedures.



Overview topics

Overview topics provide brief descriptions of tabs, features, and the tasks carried out from the tabs. However, the online guides contain more detailed feature descriptions.

To access overview topics

Click the Help button on a tab.

To find information in Help

You can look up procedures and overview topics in the following ways:

1 From the Help menu, select Help Topics.

Note: You can also press F1 on the keyboard.

2 Go to one of the following tabs:

- To see the table of contents of all the Help topics, select the Contents tab.
- To look up a subject alphabetically, select the Index tab.
- To do a full-text search to find topics that contain the words you enter, select the Find tab.

chapter 2

Getting started

Enterprise Networking is one of the networking solutions offered by CallPilot. Enterprise Networking uses a proprietary protocol, the Enterprise Networking protocol, to exchange messages.

This chapter introduces Enterprise Networking and provides a basic overview of the Enterprise Networking implementation process.

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About Enterprise Networking

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Overview

Introduction

Enterprise Networking is one of the networking solutions offered by CallPilot. This chapter introduces Enterprise Networking and provides a basic overview of its implementation process.

You must be familiar with the basic concepts of messaging networks, dialing plans, and protocols. To review these concepts, consult the *Networking Planning Guide*.

Definition: Enterprise Networking

Enterprise Networking is a CallPilot networking solution that is used to transmit messages between users at different sites in a private messaging network.

The following diagram is a conceptual illustration of how Enterprise Networking works:

Protocol

Enterprise Networking uses a proprietary analog protocol that is based on extensions to the Audio Messaging Interchange Specification (AMIS) protocol. Like the AMIS protocol, the Enterprise Networking protocol uses dual-tone multifrequency (DTMF) signaling.

Since DTMF signaling is a global standard, Enterprise Networking can be used globally.

Advantages of Enterprise Networking protocol

The Enterprise Networking extensions to the AMIS protocol offer important advantages.

The Enterprise protocol requires less resource consumption and costs less to operate.

For example, when a single message is sent to multiple recipients at the same remote site using AMIS Networking, you make one call for each recipient. With Enterprise Networking, you make only one call.

The Enterprise protocol also supports a longer voice message length than AMIS.

The Enterprise Networking extensions also support additional CallPilot features that are not supported by AMIS Networking.

Message transmitted with Enterprise Networking

A message that you transmit with Enterprise Networking consists of two parts:

- a message header consisting of
  - the mailbox numbers of the sender and the recipient or recipients
  - an indication of whether the message is a regular message or a non-delivery notification (NDN) message
- the recorded message

Enterprise site ID numbers

Every messaging system in the messaging network is called a site. A site consists of a server and one or more switches.

If you install Enterprise Networking on the messaging network, every site in the messaging network that exchanges messages with the site using Enterprise Networking needs a unique site ID number.

Enterprise Networking is the only networking solution that uses site IDs.

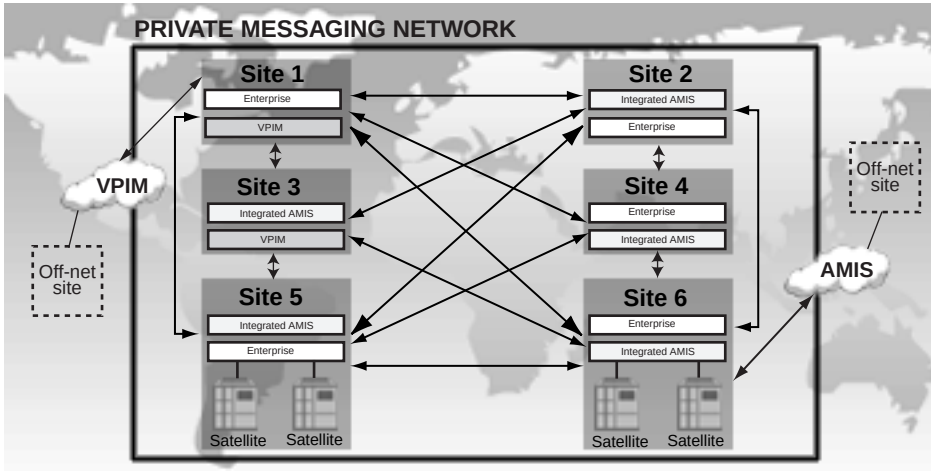
If your implementation of Enterprise Networking is an upgrade of an existing voice messaging system that used Enterprise Networking, maintain the site ID numbers of the previous system.

Complex network with Enterprise Networking

You can implement Enterprise Networking on a complex messaging network that combines several networking solutions. A messaging network is often both open and private, combining various protocols.

The following diagram illustrates a complex network that includes sites with Network Message Service (NMS), AMIS Networking, VPIM Networking, and Enterprise Networking implemented.

Because Enterprise Networking is implemented in this messaging network, every site has a unique site ID number.



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While the sites have more than one networking solution implemented, only one protocol is used between any two sites.

Example:

Because Site 4 and Site 2 both have Integrated AMIS Networking and Enterprise Networking implemented, you use only one protocol to send messages between the sites. The network administrators of Site 4 and Site 2 must agree on which protocol to use.

CallPilot and Enterprise Networking

Introduction

Enterprise Networking supports most of the features offered by CallPilot.

Enterprise Networking features

The following table lists the CallPilot features that are supported by Enterprise Networking.

For detailed information about CallPilot features, consult the *Basic Administration Guide*.

CallPilot feature	Supported	Notes
Call Sender	Yes	This feature can be used for both call answering and composed messages from network users if ■ the calling line identification (CLID) is present in the message, or ■ the mailbox numbering plan follows the dialing plan, or ■ a remote user entry is added for the network user
Names Across the Network	Yes	
Name Addressing	Yes	Name addressing is available if users at the remote site are defined as remote users at the local site. This can be done automatically with Names Across the Network or manually by the administrator.
Personal Distribution Lists	Yes	This feature is available if users at the remote site are defined as remote users at the local site, which can be done by Names Across the Network.

CallPilot feature	Supported	Notes
Shared Distribution Lists	Yes	A remote user is required. A network address cannot be entered into the shared distribution list unless the address corresponds to a remote user.
Multiple Recipients	Yes	The Enterprise Networking message contains all the recipients of the message who are at integrated sites. Recipients at open sites are not included.
Reply To	Yes	This feature can be used with all network messages. It can also be used with call answering messages left by network users if the calling line identification (CLID) is present on the message and all other conditions listed for Call Sender are met.
Reply All	Yes	This feature works with all recipients at integrated sites. It does not include recipients at open sites.
User's Actual Personal Verification	Yes	The user's personal verification is played to callers in voice messaging scenarios if recipients are defined as remote users at the local site. AutoAdd or Names Across the Network can be used to create the user's personal verification.
Administrator-Recorded Personal Verification	Yes	The administrator can record a personal verification for remote users who are defined at the local site.
Remote Site Spoken Names	Yes	A spoken name can be recorded for each remote site when configuring a remote site.
Private Tag	Yes	Messages tagged as private are announced to the recipient and may not be forwarded by the recipient to anyone else.

CallPilot feature	Supported	Notes
Acknowledgment Tag	Yes	Acknowledgment tags result in a message to the sender indicating that the message was actually listened to.
Urgent Tag	Yes	Messages tagged as urgent trigger urgent-related features, such as remote notification or message waiting indication. Urgent messages are given priority for transmission as determined by the scheduling parameters.
Economy Tag	Yes	
Received Time Announced	Yes	The time when the message was deposited into the mailbox is announced to the recipient. The time reflects the time zone of the recipient.
Sent Time Announced	Yes	The sent time announced to the recipient reflects the time zone of the sender, not the recipient.
120-Minute Messages	Yes	Enterprise Networking supports messages containing up to 120 minutes of voice, including any attachments.
Sender’s Name (Text)	Yes	This feature is supported only if American English character set (ASCII 32-126) is used.
Recipient’s Name (Text)	Yes	If the recipients are defined as remote users, their names are provided. This feature is supported only if American English character set (ASCII 32-126) is used.
Message Subject (Text)	Yes	This feature is supported only if American English character set (ASCII 32-126) is used.

CallPilot feature	Supported	Notes
Sender’s Department	No	
Timed Delivery	Yes	Any message can be tagged for future delivery.

Names Across the Network

Names Across the Network

Names Across the Network is a feature that automatically adds temporary remote users to a local database and maintains them.

You can use Names Across the Network if you have Enterprise Networking installed on your system.

Incoming and outgoing messages

You enable Names Across the Network for incoming and outgoing messages separately. A temporary remote user can be added when

- A local user addresses a message to a user at a remote site.
- A user at a remote site addresses a message to a local user.

When you select Names Across the Network for incoming messages, you add temporary remote users from all sites in the messaging network.

However, because outgoing messages must carry additional information with them, which results in longer transmission time, you can select Names Across the Network for outgoing messages for individual sites. For example, you might select the feature for outgoing messages to a site that does not incur long-distance toll charges, but clear the feature for a site that incurs these charges.

Examples

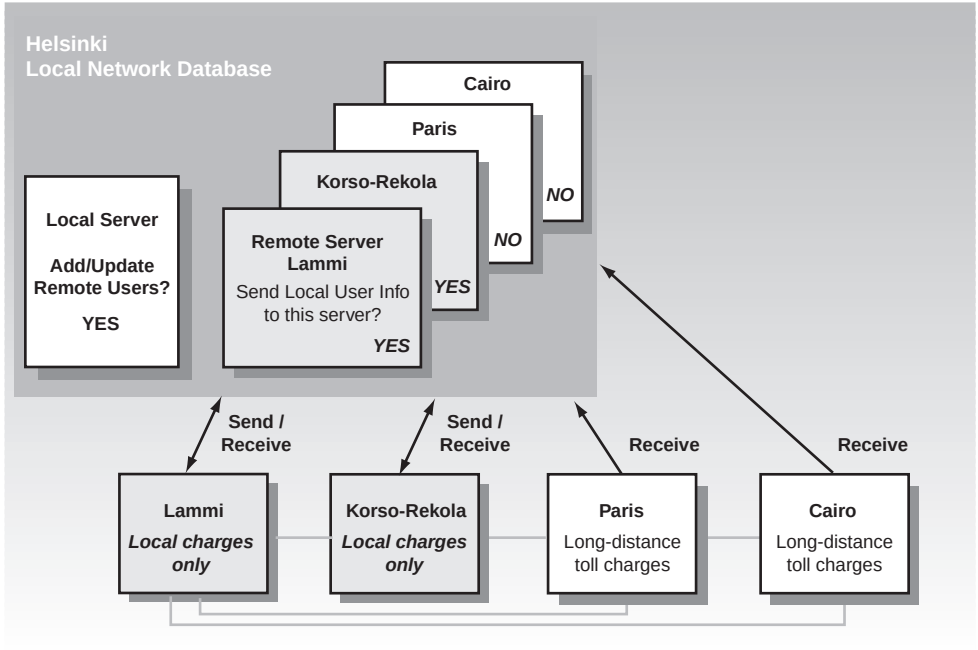
The following examples describe a messaging network consisting of five sites.

Example 1

As the local administrator of the Helsinki site, you set your system to receive Names Across the Network by selecting the Add/Update Remote Users option. You receive messages from all other sites that are configured to send the information.

However, when you configure information about the remote servers in your local database, you clear the Send Local User Information to this Server option for the sites to which you do not want to send remote user information. In this case, you do not want to incur the extra long-distance toll charges associated with Names Across the Network. Therefore, you clear the Send Local User Information to this Server option for Cairo and Paris.

Because Lammi and Korso-Rekola are near Helsinki and do not incur long-distance toll charges, you allow local user information to be sent to these sites.

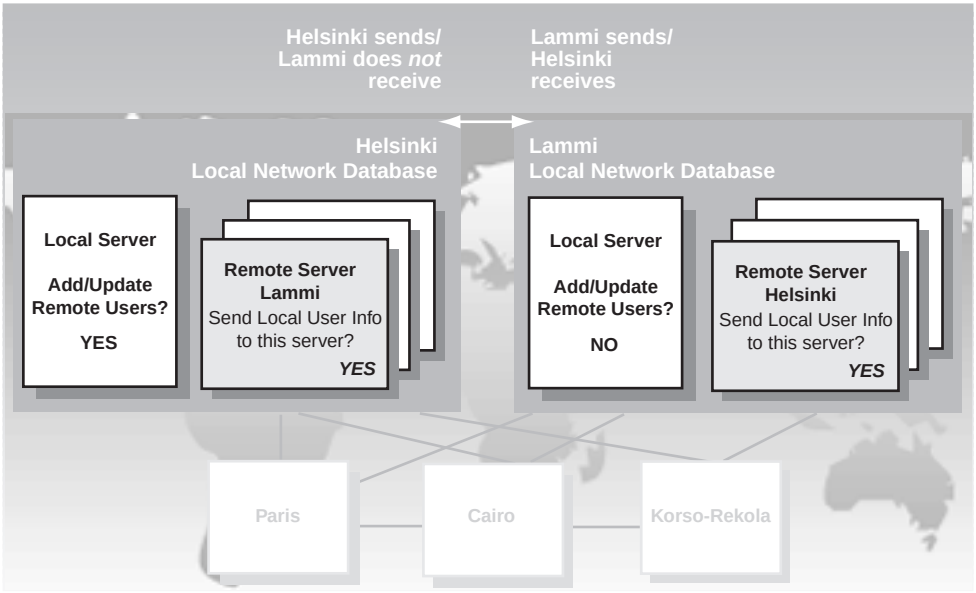


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However, Names Across the Network is also affected by the way the network administrator at a remote site configures the system.

Example 2

In this example, the network administrator in Lammi decides to clear the Send Local User Information to this Server option when configuring the Helsinki remote server in the local messaging database. This means that even though you are willing to receive Names Across the Network from Lammi, messages are not sent to your site in Helsinki.



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In this case, when a user from Helsinki sends a message to a user in Lammi, the Helsinki user is not added to the Lammi database as a remote user.

To add remote users with Names Across the Network

The setting to add remote users with Names Across the Network is on the Messaging Network Configuration page for your local server.

This setting controls your local server. You must coordinate with the system administrator of each remote site with which you want to enable Names Across the Network. You can use Names Across the Network only with remote sites that have Enterprise Networking installed.

When remote users are added and updated

Names Across the Network adds a temporary remote user to the local site when a user at the remote site sends a network message to a user at the local site. The remote user information is taken from the header of the message that is received.

Limitations

Names Across the Network has the following limitations:

- Users at remote sites are added to your system as temporary remote users only when messages are received from them. Users at remote sites who do not send network messages are not added to your system, even if they are regularly name-dialed or have messages sent to them.
- Operational measurements are not collected for remote users.
- If the sender's site does not have mailbox numbers that match the dialing plan, the Call Sender and Name Dialing features are not available.
- While the nightly audit is in progress, temporary remote users cannot be added or updated.
- Only 18 characters of the remote voice user's text name are sent.

IF	THEN
the first and last names are 18 characters or less	the first and last names of the user are sent.
the initials and last name are 18 characters or less	the initials and last name of the user are sent.
the last name only is 18 characters or less	only the last name is sent.
the last name is longer than 18 characters	only the last name, truncated to 18 characters, is sent.

Outgoing Enterprise Networking sessions

When the local site initiates an Enterprise Networking session to a remote site, the two sites negotiate whether spoken names are sent. This negotiation occurs as follows:

IF	THEN
the local site chooses to send spoken names and the remote site has selected the Add/Update Remote Users on this Server option	■ the local site includes the sender's text and spoken name with each message. ■ the remote site adds or updates the sender's remote user information.
the local site chooses not to send spoken names and/or the remote site has not selected the Add/Update Remote Users on this Server option	■ the local site does not include the spoken names for the senders. ■ the remote site does not add or update the sender's remote user information.

Time stamps updated

When a message is received from a user who already exists in the local database as a temporary remote user, the time stamp of the remote user is updated with the current date and time.

Implementing Enterprise Networking

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Overview

Introduction

Planning is critical to successfully implement Enterprise Networking. Before you begin to implement Enterprise Networking, you must understand the basic implementation process and know what information to provide.

The process for planning the implementation of a CallPilot networking solution is described in detail in the *Networking Planning Guide*. The following overview assumes that you are familiar with this description.

Before you begin

This guide makes the following assumptions:

- The switch is installed and configured.
- Sufficient trunks that connect the switch to a public switch are available.
- CallPilot is installed and configured, except for networking.
- If implemented on the local site, Network Message Service (NMS) is fully implemented.
- If implementation is an upgrade from Meridian Mail, all legacy information is available or is migrated.
- Contact is made with the network administrators of the remote sites.

Fulfill all of these requirements before you continue with the implementation of Enterprise Networking.

Implementation steps

To implement Enterprise Networking, you must complete the following steps:

- Gather information for the network.
- Configure the switch for Enterprise Networking.
- Configure CallPilot for Enterprise Networking.
- Add and configure the sites that use Enterprise Networking to the local network database.
- Test and back up the system.

Gather information for the network

The first step in implementing Enterprise Networking is to gather the information required during the configuration. You must gather information about

- the switch configuration
- the remote sites

You must also create a network representation.

Gather information from the switch

Much of the information you need to implement Enterprise Networking is available in the switch database.

For example, before you begin to implement networking, the switch is set up to make telephone calls to all the remote sites. The dialing plan exists in the switch database. You must reflect the dialing plan settings when you configure CallPilot for networking.

Ask the administrator who is responsible for the switch configuration to provide this dialing plan information.

Create the messaging network representation

You need information about the other sites in the messaging network to create a messaging network representation.

You must create a detailed representation. This representation, which is your blueprint for implementation, shows the relationship between all sites.

Configure the switch

The switch must be set up and configured at your site before you begin to implement Enterprise Networking. However, you must check the configuration and ensure that it is properly configured for Enterprise Networking.

The only additional switch configuration necessary for Enterprise Networking is the creation and setting of phantom DNs.

Configure CallPilot

The network database contains information about your messaging network. When you configure CallPilot, you add information to the network database. You must add the following information to configure CallPilot:

- general information about the message delivery configuration
- detailed information about the local site: information about how the server handles messages and how the switch handles messages
- detailed information about each remote site that communicates with the local site using Enterprise Networking

Validate the configuration

When you implement Enterprise Networking, you add configuration information about the messaging servers and switch locations to your network database.

Before you add this information, CallPilot validates the information to ensure that there are no conflicts.

Keep records

As you plan and implement Enterprise Networking, it is important to maintain detailed records about your site.

These records

- provide a source of information for support personnel
- share information about the site with other network administrators

Test the network

When you complete the configuration of Enterprise Networking, you perform a test suite. This test suite ensures that the configuration is correct and that Enterprise Networking is working properly.

Backup the network

When you successfully complete the test suite, you perform a backup. The backup ensures that no configuration information is lost in the event of system failure.

See also

If you need additional information about the general implementation process, consult the *Networking Planning Guide*.

The *Networking Planning Guid*e provides a more detailed discussion about the preliminary requirements, how to create network diagrams, and how to maintain a network history.

Implementation in a complex messaging network

Introduction

Enterprise Networking is usually part of a complex messaging network that combines several CallPilot networking solutions.

Order of implementation

If you are implementing any other CallPilot networking solutions on your site, you will make the process easier to understand and manage by following the correct order of implementation.

The implementation of each networking solution builds upon earlier implementations. Information is often configured only once, and all subsequent networking solutions that are implemented use this configuration.

Recommended order

The recommended order for implementation is

- Network Messaging Service (NMS), if the local site is an NMS site
- Integrated AMIS Networking
- Enterprise Networking
- VPIM Networking

AMIS Networking

If your local site exchanges messages with both integrated and open sites, implement Integrated AMIS Networking only. Integrated AMIS Networking also contains the functionality of AMIS Networking.

How Enterprise Networking works

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Understanding Enterprise Networking settings 72

About Enterprise Networking messages

Introduction

You use Enterprise Networking to exchange messages among the sites in a messaging network. When you implement Enterprise Networking, you configure the system to handle these messages in a particular way.

An understanding of the basic components of a message makes the implementation process and configuration of CallPilot easier to understand.

Contents of an Enterprise Networking message

Every Enterprise Networking message contains two parts:

- a message header
- the message body

Message header

The message header transmits to the receiving site with DTMF signals. The header contains the following information:

- the sender's address (which may include the site or location ID, mailbox number, and text name, depending on how the features are enabled)
- each recipient's address (site or location ID, mailbox number)
- the type of message (regular, acknowledgment, or non-delivery notification)
- the time and date when the message was sent
- the message priority applied to the message (private, urgent, or acknowledgment)

Message body

The recorded message and spoken name are played over the voice port of the sending site and are recorded by the receiving site. The recorded message contains the following information:

- the voice portion of the message
- any attachments

Note: The recorded message can optionally include a spoken name if this feature is enabled.

Message priorities

The sender can assign a message priority to Enterprise Networking messages. There are three message priorities:

- economy
- standard
- urgent

One message priority, usually standard, is the default. Users must assign another message priority manually.

Configuration required for each message priority

The message priority that is assigned to a message determines how CallPilot handles the message.

When you implement Enterprise Networking, you configure the scheduling parameters that determine how messages with different message priority are handled.

In general, you send economy messages during lower long-distance toll charge periods. You send urgent messages quickly, with the emphasis on speed rather than cost.

About Enterprise Networking parameters

Introduction

You set Enterprise Networking parameters during the implementation process. These parameters work with internal CallPilot settings to control how Enterprise Networking works.

Before you begin the implementation process, you must understand these parameters and decide on their settings.

Parameters set during implementation

CallPilot uses scheduling parameters to determine when to send messages to remote sites. CallPilot uses the following scheduling parameters:

- batch threshold
- stale times
- economy message priority delivery start and stop times

Parameter default values

CallPilot provides default settings for all scheduling parameters. The default values are based on typical requirements.

To ensure a quick implementation process, use these default values.

After your system is operational, monitor usage to determine if the default settings are serving the needs of your users. You can modify the scheduling parameters whenever users' needs change.

For all default values, see "Defaults" on page 124.

Batch threshold

The batch threshold is the number of standard and urgent messages that are held in queue waiting for delivery to a single remote site. When you send messages in batches, you make more efficient use of system resources. However, to ensure that messages awaiting delivery are not held too long in queue, the hold time overrides the batch threshold.

A message is held in a batch until either the batch threshold is exceeded or the hold time for standard or urgent messages is reached.

Batch thresholds only apply to standard and urgent messages.

Holding time

Holding time is the period of time that a message is held in queue before CallPilot attempts delivery. CallPilot holds a message in queue while it awaits the arrival of more messages for the same destination. This bulk sending makes more efficient use of the system.

However, to ensure that messages are always delivered in a timely fashion and do not wait too long for the arrival of additional messages, they are held for only a set period of time. This is the holding time.

CallPilot computes the holding time internally, based on the stale time.

Standard message holding time

The holding time for standard messages is one-third of the stale time for standard messages.

Urgent message holding time

The holding time for urgent messages is one-tenth of the stale time for urgent messages.

Stale time

Stale time determines how long an undelivered message is held within the system before being returned to the sender with a non-delivery notification (NDN).

Stale times are set independently for economy, standard, and urgent messages. Typically, the stale time for an urgent message is shorter than that of a standard message because it may be critical for a user to know that an urgent message was not delivered.

The following examples are based on an Enterprise Networking site that uses the default values.

Example 1

Milo Feinstein sends a standard message. The message is held in the queue awaiting the arrival of three more messages. However, when the message has waited in queue for 40 minutes (the holding time for standard messages), the message is sent.

Example 2

Ronnie Prakesh and Philippe Dumont are users at the same site. Ronnie sends three standard messages for users at the remote site in Newmarket. Her messages are held in the queue. Philippe sends a message to a user at the same remote site. The batch threshold is reached, and all four messages are sent.

Example 3

Barney Gumbolski sends an urgent message. It is held in queue. No other messages for the same remote site arrive within six minutes (the holding time for urgent messages). Barney’s urgent message is sent.

Economy delivery start and stop times

Economy messages receive different treament from standard and urgent messages. Economy messages are collected and are sent only during designated times, rather than held in queues.

The delivery start and stop times determine when the system sends economy messages to their destinations.

Economy messages often have a start time set to the beginning of lower-rate telephone services, and a stop time set to the resumption of regular rates.

Example

The following example is based on an Enterprise Networking site that uses the current default values.

At 8:00 a.m., Marge Sampson sends an economy message to a remote site. The message is held in queue until the economy delivery start time. The message is held in queue for a total of 16 hours. The economy message stale time is large enough to take this into account.

Understanding Enterprise Networking settings

Introduction

In addition to the scheduling parameters, you must configure other settings when you implement Enterprise Networking.

These settings include

- Enterprise site IDs
- initiating and responding passwords
- dialing plans

You must determining these settings in cooperation with the network administrators of all sites. The settings must be decided on before any site is implemented.

Enterprise site ID

If you implement Enterprise Networking on your local site, every remote site in your network database requires an Enterprise site ID.

All site IDs must be unique. Therefore, you need to coordinate with remote network administrators to ensure that this rule is observed before any site is implemented.

Initiating and responding passwords

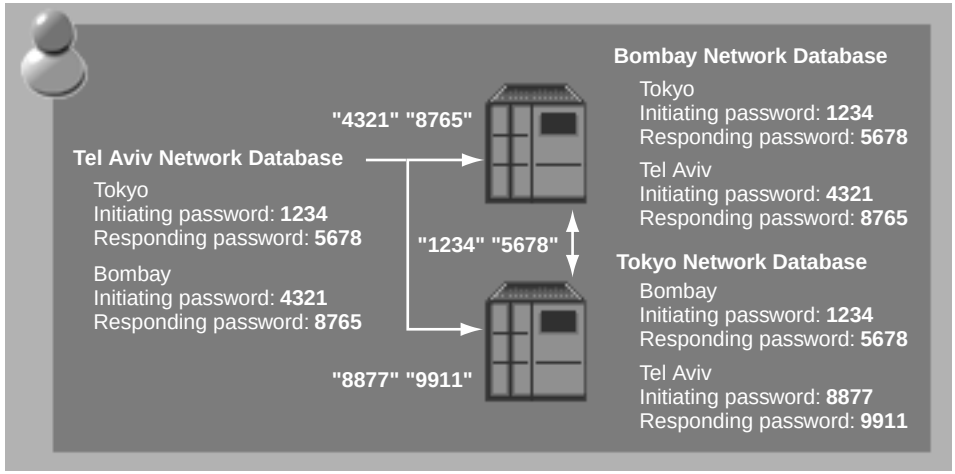
Enterprise Networking uses passwords to send messages securely. When a message is sent from one site to another, the two sites trade two passwords, an initiating password and a responding password. Both passwords must match before a message is sent.

You establish passwords between pairs of sites. For this reason, you must contact the network administrator of each remote site in the messaging network and agree on the passwords that will be used.

Example

The following diagram shows how passwords in network databases must match. Simple passwords are used for illustrative purposes.

The administrator in Bombay had to coordinate with the administrators in Tokyo and Tel Aviv to determine the passwords. With Tokyo, the passwords are “1234” and “5678.” With Tel Aviv, the passwords are “4321” and “8765.” This information is added to the network database in Bombay.



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Selecting passwords

Like all passwords, the initiating and responding passwords should be carefully thought out and secured. A password should be at least six characters long and combine both alphabetic and numeric characters within the ASCII set 3–126.

How Enterprise Networking handles messages

In this section

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What the ANA does 81
How a message is transferred 82

Overview

Introduction

The scheduling parameters that you configure during the implementation of Enterprise Networking work in conjunction with internal CallPilot networking settings. These internal settings are controlled by

- Message Transfer Agent (MTA)
- Analog Networking Agent (ANA)

This brief overview provides a general understanding of how Enterprise Networking handles messages to help you interpret Alarm and Event reports.

MTA responsibilities

The MTA is responsible for the following services:

- Queue outgoing network messages.
- Determine when to begin sending messages to a remote system.
- Receive incoming messages for delivery to local users.
- Collect networking traffic operational measurements (OMs).

To ensure the timely handling of messages, the MTA wakes up CallPilot every minute.

When it wakes up, the MTA does the following:

- initiates calls to remote sites
- checks for stale messages
- checks if any sites are in error status

MTA Monitor

The MTA Monitor continuously watches the performance of the MTA. The MTA Monitor provides detailed information and is useful for regular maintenance and troubleshooting.

For complete information about the MTA Monitor and how it is used, consult the relevant section in *System Support Tools*.

ANA responsibilities

The ANA sends messages to and from remote systems.

There is one ANA for every active port used during an Enterprise Networking session.

Main steps of message transfer

There are three main steps in the message transfer process:

- The Message Transfer Agent determines if the message is ready for transfer.
- The Analog Networking Agent completes a communication process, known as handshaking, with the receiving site.
- The message, consisting of the message header and the message body, is transferred.

What the MTA does

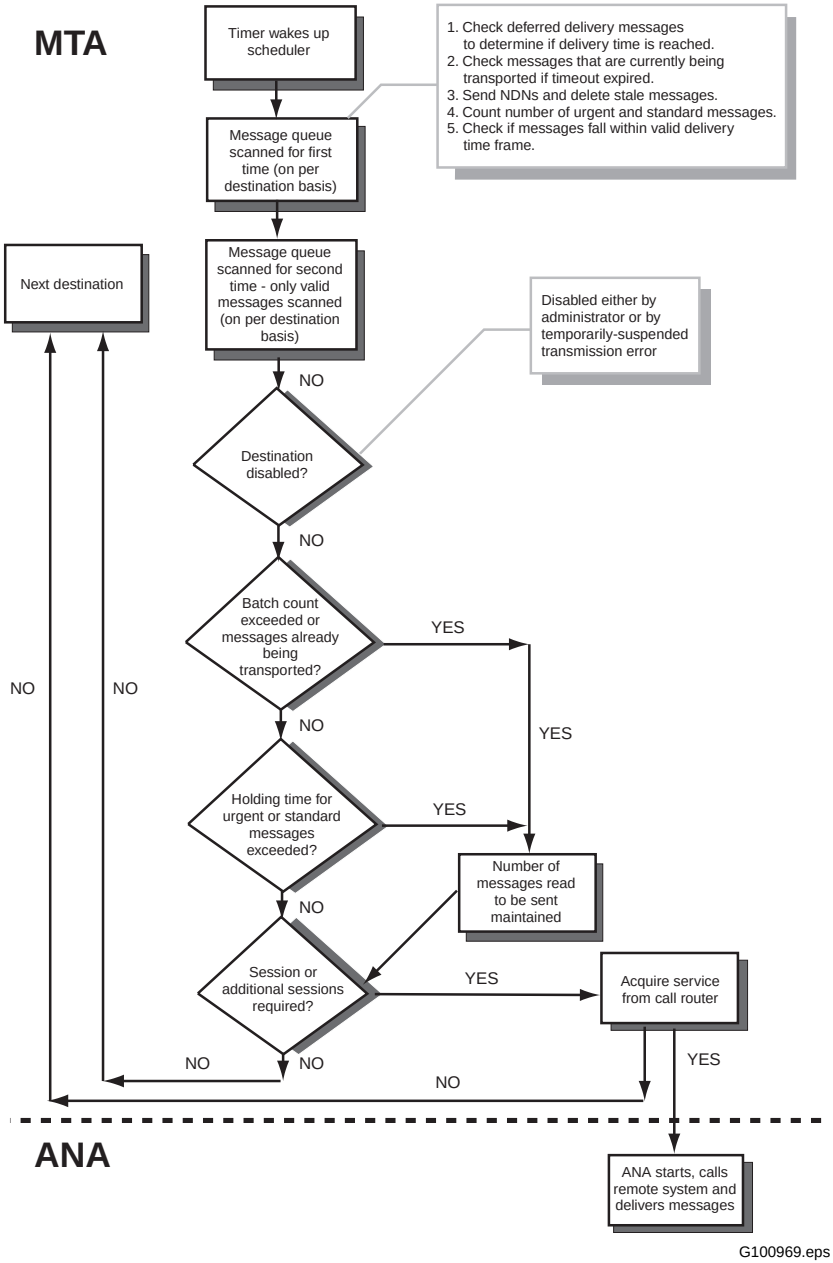
Introduction

The Message Transfer Agent (MTA) handles most aspects of message transmission for CallPilot.

How MTA and ANA handle messages

The following diagram is a graphical representation of how CallPilot handles Enterprise Networking messages.

The diagram shows the activity of both the MTA and the ANA in message handling.



As the diagram indicates, the MTA handles most of the processing. Every minute, a scheduler wakes the MTA. The MTA scans the message queue for each destination and checks the status of messages awaiting delivery. This scan determines if there are valid messages, according to the system parameter configuration. The MTA then determines if the valid messages are ready for delivery, according to the set system parameters.

Once the MTA determines that a transmission session is needed, it seeks a method of delivery from the call router. The ANA assumes responsibility for delivering the message.

What the ANA does

Introduction

The Analog Networking Agent (ANA) works with the MTA to handle messages.

How the ANA sets up calls

The ANA calls a remote site and delivers messages.

CallPilot originates a network call to the receiving site using the connection directory number (DN) defined for that site. The switch places the call according to switch call-processing parameters.

If the call is successful, the call terminates on the networking connection DN at the receiving site.

If the call is not successful

If the call fails due to a busy or no-answer condition, CallPilot waits until the next wake-up interval before it attempts the call again. If three consecutive attempts fail, CallPilot places the receiving site into error status and an alarm is generated, depending on the nature of the problem.

CallPilot waits for one hour before it repeats the three-call attempt cycle.

When connection is established

When connection between the sending and receiving sites is established, ANA initiates a communication process known as handshaking.

How a message is transferred

Introduction

After the ANA successfully establishes a message transfer session, the message transfer begins.

The message contains the message header and the recorded message.

How the ANA sets up calls

The ANA is responsible for calling a remote site and delivering messages and follows a complex routine.

CallPilot originates a network call to the receiving site using the connection directory number (DN) defined for that site. The call is placed by the switch according to switch call-processing parameters.

If the call is successful, the call terminates on the networking connection DN at the receiving site.

If the call is not successful

If the call fails due to a busy or no-answer condition, CallPilot waits until the next wake-up interval before attempting the call again. If three attempts in a row fail, CallPilot places the receiving site into error status and an alarm is generated, depending on the nature of the problem.

CallPilot waits one hour before repeating the three-call attempt cycle.

When connection is established

When connection between the sending and receiving sites is established, ANA initiates a communication process known as handshaking.

Handshaking consists of the following steps:

1. The sending site identifies itself to the receiving site.
2. The receiving site verifies that the sending site is defined in the network database of the receiving site, and that the site ID and the message transfer protocol agree.

If the information does not agree, the receiving site informs the sending site of the error and drops the call.

3. The sending site sends the initiating password and the receiving site ID to the receiving site.
4. The sending site also indicates that it will send a remote user text information if the necessary options are enabled on the site configuration for the receiving site.
5. The receiving site checks the site ID and password:

   If the information is invalid, the receiving site informs the sending site that either the site ID or the password is incorrect, and drops the call.

   If the information is valid, the receiving site proceeds to the following step.
6. The receiving site determines whether remote user or message text information will be received during this session.
7. The receiving site sends the responding password and indicates whether Names Across the Network information and a text subject header will be sent during this session.
8. The sending site checks the password:

   If the password is invalid, the sending site sends an end-of-session message and drops the call.

   If the password is valid, the sending site starts the message transfer to the receiving site.

Message transfer process

After the ANA successfully establishes a message transfer session, the message transfer begins.

The message contains the message header and the recorded message.

The following table describes how messages are transferred:

The sending site	The receiving site
sends the message information. The message contains the following: ■ time and date stamp ■ subject ■ message priority (private, urgent, or acknowledgment)	receives and intercepts the message information and creates the message.
sends the information about the sender. The information includes the following: ■ mailbox number, including site ID (and location ID if the remote site is using NMS)	receives and adds the sender to the message.
if the Remote User Add/Update option is selected, plays the spoken name.	■ records the spoken name. ■ adds or updates the remote user.
sends recipient information. The information includes the following: ■ mailbox number (including site and location ID). ■ recipient's address as text, if the Receive Text Information option is selected.	receives and adds each recipient to the message.
plays the message body.	records the message body and adds it to the message.
plays any attachments.	records each attachment and adds it to the message.
indicates the end of the message.	sends to the local MTA to deposit the message in each local recipient's mailbox.

The sending site	The receiving site
repeats all of the above for each message.	repeats all of the above for each message.

chapter 3

Gathering information

This chapter describes how to gather the information required to implement Enterprise Networking. This chapter provides a checklist for all information that is needed about the switch configuration.

This chapter also describes how to gather information about the other sites in the messaging network, and how to convert this information into a messaging network representation.

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Information required

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Overview

Introduction

Before you begin to implement Enterprise Networking, gather the information that you require. You will speed up the implementation process if you have this information before you begin. When you analyze the information for inconsistencies and incompleteness, you ensure that potential problems are resolved ahead of time.

Required information

You must gather two types of information:

- local site information, especially about the switch configuration information and dialing plan
- messaging network information that is provided by all remote sites

Why gather information?

The gathered information is used to

- identify the sites in the messaging network
- identify how the sites relate to each other
- identify the dialing plan used by each switch in the network
- determine if the dialing plan on one or more switches in the network must be modified to support the networking solutions of CallPilot
- create a messaging network representation
- prepare for CallPilot configuration

Switch information

Introduction

When you begin to implement of Enterprise Networking, the switch is already correctly installed and configured, and is operational for CallPilot.

This means that the switch is set up for dialing between the sites in the messaging network. The dialing plans that are configured on the switch for making telephone calls between sites are also used to exchange messages between sites.

You must check the configuration to make sure it is suitable for Enterprise Networking.

Gathering dialing plan information

You need the dialing plan information that is configured on the switch. You must know the dialing plan used in the messaging network and how all sites dial each other.

The easiest way to gather this information is to ask the switch technician or system administrator.

Gathering information directly from the switch

Gathering information directly from the switch is not recommended. The information that you require is found on several switch configuration files called overlays. Finding the information can be difficult and time-consuming.

If you must gather the information from the switch, consult your switch documentation for the proper procedures and detailed descriptions of the information in each overlay.

Confirming settings

Usually, when the switch is configured, the switch technician addresses the impact of messaging on the switch.

However, to ensure that there will be no problems, you must confirm that the configuration suits the needs of Enterprise Networking and can handle your anticipated volume of traffic.

If you discover that changes are necessary, you must complete these changes before you proceed with the implementation of Enterprise Networking.

Information required from the switch

Introduction

You must gather information from the switch. You must verify that the switch supports networking. You use some of the information, such as dialing plan information, to configure CallPilot.

Gather information from

- the local prime switch location
- the remote switch locations (prime and satellite)

Note: If the local site is an NMS site, you must also gather information from each satellite switch location. For instructions on how to gather this information, consult the *NMS Implementation and Administration Guide*.

Gather information about used features only

Most of the information that you gather from the switch is related to the dialing plan.

Gather information about a dialing plan only if a dialing plan is being used. Do not gather the information if the dialing plan is installed on the switch but is not currently being used.

Example: Your switch has both ESN and CDP installed. However, only ESN is used. Do not gather CDP information.

Local prime switch location checklist

You need the following information from the switch configuration:

- name or physical location of switch (useful to name the switch location on CallPilot)
- dialing plan used:
  - Electronic Switched Network (ESN)
  - Coordinated Dialing Plan (CDP)
  - hybrid dialing plan, combining ESN and CDP
  - another dialing plan, such as public switched telephone network (PSTN)
- if ESN or hybrid dialing plan is used:
  - ESN access code
  - ESN location codes:
    - local switch location
    - remote switch locations
  - overlap of location codes with extension numbers
- if CDP or hybrid dialing plan is used:
  - CDP steering codes:
    - local switch location
    - remote switch location
  - overlap of steering codes with extension numbers
- confirmation that sufficient trunks are available for anticipated networking traffic
- confirmation that restrictions are suitable for networking (for example, trunk group access restrictions [TGAR])
- range of extension numbers used at the local site (for example, 7000–7999)
- information about existing CDNs and phantom DNs that are defined on the switch

Remote switch location information checklist

For each remote site in the messaging network, you need the following information about each switch location (prime and satellite):

- name or physical location of switch (useful to name the switch location on CallPilot)
- dialing plan used:
  - Electronic Switched Network (ESN)
  - Coordinated Dialing Plan (CDP)
  - hybrid dialing plan, combining ESN and CDP
  - another dialing plan, such as public switched telephone network
- if ESN or hybrid dialing plan is used:
  - ESN access code
  - verify the ESN location codes:
    - local switch location
    - remote switch locations
  - overlap of location codes with extension numbers
- if CDP or hybrid dialing plan is used:
  - CDP steering codes:
    - local switch location
    - remote switch location
  - overlap of steering codes with extension numbers
- range of extension numbers used at the local site (for example, 7000–7999)
- confirmation that all extension numbers at this switch location can be dialed *directly* from the local switch
- confirmation that all extension numbers at this switch location can be dialed in the *same* way

Evaluating the gathered information

Introduction

When you have the dialing plan information from all switches in the messaging network, review the information to ensure that you do not have to make any changes to switch configurations.

Mandatory requirement

The dialing plans of all switches in the network must have a uniform, or standardized, dialing plan.

A uniform dialing plan means that users on all switches dial the same way to reach the same recipient.

There is only one exception to this rule: ESN access codes can be different.

You need a uniform dialing plan to dial users on other switches within the messaging network and at public sites.

A uniform dialing plan offers the following benefits:

- The network is easier to configure and maintain.
- Future growth of the network is allowed.

Configuring dialing plan information

You need extensive switch programming experience to configure dialing plan information on a switch.

ATTENTION!

If you determine that changes to the dialing plan configuration are necessary, ask a switch technician to confirm your conclusion and make the necessary changes.

See also

You can find detailed information on dialing plan configuration in your switch documentation.

Information from other sites

Introduction

Implementation of a networking solution is a coordinated effort. Many decisions must be made before implementation begins.

Gather the following information before you begin to implement Enterprise Networking:

- site names
- Enterprise site IDs
- fully qualified domain names (FQDNs) of servers
- the protocol used between the local site and all remote sites
- the dialing plan used between the local site and all remote sites
- connection DNs for each site that uses the AMIS protocol to exchange messages with the local site

If any remote sites are NMS sites, also gather the following information for each satellite switch location:

  - switch location name
  - switch type
  - location ID

- passwords—each site must decide on the initiating password and the responding password that is used with every other site

Messaging network representation

Introduction

A messaging network representation provides a complete summary of your messaging network. This representation contains information about each of the sites and indicates the relationship between each pair of sites.

If sufficiently detailed, a messaging network representation is the primary source of information for implementing a messaging network.

The more detail you can supply, the easier you will find the implementation process.

A diagram is the most suitable form of representing most messaging networks. A spreadsheet is more appropriate for large messaging networks.

Definition: Messaging network diagram

A messaging network diagram is a graphical representation of your network. It includes the following types of information:

- all sites in the network
- the protocols implemented at each site
- the protocol used between sites
- location codes and names
- dialing plan information

Definition: Messaging network spreadsheet

A spreadsheet is more appropriate for representing a large messaging network. It provides the same information as the diagram.

Benefits

There are many benefits to creating a representation of your messaging network. A representation

- offers a clear view of how your network is connected
- gathers all information required to implement a networking solution in one source
- provides useful information when you plan future modifications
- helps during the analysis of traffic issues
- reveals areas where you can improve the network
- provides support personnel with a concise, clear view of your network

Coordinating efforts

Administrators of other sites must provide much of the information for your network representation. For example, you need to know the site name and other information of every site.

Although each site administrator creates a representation, ideally one site administrator should create a final version to distribute to all sites. This ensures that the representation is comprehensive and that each site uses the same information for implementation.

Protecting the representation

Your network representation contains sensitive information. Keep it properly stored and protected as part of standard security procedures.

See also

For detailed instructions on how to create a network representation, as well as for several examples, consult the relevant section in the *Networking Planning Guide*.

chapter 4

Configuring the switch for Enterprise Networking

This chapter describes how to configure the switch to implement Enterprise Networking. The chapter introduces the concepts that are necessary to understand the configuration process and provides detailed configuration procedures.

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Configuring the switch

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Overview

Introduction

The switch provides the call handling for CallPilot.

When you implement Enterprise Networking, the switch is already installed and configured, and is operational. It is ready for the implementation of Enterprise Networking.

There are two steps in the configuration process. On the server, you must set up inbound and outbound service directory numbers (SDNs) for Enterprise Networking. On the switch, you must set up phantom directory numbers (DNs).

Before you begin

Review the information that you gathered. Confirm the settings to ensure that they are correct.

Before you begin to implement Enterprise Networking, complete and test any required changes to the switch settings.

How the switch views an Enterprise Networking call

The switch handles an Enterprise Networking message from the local site to a remote site like any other outbound telephone call.

The switch is already configured to handle outbound telephone calls. For this reason, Enterprise Networking is just an incremental implementation.

Enterprise Networking requirements

Like all services, however, Enterprise Networking needs a route that connects the messaging server and the switch.

Enterprise Networking requires only one additional configuration on the switch. A phantom DN is required for Enterprise Networking.

See also

For detailed information about the switch, consult your switch documentation.

For information about how CallPilot works with the switch and how the switch must be configured, consult the relevant section in the *Advanced Administration Guide*.

SDN Table and Enterprise Networking

Definition: SDN

A service directory number (SDN) is a number that enables a user to access a CallPilot service. Each SDN must be unique so that CallPilot can identify the requested service and play the appropriate prompts.

SDN Table

The system automatically creates the Service Directory Number Table during the initial installation of CallPilot. The SDN Table lists all SDNs and provides details about their settings.

CallPilot uses the SDN Table to map directory numbers (DNs) to services. The SDN Table lists both inbound and outbound SDNs.

Inbound and outbound SDNs

CallPilot requires both inbound and outbound SDNs.

You must manually add an inbound SDN. An outbound SDN is created automatically if Enterprise Networking is installed. Both the inbound and the outbound SDNs require additional configuration.

Inbound SDNs

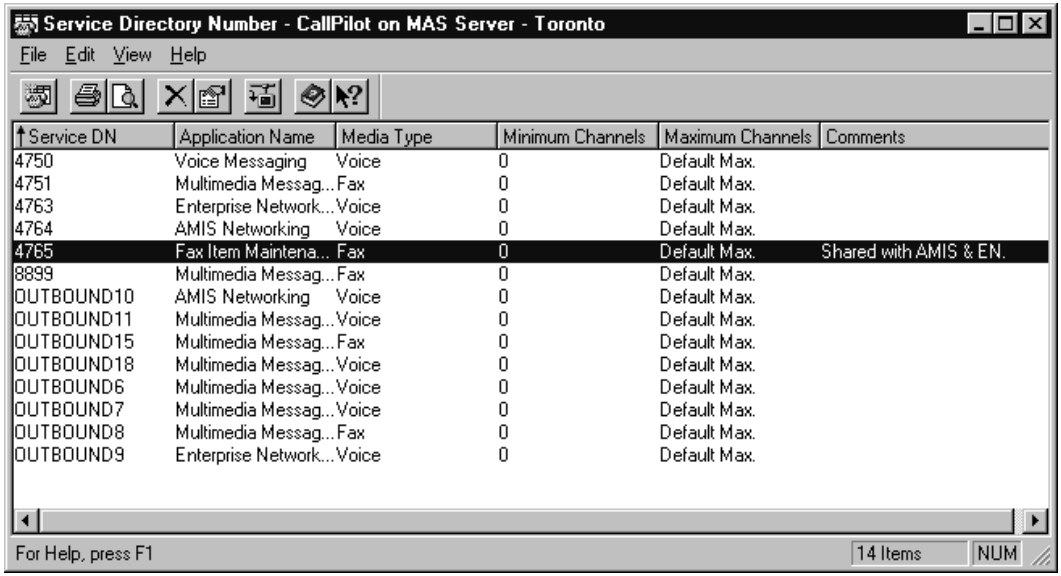
For most services, an inbound SDN is a number that a user enters to access a service. However, the Enterprise Networking inbound SDN is not a directly dialable number. A remote system dials this SDN when it delivers an Enterprise Networking message.

Outbound SDNs

CallPilot uses an outbound SDN to make the requested service available. An outbound SDN consists of the word OUTBOUND and a number.

Example: SDN Table

The following illustration shows an SDN Table that lists both inbound and outbound Enterprise SDNs.



If another service shares the inbound Enterprise SDN, that service appears in the SDN Table.

When you review an SDN Table, the only way you know if an SDN is shared is by the description. For this reason, the description of the SDN should mention that it is shared with the inbound Enterprise Networking SDN.

SDN numbers

An SDN must be unique, but it is not randomly selected. CallPilot uses SDNs to map numbers to services. There are also important relationships between the SDN and other numbers used by the system.

Relationship of SDN to other numbers

The CallPilot SDN setup echoes the DN settings on the switch.

An important relationship exists between the inbound SDN and the local system access number (SAN), and the phantom DN on the switch. For example,

- The inbound Enterprise Networking SDN = 7400.
- The Enterprise Networking local SAN = 1-416-597-7400.
- The phantom DN for Enterprise Networking = 7400.

The Enterprise Networking inbound SDN on CallPilot must correspond to the Enterprise Networking phantom DN on the Meridian switch. Before you create an SDN for Enterprise Networking, confirm the phantom DN on the switch.

To view the phantom DN setting, consult the gathered switch information.

Phantom DNs

There are two ways to create an Enterprise Networking phantom DN on the switch:

- Define a new phantom DN for Enterprise Networking.
- Share an existing phantom DN of specific services.

Media type

To process a call, Enterprise Networking needs access to a channel. A channel provides a connection between the switch and the Digital Signal Processor (DSP) cards on the CallPilot server.

CallPilot supports three channel types. Each type corresponds to different media:

- voice
- fax
- speech recognition

Enterprise Networking can use all three channel types. However, a voice channel is recommended. By default, CallPilot automatically assigns a voice port to Enterprise Networking.

Minimum and maximum channels

You must determine the channel resources for both inbound and outbound Enterprise Networking SDNs.

Every service, including Enterprise Networking, requires channel resources to process calls. Channel resources are the number of channels that Enterprise Networking has available. Channel resources are set as minimum and maximum values. The minimum value is the number of channels that is always reserved for the exclusive use of the service.

This setting is important because if you incorrectly allocate channel resources, users may experience delays in reaching requested services.

Example: Channel allocation

Your system has 96 available channels. You decide to dedicate a minimum of 5 channels and a maximum of 30 channels to Enterprise Networking. If the system handles only five Enterprise Networking calls each day, more appropriate allocation is a minimum of 1 channel and maximum of 3 channels.

Examples: How to use inbound and outbound Enterprise Networking SDNs

The following examples describe a network that consists of two sites, and show how to use the inbound and outbound Enterprise Networking SDNs to provide services.

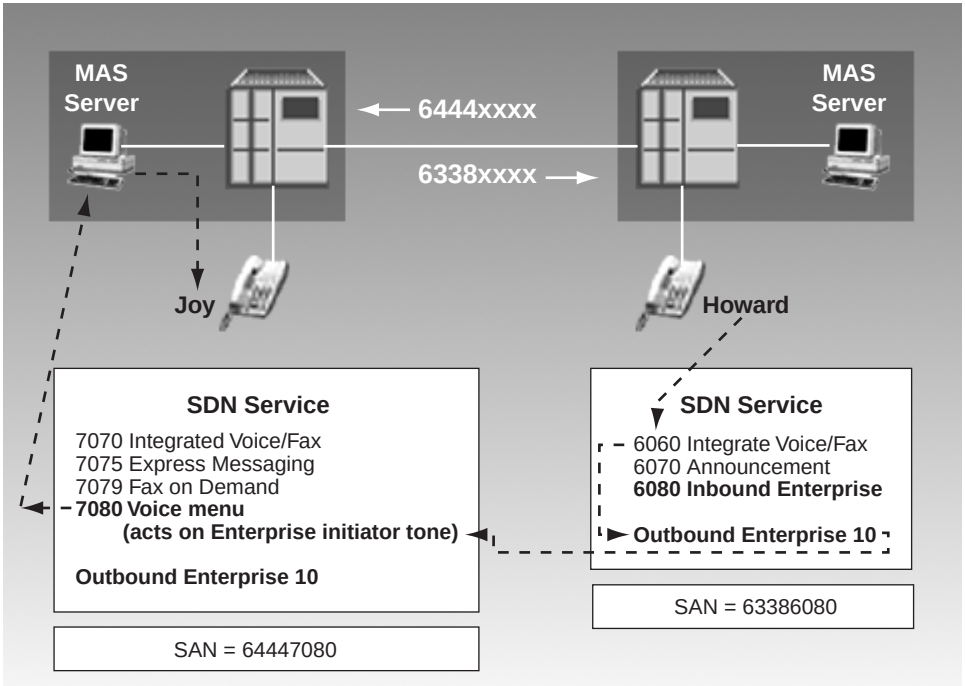
In these examples, it is important to distinguish between messages sent by users and calls made by the CallPilot system itself.

Example 1: Shared SDN

This example describes how to use a shared inbound SDN.

Howard wants to send a message to Joy in Chicago. He enters 6060, which is directed to the SDN for Integrated Voice/Fax. The request is directed to CallPilot, which routes it to the outbound Enterprise Networking SDN. The system in Philadelphia calls the remote SAN of the system in Chicago, 64447080, and the two systems complete the required handshaking before the message is transferred.

The Voice Menu SDN, which is shared with the inbound Enterprise Networking SDN, receives the message. The Voice Menu SDN is set to act when it receives an AMIS initiator tone. The message is directed to Joy's mailbox.

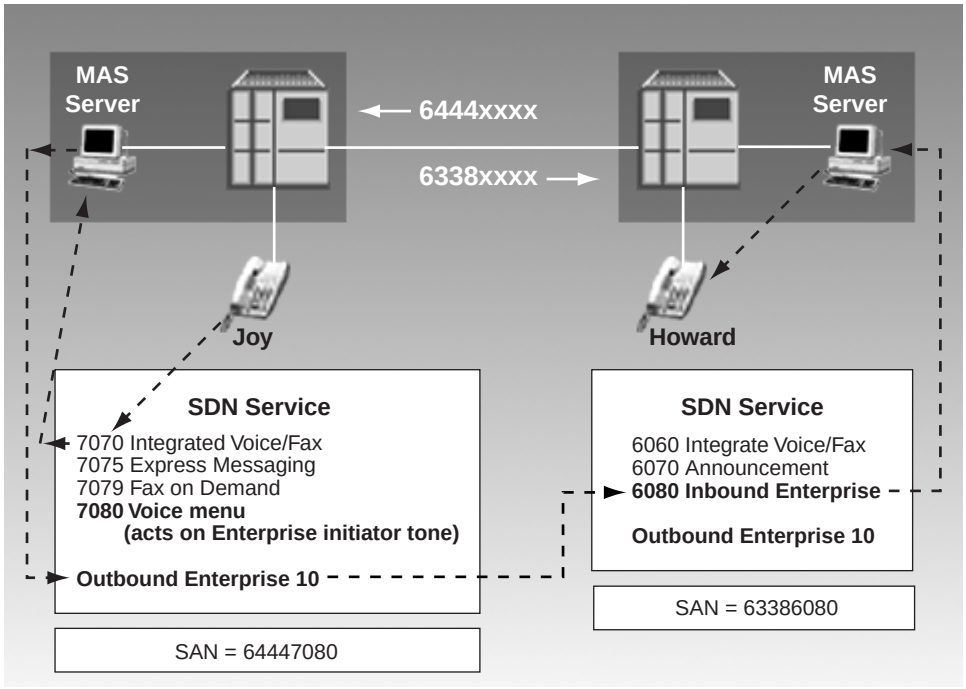


G100993.eps

Example 2: Unique SDN

This example describes how to use an inbound Enterprise Networking SDN that is not shared.

Joy wants to send a message to Howard in Philadelphia. She enters 7070, which is directed to the SDN for Integrated Voice/Fax. The request is directed to CallPilot, which routes it to the outbound Enterprise Networking SDN. The system in Chicago calls the remote SAN of the system in Philadelphia, 63386080, and the two systems complete the required handshaking before the message is transferred. The inbound Enterprise Networking SDN receives the message and directs it to Howard's mailbox.



G100991.eps

See also

For detailed information on SDNs and SDN Tables, consult the *Advanced Administration Guide*.

Adding and configuring SDNs

Enterprise Networking SDNs

Enterprise Networking requires an outbound SDN and an inbound SDN.

Outbound SDN

An outbound SDN is created automatically when you install Enterprise Networking. You can modify the default channel resource allocation.

Inbound SDN

An inbound SDN is not created automatically. There are two ways to set up an inbound SDN:

- Create a new inbound SDN.
- Share an inbound SDN with certain other services.

The choice depends on your administrative requirements.

Do this	If the primary concern is
Create new SDNs.	Operational Measurement reports must be precise for each service.
Share SDNs with other services.	a shortage of DNs exists or is likely to exist.

Services that can share an inbound SDN with Enterprise Networking

Enterprise Networking can share the inbound SDN of the following services:

- Announcement Service
- AMIS Networking
- Fax Information Service
- Voice Menu
- Time of Day Controller
- Thru-Dial

Getting there Nortel SMI > Meridian Application Server > System Configuration > Service Administration > Service Directory Number

To add and configure a new inbound SDN

1 From the SDN Table, select New from the File menu.

Result: The New Inbound Service Directory Number Properties dialog box appears.



2 On the General tab, enter the SDN number in the Service DN box.

Note: This number must correspond to a CDN or phantom DN on the switch.

3 Select an application from the Application Name list.

Result: The corresponding application ID appears above the application name in the Application ID box.

4 Select the type of channel required by the service in the Media Type list.

5 If you want to reserve a minimum number of channels for the service, enter the number in the Minimum Channels box.

6 Do one of the following:

- Select the Use Default Maximum box. This is the recommended option.
- Enter the maximum number of channels that a service can use at one time in the Maximum Channels box.

Note: The maximum number of channels cannot exceed the total number of channels available on the server. If you enter a number larger than the total number of channels, a warning box appears asking you to change the number.

7 Enter any comments in the Comments box.

8 Click Save to add the SDN to the SDN Table.

To share an existing inbound SDN with Enterprise Networking

1 Select an existing inbound SDN that can be shared with Enterprise Networking from the SDN Table.

2 On the File menu, click New.

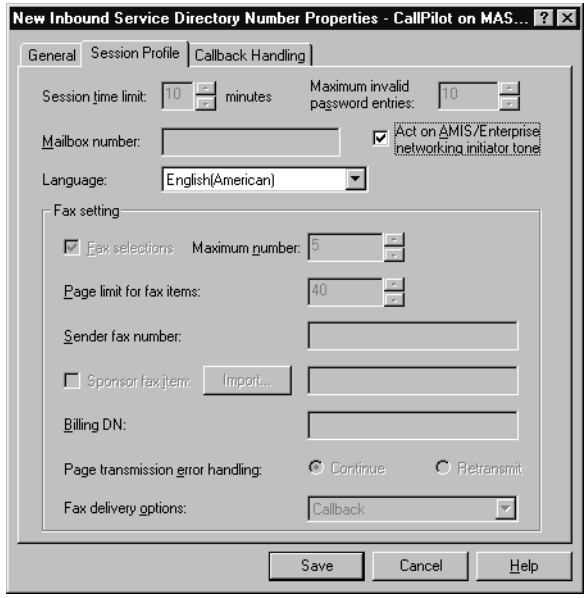
Result: The New Inbound Service Directory Number Properties dialog box appears.

3 On the General tab, in the Comments box, insert a brief comment that the SDN is shared with Enterprise Networking.

Tip: This comment appears in the final column of the SDN Table and is the easiest way to determine which SDN is shared with Enterprise Networking.

4 Click the Session Profile tab.

Result: The Session Profile tab appears.



5 Select Act on AMIS/Enterprise networking initiator tone. You select this option only for the SDN that is being shared with the inbound Enterprise SDN.

6 Click Save to add the shared SDN to the SDN Table.

Phantom DNs and Enterprise Networking

Switch setting required for Enterprise Networking

SDNs on the server have a direct correspondence to phantom directory numbers (DNs) on the switch.

If you create a new SDN for Enterprise Networking, you need a phantom DN for Enterprise Networking. If you share an existing SDN for Enterprise Networking with an existing service, Enterprise Networking also shares the phantom DN of that service.

Enterprise Networking uses DNs

To access a CallPilot service, a user enters a unique dialable number. The dialable number is known as a directory number (DN). There are different types of DNs, including extension numbers and telephone numbers.

The switch uses the DN to route the call to the requested service.

Example

A user enters a DN, 7505, to access Remote Notification.

Switch and DNs

All DNs that you use to access a service correspond to a setting on the switch. To handle calls in sequence of arrival, the system places calls in a queue, depending on the call type.

The switch has as many as three queues, called controlled directory number (CDN) queues, which you use for the following types of services:

- Voice Messaging
- Fax Call Answering
- Speech Recognition Messaging

Each CDN queue is associated with a dialable number known as the CDN. A user can dial the service directly by entering the CDN.

Example

The CDN of Voice Messaging is 7400. A user can dial 7400 to reach Voice Messaging. The call is placed into the queue.

Phantom DNs

While there are queues for three types of services, CallPilot users usually have many individual services available within each type. These services are also dialable.

To offer more than three services, the switch uses phantom DNs.

A phantom DN is a unique dialable number that is routed to one of the CDN queues.

A phantom DN is not a randomly selected number. There is a direct correspondence between the local system access number (SAN) for Enterprise Networking and the phantom DN.

If Enterprise Networking shares an existing phantom DN, check that the phantom DN is configured to forward messages to the correct CDN queue. For Enterprise Networking, the phantom DN should forward messages to the Voice Messaging CDN queue.

Example

The phantom DN for Express Messaging is 7401. A user dials 7401 and expects to reach the requested service. However, the switch routes the phantom DN to the appropriate CDN queue (in this case, Voice Messaging) before the service is provided.

Enterprise Networking phantom DN

Enterprise Networking requires a phantom DN for incoming messages.

However, unlike other phantom DNs, it is not dialed by a local user when addressing an Enterprise Networking site. The system uses this number when an Enterprise Networking message must be sent to a remote site.

Users at remote sites also use the phantom DN when they make a call to a local system.

Ways to create the phantom DN

There are two ways to create a phantom DN for Enterprise Networking:

- Use a unique phantom DN. Most switch technicians create additional phantom DNs for use by services like Enterprise Networking.
- Share an existing phantom DN. If Enterprise Networking shares a service directory number (SDN) with another service, it also shares the phantom DN of the service.

See also

For a detailed description of how the switch is configured for CallPilot, consult the relevant section in the *Advanced Administration Guide*.

chapter 5

Configuring CallPilot for Enterprise Networking

This chapter describes how to configure CallPilot to implement Enterprise Networking.

The chapter introduces the concepts that are necessary to understand the configuration process and provides detailed descriptions of configuration procedures.

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Configuring CallPilot

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Overview

Configuring CallPilot

The implementation of Enterprise Networking requires additional configuration of CallPilot. This configuration determines how Enterprise Networking exchanges messages with other sites in the messaging network.

To configure CallPilot for Enterprise Networking, you must

- confirm CallPilot administration settings
- define Enterprise Networking information
- create a loopback mailbox

ATTENTION!

You must perform each step in the configuration process in the order presented.

Before you begin

Complete the switch configuration before you configure CallPilot.

Configuration summary

Introduction

The Enterprise Networking message delivery configuration determines how Enterprise Networking handles messages.

You provide this information on the Enterprise tab of the Message Delivery Configuration dialog box.

Required information

When you complete the Enterprise tab, the following are required:

- enabled outgoing and incoming Enterprise Networking
- batch threshold
- economy delivery times
- stale times

See also

A general overview of how Enterprise Networking uses this information is provided in Chapter 2, “Getting started”.

Defaults

CallPilot provides default settings for the message delivery configuration. The default values are based on typical requirements.

To simplify the process of implementing Enterprise Networking, use the default values. After your system is operational, monitor usage and performance to determine if the default settings are sufficient. You can change the settings whenever users' needs change.

Parameter	Current default
Batch threshold	4 messages
Stale time for standard messages	2 hours
Holding time for standard messages	40 minutes (calculated internally, based on stale time settings)
Stale time for urgent messages	60 minutes
Holding time for urgent messages	6 minutes (calculated internally, based on stale time setting)
Stale time for economy messages	6 hours
Delivery start time for economy messages	6:00 p.m.
Delivery stop time for economy messages	11:00 p.m.

Suggested process

Read through this section on how to configure Enterprise Networking information. The settings that you select determine how efficiently your system handles Enterprise Networking messages.

Ideally, know how you are going to complete the required information before you begin the configuration.

Before you begin

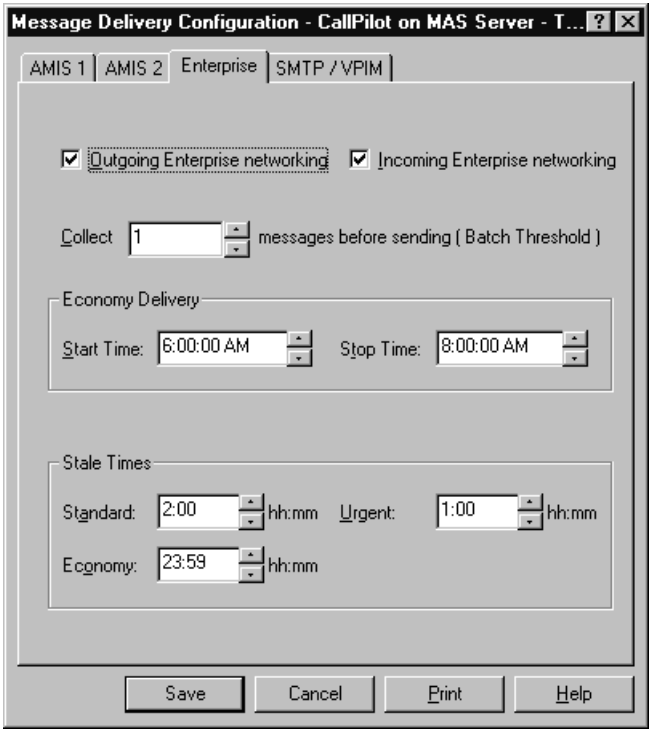
You must properly configure the inbound and outbound SDNs for Enterprise Networking before you configure Enterprise Networking.

Message delivery parameters—Enterprise tab

Introduction

To implement Enterprise Networking you must set the parameters that CallPilot uses to deliver messages.

These parameters are set on the Message Delivery Configuration dialog box Enterprise tab.



Outgoing and incoming Enterprise networking

If Enterprise Networking is installed on your system, the following options are enabled by default:

- Outgoing Enterprise Networking
- Incoming Enterprise Networking

These boxes restrict the use of Enterprise Networking.

If you do not want local users to send outbound Enterprise Networking messages, clear the Outgoing Enterprise Networking option.

If you do not want local users to receive inbound Enterprise Networking messages, clear the Incoming Enterprise Networking option.

To completely disable Enterprise Networking, clear both options.

Batch Threshold

When you batch messages, you send messages that are intended for a single destination in a group. This method makes more efficient use of the system than if you send each message separately.

The batch threshold defines the maximum number of messages intended for a single destination that can be queued before CallPilot begins to send the messages.

The batch threshold applies only to standard and urgent message types.

The batch threshold overrides the CallPilot holding times.

Economy delivery start and stop times

An economy message is a message that a user tags for economy delivery.

Economy messages are treated differently from standard and urgent messages. Economy messages are not held in queues. Instead, they are collected through the day and are sent only during designated times. The delivery start and stop times determine when the system begins to send economy messages to their destinations.

Economy messages often have a start time set to the beginning of lower-rate telephone services, and a stop time set to the resumption of regular rates.

Example

If the telephone rate is lower between 11:00 p.m. and 6:00 a.m., set the start time at 11:00 p.m. and the stop time at 5:55 a.m.

Stale times

Stale time is the period of time that CallPilot holds an undelivered message before it considers the message undeliverable and returns it to the sender with a non-delivery notification (NDN). In the period before a message is considered stale, CallPilot makes repeated attempts at delivery.

Stale time is expressed as a time period, such as 10 minutes or 5 hours.

Separate stale times are set for economy, standard, and urgent messages. The stale time for urgent messages should be the shortest time, because it is critical to know if an urgent message is not delivered.

Stale time settings affect holding times

CallPilot uses stale time settings to calculate holding times.

The holding time is the period of time that a message is held in queue before an attempt is made to send it.

Urgent messages

For urgent messages, the holding time is one-third of the stale time.

For example, if you set the urgent stale time to 30 minutes, the urgent message holding time is automatically set to 10 minutes.

Standard messages

For standard messages, the holding time is one-tenth of the stale time.

For example, if you set the standard stale time to 5 hours, the standard message holding time is automatically set to 30 minutes.

Holding times interact with the batch threshold

The interaction of the holding time and the batch threshold ensures that messages are delivered in a timely and efficient manner. A message is sent when the batch threshold is reached or when the holding time is reached—whichever is sooner.

Configuring the message delivery parameters

Introduction

You must configure the parameters that determine how your system handles messages.

You configure these parameters on the Message Delivery Configuration dialog Enterprise tab.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Message Delivery Configuration > Enterprise tab

To configure Enterprise Networking parameters

1. To enable your site to send outgoing Enterprise Networking messages, ensure the Outgoing Enterprise Networking check box is selected.
2. To enable your site to receive incoming Enterprise Networking messages, ensure the Incoming Enterprise Networking check box is selected.
3. Enter the batch threshold in the Collect (number of) messages before sending (Batch Threshold) box.
4. Enter the economy delivery start and start times in the Start Time and Stop Time boxes.
5. Enter the stale times for each message type:
   - Standard
   - Urgent
   - Economy
6. Click Save.

   Result: The information is validated and entered into the network database.

What's next?

After configuring CallPilot for Enterprise Networking, you must complete one basic administrative activity. Every site in the messaging network requires a loopback mailbox.

Although it is not mandatory to complete this administrative task at this time, it is recommended.

Creating a loopback mailbox

Introduction

When you implement Enterprise Networking, create a loopback mailbox. Although it is not mandatory to create the loopback mailbox at this time, completing this task now will save you considerable time later.

Definition: Loopback mailbox

A loopback mailbox is a mailbox that is created at each site in a messaging network. You use a loopback mailbox to test the capability of a site.

To test that a site can send a message to a remote site, a message is sent to the loopback mailbox. The loopback mailbox automatically returns the message to the sender.

Remote sites use your loopback mailbox to test their systems. You use the loopback mailboxes of each remote site to test your system.

Since each site requires a loopback mailbox, create one now so that the testing can proceed without interruption.

Loopback mailbox requirements

A loopback mailbox is not a real mailbox because it does not collect messages. It bounces messages back to the sender. However, the loopback mailbox number must be unique and cannot conflict with any other mailbox number.

Getting there Nortel SMI > Meridian Application Server > User Administration > Messaging Administration Properties > Mailboxes tab

To create a loopback mailbox

1. In the Networking Loopback mailbox box, enter the mailbox number.
2. Click Save.

   Result: The information is validated and saved to the database.

Announce the loopback mailbox

Remote network administrators test their implementation by sending an Enterprise Networking message to your loopback mailbox. Announce the loopback mailbox number to all remote sites.

Similarly, gather the loopback mailbox numbers from the network administrators of all other remote sites.

Using the loopback mailbox

A remote administrator addresses a test message to a loopback mailbox using the protocol and dialing plans specified for use between the two sites.

For example, you create a loopback mailbox, 9999, on your site. Enterprise Networking is used between a remote site and your site. The ESN dialing plan is used, and the ESN prefix to address your site from the remote site is 3555. Therefore, to address your loopback mailbox, the remote network administrator enters 35559999.

chapter 6

Adding sites to Enterprise Networking

This chapter describes how to define the sites in the messaging network that use Enterprise Networking to exchange messages.

This chapter describes how to configure the local messaging server and prime switch location. It also explains how to add and configure remote messaging servers and switch locations.

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About the messaging network

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Overview

Introduction

A CallPilot messaging network consists of a local site and one or more remote sites.

All sites in your private messaging network with which your local site exchanges messages must appear in the Messaging Network Configuration tree view. If a remote site is part of the messaging network, but the local site does not exchange messages with that remote site, you do not add it to the tree view.

To implement Enterprise Networking, you must configure the local site and add and configure all remote sites that will transfer messages with the local site using Enterprise Networking.

ATTENTION!

It is strongly recommended that you complete each step in the configuration process in the order presented.

See also

Sites are configured in the Messaging Network Configuration tree view. For an overview of how to work with the tree view, consult the relevant section in the *Networking Planning Guide*.

Before you begin

You should have already configured the Message Delivery Configuration dialog box for Enterprise Networking.

If your local site is an NMS site, NMS should be configured and tested.

Your messaging network representation should be complete and available. This representation provides a blueprint for the implementation process.

Configuration and other networking solutions

Introduction

If any other CallPilot networking solution is implemented on your local system, much of local messaging server and the local switch location configuration is already complete.

Configuring the local messaging server and switch location

If another networking solution is implemented on the local site, the local messaging server and prime switch location configuration is almost entirely complete. You must only confirm the settings and enter the information that is specifically required to implement Enterprise Networking.

For example, if Integrated AMIS Networking is already implemented on your system, most of the required information is already entered into the network database.

NMS local site

If your local site is an NMS site, implement and test NMS before you begin to implement Enterprise Networking.

If NMS is installed, the NMS satellite switch locations for the local site appear in the Messaging Network Configuration tree view below the local prime switch location.

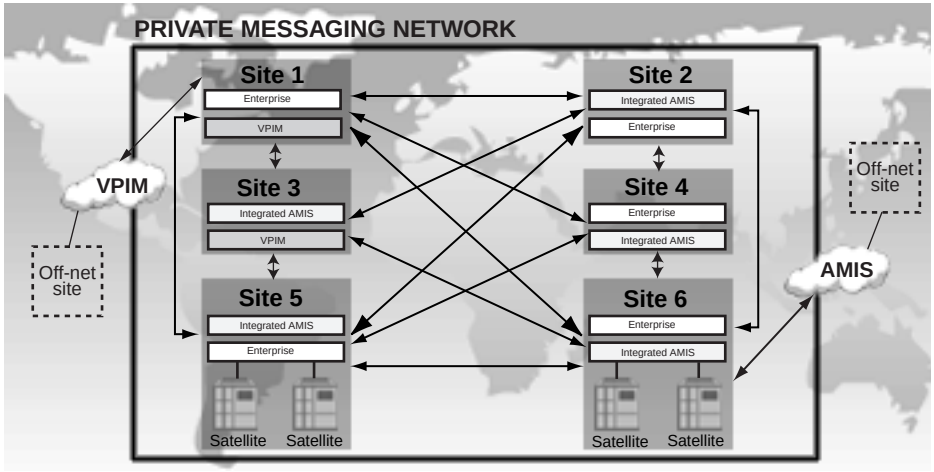
Remote sites

If another CallPilot networking solution is implemented on your system, remote sites may already be added and configured. These sites appear in the Messaging Network Configuration tree view. These sites exchange messages with the local site using the other networking solution.

When you implement Enterprise Networking, you must add and configure the remote sites that will communicate with your local site using Enterprise Networking. These sites appear in the tree view only as you add them.

Example: Implementing Enterprise Networking

In this example, you are the network administrator of Site 6. Working with the network administrators of the other sites in your messaging network, you have created a diagram of your messaging network. Note that many details are removed from this network diagram for clarity.



G101139.e

Your local site has the following networking solutions: Integrated AMIS Networking, AMIS Networking (available because Integrated AMIS Networking is installed), NMS, and Enterprise Networking.

Since you are following the recommended order of implementation, you have completed the following for Site 6:

- NMS is implemented and tested.
- Integrated AMIS Networking (and AMIS Networking) is implemented and tested.

The local messaging server and switch locations are configured.

To implement Integrated AMIS Networking, you add the following remote sites to your network database because you use the AMIS protocol to send and receive messages with them:

- Site 3
- Site 4
- Site 5—satellite switches are also added

You are now ready to begin implementing Enterprise Networking. After configuring the message delivery parameters, complete the configuration of the local messaging server and add the sites that use Enterprise Networking to the network database.

In this example, you must add Site 1 and Site 2 to your network database, because they are the sites that use Enterprise Networking to communicate with your site, Site 6.

Configuring the local site

In this section

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Configuring the local prime switch location 150
Configuring ESN information 156
Configuring CDP information 160

Overview

Introduction

When CallPilot is initially installed on your system, a local messaging server and local switch location are automatically added to the Messaging Network Configuration tree view.

Local messaging server name

By default, both the local messaging server and the prime switch location are assigned the name “Untitled.” Assign new names to the local messaging server and the prime switch location during configuration.

The local site receives its name from the name assigned to the local messaging server.

Configuration

You must configure the local messaging server. To configure the messaging server, you save general information, such as name and description, to the network database.

The local messaging server is configured on the General tab of the Local Server Properties dialog box.

SMTP/VPIM Server FQDN

The SMTP/VPIM Networking Server FQDN box is enabled only if VPIM Networking is installed on your system. It is configured during the implementation of VPIM Networking.

However, if the box is enabled on the General tab, you must enter a placeholder in the box or you will be unable to close the tab and save the information to the network database.

While implementing Enterprise Networking, enter a placeholder in this box. You will replace this placeholder with the correct server FQDN when you implement VPIM Networking.

Configuring the local server if another messaging solution is implemented

If you have implemented another CallPilot networking solution on your local system, you have already completed most local messaging server configuration.

For example, if Integrated AMIS Networking is already implemented, the Name, Description, and Send Messages to all other Server fields are already completed.

In this case, check the current configuration and complete additional options that are specific to Enterprise Networking and would not have been completed during the previous implementation.

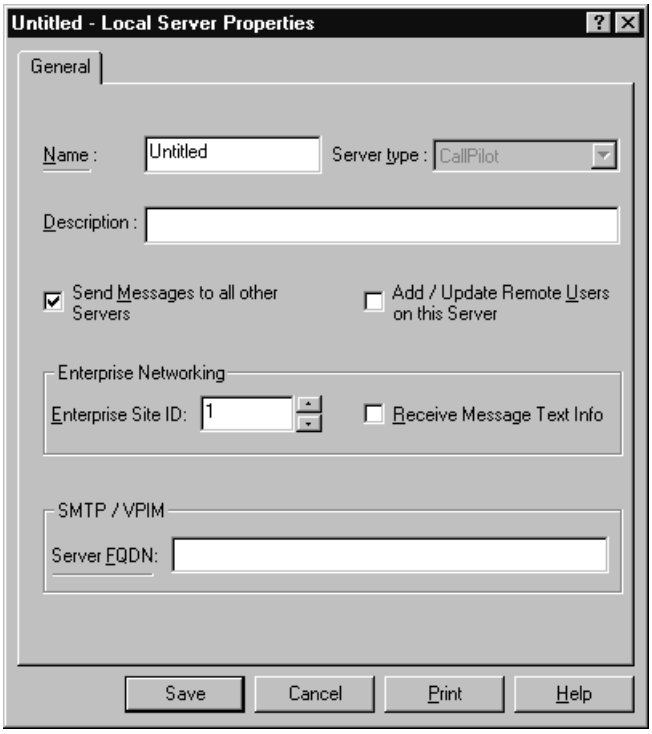
Configuring the local messaging server

Introduction

You must configure the local messaging server to implement Enterprise Networking.

If another networking solution is implemented, most of the information is already completed. You must only check the information and add the information required for Enterprise Networking.

The local messaging server is configured on the Local Server Properties—General tab.



Name

By default, both the local messaging server and the prime switch location are assigned the name “Untitled.” Assign new names during configuration.

The messaging server is usually given a name that corresponds to its geographic location.

Local site name

The name given to the local messaging server becomes the name of the local site.

Server type

The local messaging server is always CallPilot.

Description

Provide a brief description of the messaging server or implementation notes, such as when the server was configured or who completed the configuration, in the Description.

Send Messages to all other Servers

The Send Messages to all other Servers check box determines if the local site can send messages to integrated remote sites in the messaging network.

This check box is selected by default and is cleared only under exceptional circumstances.

When cleared, the local messaging server does not send messages to any integrated remote site using any protocol. Messages can still be sent to open remote sites.

When to clear this option

This option lets you quickly disable messaging from your local site. Clear this check box in emergency situations.

Restricting the sending of messages

Clearing the Send Messages to all other Servers check box is a quick way to disable the system.

You restrict the sending of messages to each remote site separately.

To prohibit the local messaging server from sending messages to a particular remote site, clear the Send Messages to this Server check box on the Remote Messaging Server Properties—General tab.

For example, your messaging network has six sites and you do not want to send messages to one of these sites. You select the Send Messages to all other Servers option while you configure the local messaging server. You clear the Send Messages to this Server option while you configure the remote server to which you do not want to send messages.

Note: When the Send Messages to all other Servers box is cleared, users can still send messages to open sites using the VPIM and AMIS protocols.

Add/Update Remote Users on this Server

The Names Across the Network feature is available with Enterprise Networking only.

The Add/Update Remote Users on this Server check box enables the Names Across the Network feature to work with Enterprise Networking.

This box controls your local server. You must coordinate with the network administrator of each remote site with which you want to enable Names Across the Network. You can use Names Across the Network only with remote sites that use Enterprise Networking and have the Send Remote User Info feature enabled.

Additional information

The Names Across the Network feature is not the only way to add remote users to your local network database. You can also add remote users manually with User Administration.

For a detailed discussion of remote users and Names Across the Network, consult the *Networking Planning Guide*.

Enterprise Site ID

To implement Enterprise Networking, you must assign an Enterprise site ID to your local messaging server.

The site ID, combined with the location ID, identifies the local site to remote sites in the messaging network.

The site ID is one of the pieces of information included in a message header.

When Enterprise Networking is implemented on any site in a messaging network, every site that exchanges Enterprise Networking messages with it must have a site ID.

Receive Message Text Info

The local messaging server can receive message subject headers in the messages sent by all remote sites that are enabled to send message subject headers.

The message subject header is available to desktop users.

In most environments, the Receive Message Text Info check box is selected. However, if the local site incurs long-distance toll charges when receiving messages, you may want to clear this option because messages that include message subject headers take longer to send.

Server FQDN

The Server FQDN box is enabled only if VPIM Networking is installed on your local site. The server FQDN is entered when you implement VPIM Networking.

However, the Local Server Properties—General tab cannot be closed and the information cannot be saved to the network database unless the Server FQDN box contains some information. When you implement Enterprise Networking, if you do not know the server FQDN, enter a placeholder in the box. If you know the server FQDN, enter it.

For example, enter “FQDN_goes_here”. A clearly marked placeholder reminds you to complete the box when you implement VPIM Networking.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration

To configure the local messaging server

1. In the Messaging Network Configuration tree view, select the local messaging server.
2. On the File menu, click Open.

   Result: The Messaging Network Configuration—Local Server—General tab appears.
3. To change the name of the local server, enter a new name in the Name box.

   Tip: The name given to the local messaging server is also the name of the local site.

   Note: The server type is always CallPilot and cannot be changed.
4. In the Description box, enter details about the local messaging server.
5. To enable the local messaging server to send messages to the remote sites in your messaging network, select the Send Messages to all other Servers check box.

   Attention: If this check box is not selected, messages cannot be sent to remote sites. This check box is cleared only in unusual circumstances. To clear the check box, you are prompted to confirm your decision.
6. To enable the Names Across the Network feature, select the Add/Update Remote Users on this Server box.
7. In the Enterprise Site ID box, enter a unique ID number for the local messaging server.
8. To enable the local messaging server to receive message subject headers with Enterprise Networking messages from all remote sites that are willing to send these headers, select the Receive Message Text Info check box.
9. If the Server FQDN box is enabled, enter a valid placeholder or, if available, the FQDN of the local server.

   Note: If you enter a placeholder, you replace it when you implement VPIM Networking.
10. Click Save.

    Result: The information is validated and saved to the network database.

What's next?

After you configure the local messaging server, configure the local prime switch location.

Configuring the local prime switch location

Introduction

You must configure the local prime switch location to implement Enterprise Networking.

If any other networking solution is implemented

If another networking solution is implemented on the local site, the local switch location is already configured.

Check the current configuration information. Make any necessary modifications.

If NMS is implemented

If NMS is installed on the local site, the local prime switch location is already configured.

All satellite switch locations attached to the local prime switch location are also already configured.

Check the current configuration information. Make any necessary modifications.

If no other networking solution is installed locally

If no other networking solution is implemented on the local site, complete the General tab. Complete the ESN tab or the CDP tab, or both, depending on the dialing plan used on your local switch location.

Where the prime switch location is configured

The local prime switch location is configured on the Prime Switch Location Properties dialog box, which has four tabs:

- General
- ESN
- CDP
- SMTP/VPIM

General tab

Complete the General tab no matter what dialing plan is used on your local site.

ESN tab

Complete the ESN tab if the local site uses the ESN or a hybrid dialing plan.

CDP tab

Complete the CDP tab if the local site uses the CDP or a hybrid dialing plan.

SMTP/VPIM tab

The SMTP/VPIM tab is enabled only if VPIM Networking is installed on your local switch location.

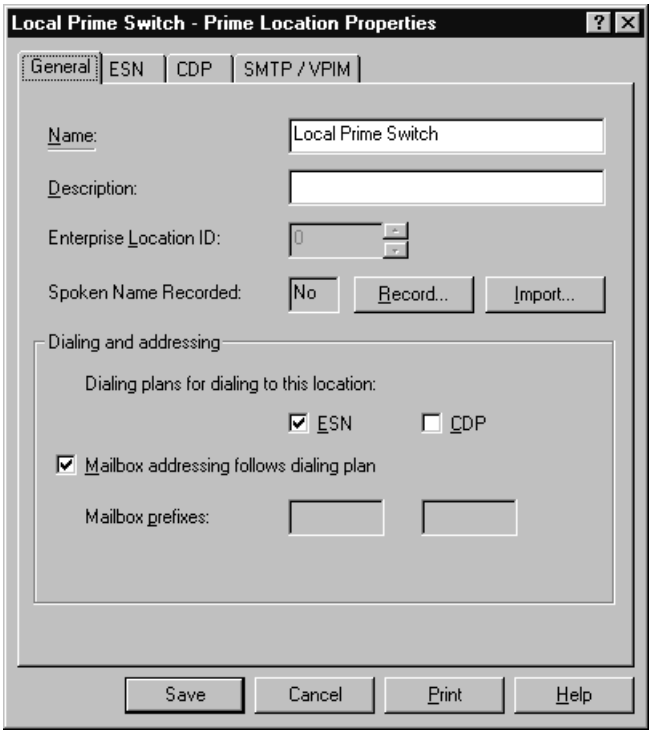
You complete the SMTP/VPIM tab when you implement VPIM Networking on your local site, not during the implementation of Enterprise Networking.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Message Delivery Configuration

To open the Prime Switch Location Properties dialog box

1. In the Messaging Network Configuration tree view, select the local prime switch location.
2. On the File menu, click Open.

   Result: The Messaging Network Configuration—Prime Location Properties—General tab appears.



Name

Each switch location must be assigned a name that is unique within the messaging network. Usually, this name is the same as the name of the messaging server. This ensures that the identity of the switch location within the network is immediately apparent. A geographic name is common.

For example, if a messaging server is named “Moscow,” the prime switch location is usually also named “Moscow.”

By default, the local prime switch location is given the name “Untitled.” This name must be changed.

Description

The Description box is useful for short notes, reminders, or comments about the switch location.

You might find it useful to specify your switch model, the date of the switch configuration, or contact information for the switch technician.

Enterprise Location ID

The Enterprise Location ID box is not enabled for the prime switch location.

Note: The location ID for a prime switch location is always 0 and cannot be changed.

Spoken Name Recorded

If your local site is not an NMS site, the Spoken Name Recorded box is not enabled.

If your site is an NMS site, the Spoken Name Recorded check box was configured during the NMS implementation.

Dialing plan information

Detailed information about the dialing plan used on the local prime switch location is required when configuring the local prime switch location.

Dialing plans for dialing to this location

You must specify which of the following dialing plans is used to dial to the local switch location:

- ESN
- CDP
- hybrid, which combines ESN and CDP
- another dialing plan (such as PSTN)

When you configure the local prime switch location, you specify the dialing plan that is used to dial to the local site.

Note: If you use ESN anywhere in the messaging network, ESN must be selected because the local site needs an ESN access code.

Mailbox specifications

The following boxes are dynamically enabled and disabled depending on the dialing plan you have specified for the prime switch location:

- Mailbox addressing follows dialing plan
- Mailbox prefixes

Mailbox addressing follows dialing plan

The Mailbox addressing follows dialing plan box is enabled only if NMS is installed on the local messaging server. If NMS is implemented, this check box should be properly configured already.

Mailbox prefixes

A mailbox prefix is a leading string of digits that uniquely identifies a mailbox number as belonging to a particular site.

If the local site does not have NMS installed, you never need mailbox prefixes for the local prime switch location.

If the local site does have NMS installed, the mailbox prefix or prefixes should be properly configured already.

To configure the local prime switch location

1. To change the name of the local prime switch location, enter a name in the Name box.
2. In the Description box, enter details about the local prime switch location.
3. In the Enterprise Location ID box, enter the location ID number of the local prime switch location.

   Note: The Enterprise location ID is always 0 and cannot be changed.
4. Confirm the status of the Spoken Name Recorded box.

   Note: This box is enabled only if NMS is installed and was completed during the implementation of NMS.
5. Specify the dialing plan used to dial the local prime switch location. Select the

   - ESN check box if ESN is used
   - CDP check box if CDP is used
   - ESN and CDP check boxes if a hybrid dialing plan is used

   Note: Leave both check boxes clear if you use another dialing plan, such as PSTN.
6. Determine whether you must complete another tab. If not, click Save to close the dialog box.
7. Select another tab to continue the configuration.

What's next?

If the local site uses an ESN, CDP, or hybrid dialing plan

After you complete the General tab, you must complete the ESN tab, or the CDP tab, or both tabs, depending on the dialing plan used.

If the local site uses another dialing plan

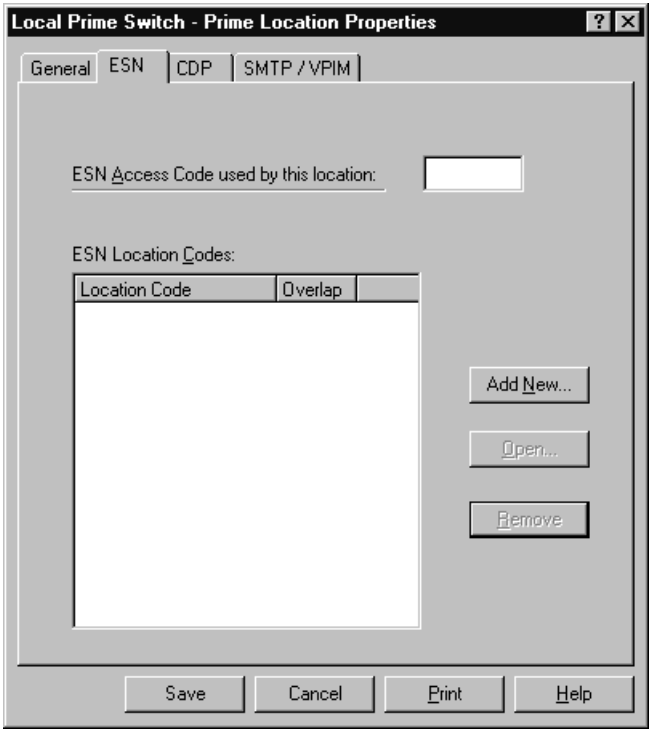
If your local site uses another dialing plan, such as PSTN, you have completed the configuration of your local prime switch location.

Configuring ESN information

Introduction

If the local prime switch location uses either an ESN dialing plan or a hybrid dialing plan, you must complete the ESN tab.

You provide the ESN access codes and ESN location codes. These are combined to create the ESN prefix.



See also

For a description of the ESN dialing plan and how it works, consult the *Networking Planning Guide*.

ESN Access Code used by this location

The ESN access code is used to access ESN routing in the same way that an access code, such as 9, is used to dial out to the public network from a private network.

Typically, all switches in a messaging network use the same ESN access code.

ESN Location Codes

An ESN location code is a routing prefix that identifies a location within a network. It is usually three digits long, but can be up to ten digits long.

You must also indicate the number of digits in the ESN location code that overlap the mailbox number.

The ESN Location Codes list contains all ESN location codes currently assigned and indicates the overlap between the ESN location code and the mailbox directory numbers.

ESN location codes can be added, modified, or deleted at any time. The ESN location codes must always match the dialing plan configuration on the switch.

ESN location code capacity

The maximum number of ESN location codes for a switch location is 30.

ESN location code overlap

When you enter the dialing plan information for the local site, calculate the number of digits in the ESN prefix that overlap the digits in the local extension.

If there is overlap between the rightmost digit or digits of the location code and the leftmost digit or digits of the extension number, enter the amount of overlap.

The following table provides two examples of ESN location code overlap.

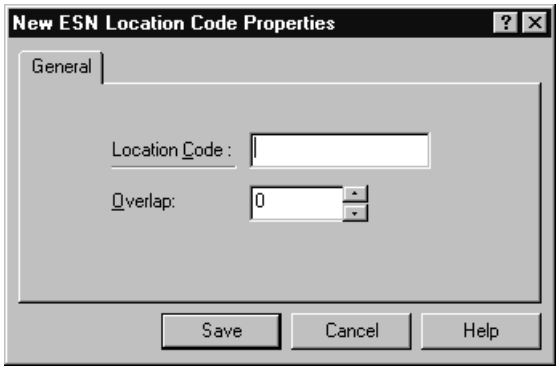
Access code	Location code	Extension number	Number dialed by users at other sites	Overlap
6	33**8**	**8**300	633**88**300	0
6	33**8**	**8**300	633**8**300	1

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration > Local Prime Switch Location > ESN tab

To configure the ESN information

1. Enter the ESN access code.
2. To add a new location code, click the Add New button.

   Result: The New ESN Location Code Properties dialog box appears.



3. In the Location Code box, enter the location code.
4. In the Overlap box, enter the number of digits in the mailbox number that overlap the location code.
5. Click Save.

   Result: The location code and overlap are validated and appear in the ESN Location Codes list box on the ESN tab.
6. Repeat steps 3–5 for each ESN location code that you require.
7. When you have finished configuring the ESN information, determine if you must configure CDP information.

   - If yes, click the CDP tab.
   - If no, click Save to validate the ESN information and save it to the database.

What's next?

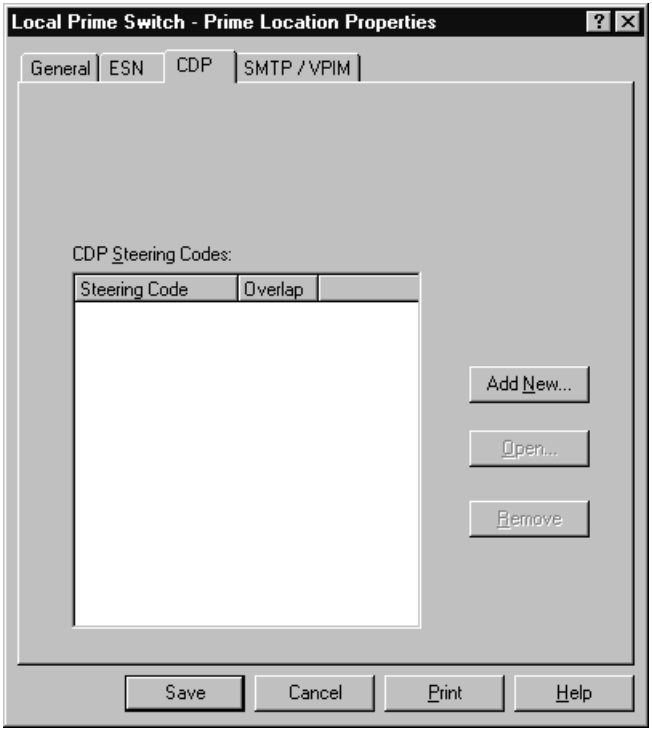
If your local prime switch location uses the hybrid dialing plan, click the CDP tab to continue configuring the local prime switch location.

Configuring CDP information

Introduction

If the local switch location uses either a CDP dialing plan or a hybrid dialing plan, complete the CDP tab.

You must provide the CDP steering codes.



See also

For a general description of the CDP dialing plan and how it works, consult the *Networking Planning Guide*.

CDP Steering Codes

A CDP steering code is a site prefix that identifies the local site within the network. Therefore, a CDP prefix must be unique for all switches in the messaging network.

CDP steering codes are determined by the switch technician.

The CDP steering codes defined on the switch are entered on CallPilot because the system must be able to identify the steering code in the mailbox number to determine the site.

The CDP Steering Codes list box contains all CDP steering codes currently assigned to the switch location. The list box also indicates the overlap between the CDP steering codes and the mailbox directory numbers.

CDP steering codes can be added, modified, or deleted.

CDP steering code capacity

The maximum number of CDP steering codes for a switch location is 500.

CDP steering code overlap

When you enter the dialing plan information, you must calculate the number of digits in the CDP steering code that overlap the digits of the local extension.

If there is overlap between the rightmost digit or digits of the steering code and the leftmost digit or digits of the extension number, enter the amount of overlap.

Normally, the steering code overlaps with the first few digits of a local extension number.

The following table provides three examples of CDP steering code overlap.

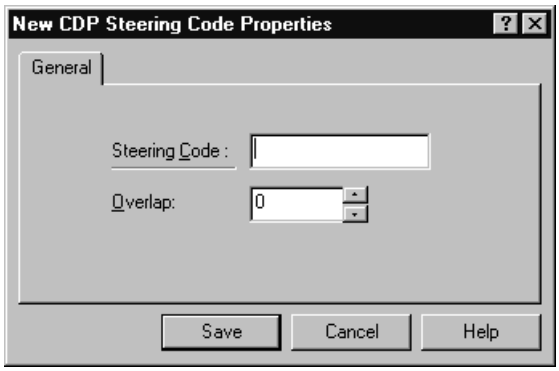
Steering code	Extension number	Number dialed by users at other sites	Amount of overlap
22	**22**345	**2222**345	0
22	**22**345	**222**345	1
22	**22**345	**22**345	2

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration > Local Prime Switch Location > CDP tab

To configure the CDP information

1 Click the Add New button.

Result: The New CDP Steering Code Properties dialog box appears.



2 In the Steering Code box, enter the steering code.

3 In the Overlap box, enter the number of digits in the mailbox number that overlap the steering code.

4 Click Save.

Result: The steering code and overlap are validated and appear in the CDP Steering Codes list box on the CDP tab.

5 Repeat steps 1–4 for each CDP steering code required.

6 When you have added all necessary CDP steering codes, click Save.

Result: The information is validated and saved to the network database.

What's next?

You have completed the configuration of the local site and are ready to begin adding and configuring remote sites.

Adding and configuring a remote site

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Overview

Introduction

When you implement Enterprise Networking, you add to the Messaging Network Configuration tree view all the remote sites that use Enterprise Networking to exchange messages with the local site.

Every remote site added to the tree view must be configured.

Information required

The information that you enter when you configure a remote site reflects the information that is configured for that site in its own local network database. For example, you enter the name of that site and its Enterprise site ID. You must get this information from the remote network administrator.

However, configuring a remote site involves more than simply copying the information provided by the remote site. You also enter information that reflects how your local site will communicate with that remote site. For example, for each remote site, you decide whether your local site sends messages to this particular remote server.

Main steps

There are three main steps to adding a remote site to your local network database. For each remote site, you must add and configure

- the remote messaging server
- the remote prime switch location
- the remote satellite switch locations, if the remote site is an NMS site

Network representation

Much of the information that you must provide while configuring a remote messaging server is contained in the network diagram or spreadsheet.

Correcting information about remote sites already added to the network database

If another messaging network solution is already implemented on your local site, such as Integrated AMIS Networking, check the information for the remote messaging servers that you added to your local network database during that configuration.

For example, when you added remote sites to your network database during the installation of Integrated AMIS Networking, you added the remote sites that use the AMIS protocol to send messages to and receive messages from your local site. When configuring these remote sites, the validation process forced you to enter an Enterprise site ID for the remote site to save the configuration to your network database.

You must check the Enterprise site IDs that you entered for these sites to ensure that they are valid and correct. If you entered a random number as a placeholder, change them to actual site ID numbers.

Configuring a remote messaging server

Introduction

When you initially install CallPilot on your system, your local site, which consists of a local messaging server and a local prime switch location, is automatically added to the Messaging Network Configuration tree view.

However, you must manually add each remote site that exchanges messages with the local site using Integrated AMIS Networking into the Messaging Network Configuration tree view. You must configure both the remote messaging server and the remote prime switch location.

You must complete the following tabs for each remote messaging server:

- Remote Messaging Server Properties—General tab
- Remote Messaging Server Properties—Connection Information tab

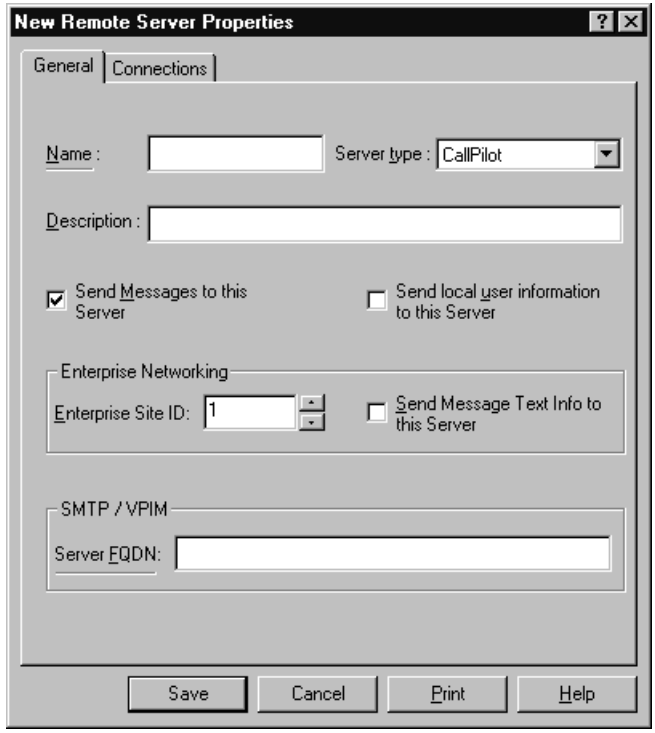
Remote servers and other messaging solutions

If you have implemented another CallPilot networking solution on your system, you have already added remote sites to the Messaging Network Configuration tree view.

The process of adding a remote site is essentially the same regardless of the networking solution being implemented. However, when you add remote sites during the implementation of Enterprise Networking there are important differences.

Remote Messaging Server Properties—General tab

The Remote Messaging Server Properties—General tab contains detailed information about the remote messaging server and defines how the local site and the remote site exchange messages.



Name

You should assign the remote messaging server the same name that was assigned to it by its local network administrator. This correspondence in naming sites makes the network easier to administer and maintain because all network administrators use the same names for the same sites.

For example, if a remote site calls itself “Connecticut,” you should name it “Connecticut” when you add it to the Messaging Network Configuration tree view.

Server type

The remote messaging server can be any of the following types:

- CallPilot
- Meridian Mail Net Gateway (MMNG)
- Norstar Voice Mail (Norstar)
- Meridian Mail
- Other

Description

Provide a brief description of the remote messaging server or useful notes, such as when the messaging server was configured or who completed the configuration.

Send Messages to this Server

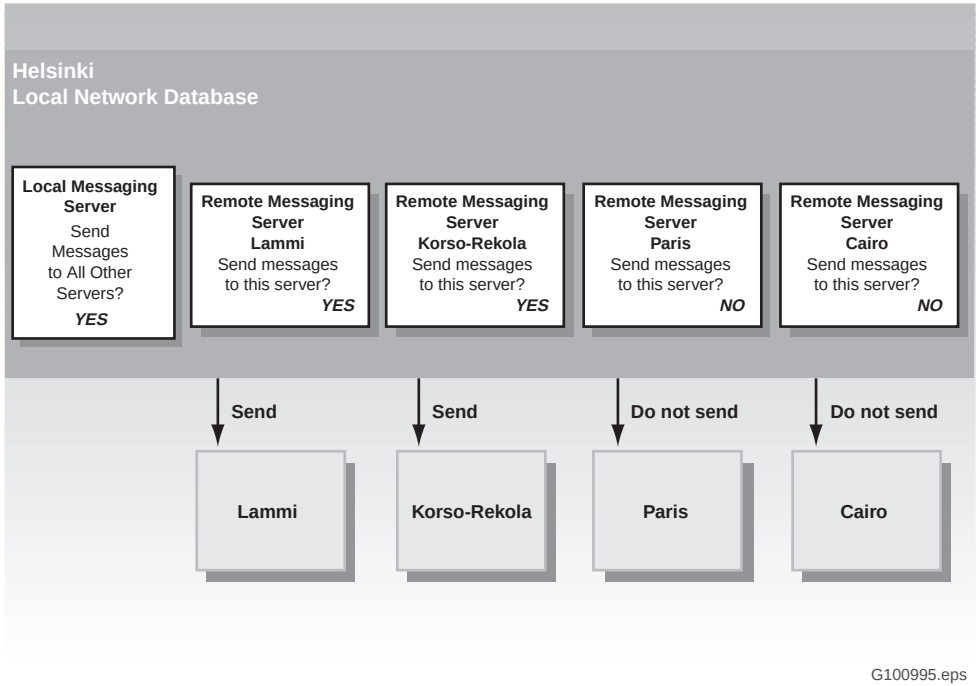
The Send Messages to this Server check box interacts with the Send Messages to all other Servers check box on the Local Messaging Server Properties—General tab.

When you configured the local messaging server, you decided if you wanted the local messaging server to send messages to all remote messaging servers. This option is selected by default and is cleared only under exceptional circumstances only.

However, you can still stop the delivery of messages to specific remote messaging servers. The Send Messages to this Server check box enables you to block the delivery of messages from your local messaging server to a particular remote site.

Example

In the following diagram, Helsinki is configured to deliver messages to all other sites. However, the network database record for Paris and for Cairo specifies that messages are not sent to these remote sites. Messages are sent to both Lammi and Korso-Rekola. Therefore, while the potential exists for sending messages to all remote sites, only two remote sites receive messages.



G100995.eps

Send local user information to this Server

The Send local user information to this Server check box determines if the Names Across the Network feature is used with this remote site. If enabled, this feature was configured during the implementation of Enterprise Networking.

Enterprise Site ID

The Enterprise Site ID box is enabled only if Enterprise Networking is installed on the local site.

All remote sites connected to a site that has Enterprise Networking installed must have an Enterprise site ID, regardless of the actual protocol used with the site.

Send Message Text Info to this Server

This check box applies only to remote sites that use Enterprise Networking to exchange messages with the local site. If enabled, message text information is sent to the remote site.

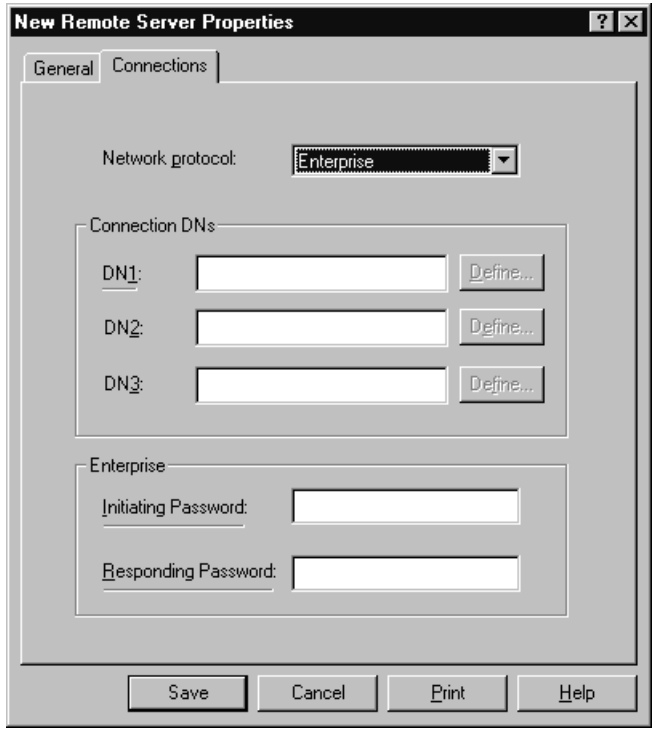
Server FQDN

If VPIM Networking is installed on your local site, the VPIM Networking Server FQDN box is enabled.

However, since your local site transfers messages with this remote site using Enterprise Networking, the Fully Qualified Domain Name (FQDN) of the remote server is not required.

Remote Messaging Server—Connections tab

The configuration of a remote messaging server continues on the Connections tab.



Network protocol

When implementing Enterprise Networking, you must specify that the protocol used by the local site to exchange messages with this remote site is Enterprise.

To use a particular protocol, both sites must have the same networking solution installed and implemented.

If a remote site is not configured to use the same protocol as the local site, the following occurs when the local site attempts to send a message:

- The message is not delivered.
- An error message is generated.
- The remote site is put into error status on the local system.

Enterprise Networking Connection DNs

When CallPilot initiates a call to a remote site, it uses the networking connection DN that is specified for the remote site in your network database.

Up to three DNs can be defined. DN1 is mandatory. DN2 and DN3 are optional.

The first Enterprise Networking connection DN is the Enterprise Networking SDN for the remote site, as defined in the SDN table of the remote site. If Enterprise Networking is sharing an SDN with another service, such as AMIS Networking, then the networking connection DN is the DN that accepts such network calls.

You must contact the administrator of the remote site for the connection DN.

The connection is entered in a format that is dialable from the local site.

The system always uses DN1 to call the remote site unless it encounters problems. If the system does encounter a problem, it attempts to contact the remote site using DN2, then DN3. In general, the DNs are ordered from least expensive to most expensive connections. For example, DN1 could be a private number and DN3 could be a public telephone number.

Network passwords

Unique passwords are used between each pair of sites in the messaging network. They are used to secure the messaging network and the integrity of the messages. Two passwords are used to verify that any two sites may communicate with each other:

- initiating password
- responding password

The passwords on your site must match the site you are calling or from which you are receiving messages.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration

To configure a remote messaging server

1. In the Messaging Network Configuration tree view, select Remote Server Maintenance.
2. On the File menu, click New > Messaging Server.

   Result: The Remote Messaging Server Properties—General tab appears.
3. On the General tab, in the Name box, enter the name of the remote messaging server.
4. Select the server type from the Server type box.
5. In the Description box, enter details about the remote messaging server.
6. To enable the local messaging server to send messages to this remote messaging server, ensure that the Send Messages to this Server box is selected.
7. Enter the unique Enterprise site ID number of the remote messaging server or a valid placeholder.
8. To continue configuring the remote messaging server, click the Connections tab.

   Result: The Connections tab appears.
9. From the Network protocol list, select Enterprise.

   Result: The Connection DNs boxes become enabled.
10. In the DN1 box, enter the connection DN.

    Note: DN1 is mandatory. At least one DN must be the system access number of the remote site.
11. Repeat for each connection DN.

    Note: If you are defining more than one connection DN, list them in order of cost. Connection DN1 should be the least expensive means of contacting the remote site.
12. Enter the Initiating and Responding Enterprise Passwords.

13 Click Save.

Result: The information is validated and entered into the network database.

What's next?

After you add information about the remote messaging server into your local network database, you must also add information about the remote prime switch location.

Configuring a remote prime switch location

Introduction

When you added a remote messaging server to the Message Network Configuration tree view, a corresponding prime switch location was added.

A remote prime switch location must be configured. This process is almost identical to configuring the local prime switch location.

Remote Prime Switch Location dialog box

The remote prime switch location is configured on the Remote Prime Switch Location Properties dialog box, which has four tabs:

- General
- ESN
- CDP
- SMTP/VPIM

General tab

Completing the General tab is mandatory.

ESN tab

Complete the ESN tab if an ESN or a hybrid dialing plan is used with this remote site.

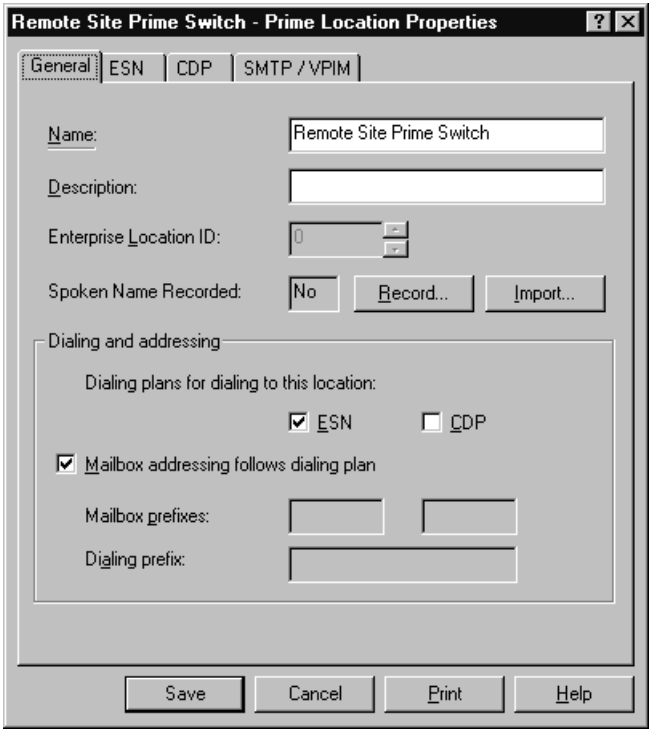
CDP tab

Complete the CDP tab if a CDP or a hybrid dialing plan is used with this remote site.

SMTP/VPIM tab

Because your local site is not using VPIM Networking to transfer messages with this remote site, do not complete the SMTP/VPIM tab.

Remote Prime Switch Location Properties—General tab



Name

Assign a unique name to each switch location. The name should correspond to the switch location to make the location easy to identify. A street or city name is a good choice.

The remote switch location is automatically given the name of the remote server that was added to the Messaging Network Configuration tree view. This name can be changed.

Description

Enter short notes or comments about the remote switch location in this box.

Enterprise Location ID

The Enterprise Location ID box is enabled only if Enterprise Networking is implemented on the local site.

A location ID is required for all remote sites if Enterprise Networking is installed locally, even if another protocol is used to exchange messages with this site.

The location ID of the prime switch location is set to 0 by default and cannot be changed.

Spoken Name Recorded

When local users compose a message to this remote site or use the playback feature to determine the sender of a message, they hear a message that identifies the sender. The content of the message depends on whether a spoken name for that remote site is recorded.

If a spoken name is recorded, voice mail users hear the location name followed by the local mailbox directory number.

Example: “Dallas, Mailbox 2346”

Spoken name not recorded

If a spoken name is not recorded, local users hear a full mailbox address that does not identify the sender’s site by name.

For example, for an ESN switch location, users hear the ESN location prefix followed by the local mailbox directory number.

Example: “Mailbox 6444 2346”

When a spoken name is not desirable

You may decide that you do not want local users to hear a spoken name for a particular remote site. For example, if CDP is used for messaging with this remote site and the mailbox numbers follow the dialing plan, you may decide that a recorded spoken name is unnecessary. In this case, do not record or import a spoken name.

Ways to add a spoken name recording

There are two ways to add a spoken name recording: record a spoken name directly by clicking the Record button, or import a prerecorded message.

Dialing and addressing

Provide general information on the dialing plan used by the switch.

Several of the boxes are enabled or disabled, depending on the selections made. The dialing plan boxes have complex interactions. Complete all enabled boxes.

Dialing plans for dialing to this location

You must specify which dialing plan is used to dial this remote switch location from the local switch location. There are four possible dialing plans:

- ESN
- CDP
- hybrid, which combines ESN and CDP
- another (such as PSTN)

Mailbox addressing follows dialing plan

When a mailbox follows the dialing plan, a user dials and addresses a message to a recipient in the same way. There are two ways to achieve this correspondence:

- A user's mailbox number and extension number are the same.
- The addressing plan and the dialing plan are the same.

If either situation is true, select the Mailbox addressing follows dialing plan check box.

Clear this option if users at the site do not dial and address recipients in the same way.

Example: If the local ESN prefix is 6222 and the local mailbox is 1234, remote users can dial the local user with the number 62221234, which is the ESN prefix and the mailbox number combined.

Example: If the CDP steering code is 22 and the local mailbox is 1234, remote users can dial the local user with the number 221234, which is the steering code and the mailbox number combined.

Mailbox prefixes

Mailbox prefixes are used by local users to address users at a remote site if mailboxes at the remote site do not follow the dialing plan.

A mailbox prefix must be provided if the mailbox does not follow the dialing plan or if another dialing plan, such as PSTN, is used.

A mailbox prefix does not have to overlap with local mailbox numbers. Two mailbox prefixes can be entered. Either prefix can be used to address any mailbox at the local site. Normally, however, only one prefix is required.

Usually, the mailbox prefix is a shortcut. A mailbox prefix can be any number as long as it does not conflict with other network data.

A mailbox prefix can also be the entire telephone number of the site, including country code, city/area code, and exchange.

Example: If the mailbox prefix is 22 and the mailbox number of a local user is 6565, users at other switches address the local user by dialing 226565.

Dialing prefix

A dialing plan is needed if the local site uses another dialing plan, such as PSTN, and users at your local site use a dialing prefix to reach users at this remote site.

Usually, if the Dialing prefix box is enabled, you enter the prefix.

In a few cases, a dialing prefix is not needed. For example, if the mailbox number, without the mailbox prefix, can be dialed directly, a dialing prefix is not needed. This situation is rare because most systems use some sort of access code.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration

To configure the remote prime switch location

1. In the Messaging Network Configuration tree view, select the remote prime switch location.
2. On the File menu, select Properties.

   Result: The Remote Prime Switch Location Properties dialog box appears.
3. On the General tab, in the Name box, enter the name of the remote prime switch location.
4. In the Description box, enter details about the switch location.

   Note: The Enterprise Location ID is always set to 0 for remote prime switch locations and cannot be changed.
5. If needed, click Record to record a spoken name for the site, or click Import to import a prerecorded spoken name.

   Note: For instructions on how to record a spoken name, see “Recording a spoken name” on page 191.

   For instructions on how to import a spoken name, see “Importing a spoken name” on page 193.
6. Specify the dialing plan used to dial the remote site. Select the
   - ESN check box if ESN is used
   - CDP check box if CDP is used
   - ESN and CDP check boxes if a hybrid dialing plan is used

   Note: Leave both check boxes clear if you use another dialing plan, such as PSTN.
7. Indicate if mailbox addressing follows the dialing plan.
8. If necessary, enter the mailbox prefix or prefixes.
9. If necessary, enter the dialing prefix.

ESN information

If the remote prime switch location uses an ESN or a hybrid dialing plan, complete the ESN tab.

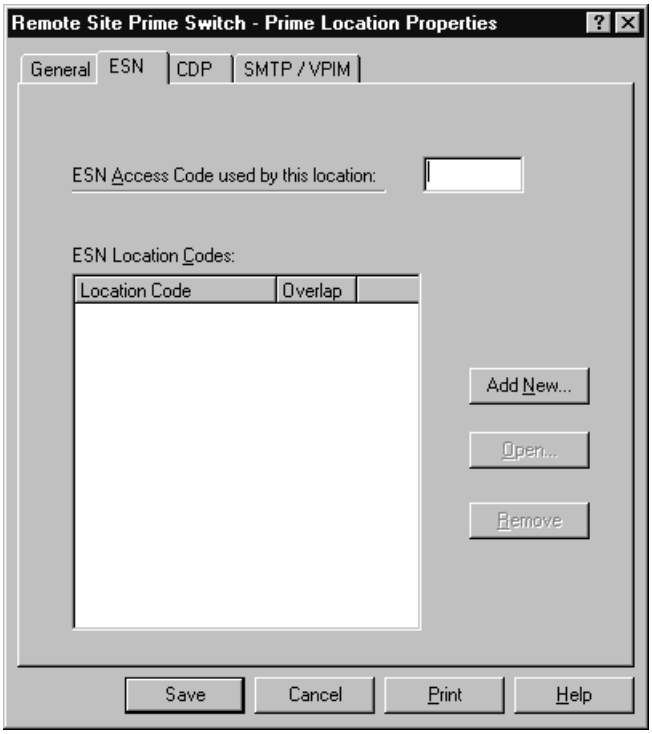
The procedure for configuring the ESN information for a remote prime switch is identical to the procedure used for the local prime switch location.

Note: You must provide the ESN access code used at the remote site. Do not enter the access code used locally.

For a review of the ESN access codes, ESN location codes, and overlap, consult “Configuring ESN information” on page 156.

To configure the ESN information

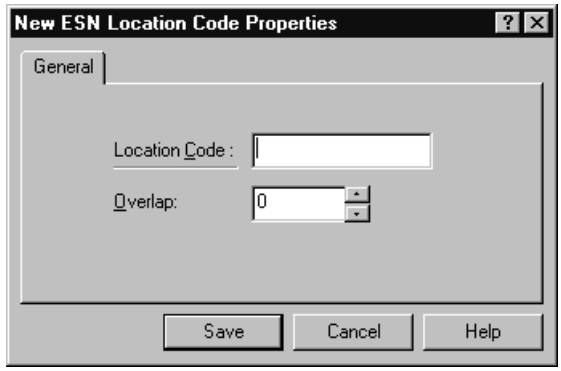
1 Open Message Delivery Configuration > Remote Prime Switch Location > ESN tab.



2 Enter the ESN access code.

3 To add a new location code, click the Add New button.

Result: The New ESN Location Code Properties dialog box appears.



4 In the Location Code box, enter the location code.

5 In the Overlap box, enter the number of digits in the mailbox number that overlap the location code.

6 Click Save.

Result: The location code and overlap are validated and appear in the ESN Location Codes box on the ESN tab.

7 Repeat steps 3–6 for each ESN location code required.

8 When you have finished configuring the ESN information, determine if you must configure CDP information. If yes, click the CDP tab. If no, click Save.

What's next?

If your remote prime switch location uses the hybrid dialing plan, click the CDP tab to continue the configuration of the local prime switch location.

If the local prime switch location uses only the ESN dialing plan, click Save to validate the configuration information and save it to the network database.

CDP information

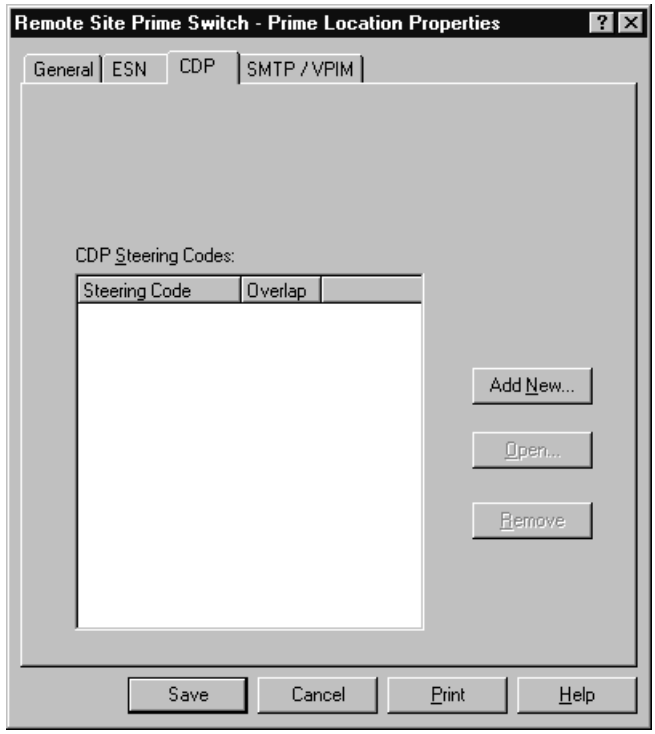
If a CDP dialing plan or a hybrid dialing plan is used to connect the local site to the remote site, complete the CDP tab.

Configuring the CDP information for a remote prime switch location is identical to configuring the local prime switch location.

For a review of the CDP steering codes and overlap, consult “Configuring CDP information” on page 160.

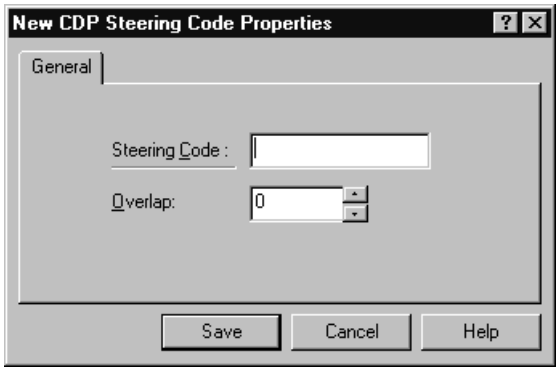
To configure the CDP information:

1 Open Message Delivery Configuration > Remote Prime Switch Location > CDP tab.



2 Click the Add New button.

Result: The New CDP Steering Code Properties dialog box appears.



3 In the Steering Code box, enter the steering code.

4 In the Overlap box, enter the number of digits in the mailbox number that overlap the steering code.

5 Click Save.

Result: The steering code and overlap are validated and appear in the CDP Steering Codes box on the CDP tab.

6 Repeat steps 2–5 for each CDP steering code required.

7 When you have added all necessary CDP steering codes, click Save.

Result: The information is validated and added to the network database, and you return to the Messaging Network Configuration tree view.

What's next?

You have completed the configuration of the remote prime switch location.

Configuring a remote satellite switch location

Introduction

If a remote site is an NMS site, you must add and configure each of its satellite switch locations. This information is saved to the local network database.

Although a prime switch location is added automatically when a remote site is added to the Messaging Network Configuration tree view, you must manually add each satellite switch location of a remote NMS site.

Capacity

An NMS site can have up to 59 satellite switch locations.

Organization

When you add a satellite switch location, this location appears in the Messaging Network Configuration tree view. Satellite switch locations are listed alphabetically below the prime switch location.

Where to configure a satellite switch location

To configure a satellite switch location, complete the General tab of the Network Messaging Configuration property page.

You must also complete the tabs that correspond to the dialing plan used by the local site.

ESN tab

Complete the ESN tab if you use an ESN or a hybrid dialing plan.

CDP tab

Complete the CDP tab if you use a CDP or a hybrid dialing plan.

Spoken Name Recorded

When local users compose a message to a remote satellite switch location or use the playback feature to hear who sent a message, the name of the switch location is played.

If a spoken name is not recorded, local users hear the full DN, such as “Mailbox 64441234.” If a recording of the spoken name is available, local users hear the switch location name followed by the mailbox number, such as “Milan 1234.” You can either record a message using the telephone or import a prerecorded WAV file.

When a recording of the spoken name is available, Yes appears in the Spoken Name Recorded box.

If you do not want your local users to hear the name of this satellite switch location when composing messages or using playback, do not record a message. For example, if you are using CDP to transfer messages to the site and mailbox numbers follow the dialing plan, you may feel that a spoken name is unnecessary.

Dialing plan interaction

The dialing plan boxes are dynamically enabled or disabled depending on the choices made. Complete all enabled fields.

See also

Configuring a satellite switch location for a remote site is identical to configuring a remote prime switch location for a remote site.

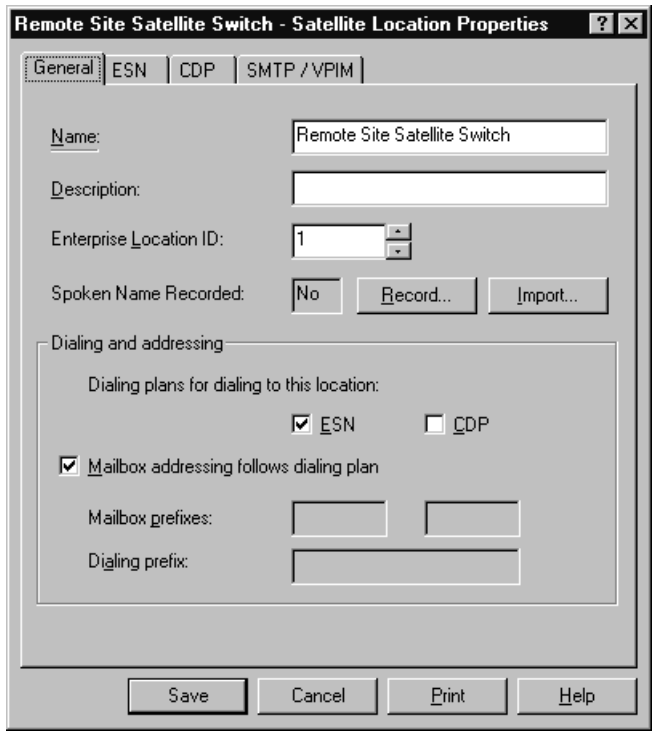
For a review, consult “Configuring a remote prime switch location” on page 175.

Getting there Nortel SMI > Meridian Application Server > CallPilot> Networking > Messaging Network Configuration

To add a remote satellite switch location

1. On the Messaging Network Configuration tree view, highlight the remote messaging server.
2. On the File menu, select New > Switch location.

   Result: The Satellite Switch Location Properties dialog box appears.



3. To add the satellite switch location to the remote site, configure the satellite switch location.
4. In the Satellite Switch Location Properties dialog box, complete the General tab.
5. To record a spoken name, click Record.

To import a prerecorded spoken name, click Import.

Note: For detailed instructions on how to record or import spoken names, consult “Recording a spoken name” on page 191, or “Importing a spoken name” on page 193.

6 Complete the ESN tab and the CDP tab as required.

7 Click Save.

Result: The information is validated and the satellite switch location is added to the remote site.

8 Repeat steps 1–4 for each satellite switch location required.

9 When all satellite switch locations are added, click Save to save them to the Messaging Network Configuration tree view.

Recording a spoken name

Introduction

You can create a recording of the name of a switch location. A recorded name is heard by a local user whenever an address is played back. A recorded name for a site is played if a user does not have a personal recorded name.

Local switch location

If your local site is not an NMS site, a spoken name is not required for the local site.

If your local site is an NMS site, you can decide if you want to record a spoken name. For example, if the NMS site uses CDP, you may decide a spoken name is not necessary.

Remote switch location

A spoken name should be available for every remote site in your Message Delivery Configuration tree view.

The recording is played when local users compose messages to the remote site.

Importing a spoken name

If you do not want to record your own voice using the telephone, you can import a prerecorded WAV file. See “Importing a spoken name” on page 193.

Before you begin

A telephone serves as the microphone. Therefore, if you want to record a spoken name, a telephone must be available.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration

To record a spoken name

1. In the Messaging Network Configuration tree view, select the switch location of the site for which you want to record a spoken name.
2. On the File menu, select Open.

   Result: The Switch Location Properties dialog box appears.
3. On the General tab, click Record.

   Result: The Specify Phoneset dialog box appears.



4. Enter the telephone number of the telephone to be used as a microphone and click Dial.

   Result: The telephone rings and the Voice Recorder dialog box appears.
5. Answer the telephone.
6. In the Voice Recorder dialog box, click Record.
7. Speak the name of the site into the telephone.
8. Click Stop.
9. To review the recording, click Play.
10. If you are satisfied with the recording, click Done.

Importing a spoken name

Introduction

You can import a prerecorded file of the name of a switch location. The recording is heard by a local user whenever an address is played back. A recording for a site is played if a user does not have a personal spoken name.

Local switch location

If your local site is not an NMS site, a spoken name is not required for the local site.

If your local site is an NMS site, you can decide if you want to import a spoken name. For example, if the NMS site uses CDP, you may decide a spoken name is not necessary.

Remote switch location

A spoken name should be available for every remote site in your Message Delivery Configuration tree view.

The recording is played when local users compose messages to the remote site.

Instead of importing a spoken name

If you do not want to import a prerecorded spoken name, you can record your own voice message using the telephone.

Before you begin

A prerecorded WAV file must be available. Check the quality of the recording before importing the file.

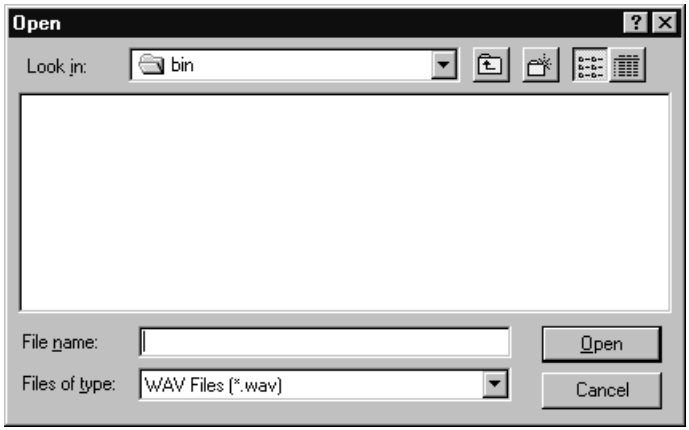
Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration

To import a prerecorded file

1. In the Messaging Network Configuration tree view, select the switch location of the site for which you want to import a prerecorded file.
2. On the File menu, select Open.

   Result: The Switch Location Properties dialog box appears.
3. On the General tab, click Import.

   Result: The Open dialog box appears.



4. Select the WAV file, and click Open.

   Result: The file is imported.
5. Close the Open dialog box.

Checking the configuration of other remote sites

Introduction

If you implemented another networking solution before you implemented Enterprise Networking, you may not have completed all required information.

For example, if you implemented Integrated AMIS Networking, you may have added an Enterprise site ID. You should have entered the correct site ID shown in your network diagram. However, if you used a placeholder instead of the real site ID, you must correct it.

Note: You are not changing the protocol used for these remote sites. You are only defining information that Enterprise Networking uses to identify a site.

Recommended procedure

It is recommended that you check the Enterprise site ID for all remote messaging servers added during the implementation of another networking solution. Check the remote switch location ID number also.

To check the Enterprise Site ID

1. Open the Remote Server Properties dialog box.
2. On the General tab, check the Enterprise site ID.
3. If the site ID is correct, click Cancel.

   If the site ID is incorrect, replace the ID and click Save.
4. Repeat steps 1–3 for each remote site added during the implementation of another networking solution.

To check the Enterprise Location ID

1. Open the Remote Prime Switch Location Properties dialog box.
2. On the General tab, check the Enterprise location ID.
3. If the location ID is correct, click Cancel.

   If the location ID is incorrect, replace the ID and click Save.
4. Repeat steps 1–3 for each remote site added during the implementation of another networking solution.

Non-CallPilot remote sites

Introduction

Enterprise Networking can exchange messages between a CallPilot system and the following non-CallPilot remote systems:

- a Meridian Mail (Release 8 and later) system
- a Norstar Voice Mail (Release 3 and later) system

Coordination

If a remote site is a non-CallPilot system, you must coordinate with the network administrator of that remote site to ensure that the systems are properly configured. You must share the standard information that is required between any sites in a messaging network.

Example

The two sites must coordinate dialing plans and ensure that there are no conflicts in the configuration information.

Adding and configuring the remote site

Adding a non-CallPilot remote site to the local network database is exactly the same as adding a CallPilot remote site.

To configure the non-CallPilot remote site, you require no special information. You must only specify the server type on the Remote Messaging Server dialog box. The rest of the configuration is the same as the configuration of a CallPilot remote site.

Server type

Specify the server type of a non-CallPilot system on the Messaging Network Configuration—Remote Server Properties—General tab.

Instructions for the remote administrator

For both Meridian Mail and Norstar Voice Mail systems, there are no special considerations that must be communicated to the remote network administrator.

You add the CallPilot site to the remote network database like any other remote site. No special configuration is required.

Meridian Mail remote sites

Introduction

CallPilot can exchange Enterprise Networking messages with Meridian Mail (Release 8 and higher).

If a remote site is a Meridian Mail system, you must coordinate with the network administrator of that site to ensure that the systems are properly configured.

The coordination involves standard information that is required between any sites in a messaging network (for example, site names and dialing plan information).

Instructions for the remote Meridian Mail administrator

The CallPilot site is added to the network database like any other site.

Special considerations

CallPilot does not support network broadcast. If network broadcast messages are sent from the Meridian Mail site, they are rejected.

For Meridian Mail (Release 11 and higher), the Meridian Mail administrator can selectively disable the network broadcast for selective sites. Network broadcast should be disabled for remote CallPilot sites.

Testing

The Meridian Mail administrator can run an additional test, the Enterprise diagnostic test, to determine if Enterprise Networking is performing properly. This test is not available for network administrators at CallPilot sites.

Norstar Voice Mail remote sites

Introduction

Enterprise Networking can exchange messages between a CallPilot system and a Norstar Voice Mail (Release 3 and later) system.

Instructions for the remote Norstar Voice Mail administrator

Add the CallPilot site to the network database like any other site. There are no special considerations that must be communicated to the network administrator.

chapter 7

Testing and backing up Enterprise Networking

This chapter describes how to test the Enterprise Networking configuration. The test suite determines if Enterprise Networking works properly both locally and with remote sites.

This chapter also describes how to create a backup of your system to ensure that the correct configuration is not lost due to system failure.

In this chapter

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Tests and backups

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Enterprise Networking test suite

Introduction

After you configure CallPilot for Enterprise Networking, test the system.

The Enterprise Networking test suite tests every aspect of the system. If any test fails, resolve the problem and retry the test before you continue.

Note: These tests are not intended to validate the Enterprise compliance of a third-party system. The tests assume that any system that you communicate with is Enterprise-compliant.

Test suite

The Enterprise Networking test suite consists of five tests. Two tests are local site tests, which verify that your local configuration is correct. Three tests are coordinated site tests, which verify that everything works properly at your site and at every remote site.

The following table lists the local site tests and describes their purpose:

This local site test	determines if
call routing test	■ the local system can make outbound calls to other sites in the network. ■ the local system cannot make outbound calls to restricted sites on the network.
local SDNs test	■ Digital Signal Processing (DSP) cards are working properly and SDNs are defined correctly.

The following table lists the coordinated site tests and describes their purpose:

This coordinated site test	determines if
end-to-end test	■ a remote system can receive messages from the local system.
loopback test	■ the local system can receive messages from the remote system.

Coordination

While you can perform local site tests independently, you must work with the network administrators at each remote site to perform the coordinated site tests.

In some instances, the remote administrator must make preparations before you can conduct the test. For example, to complete the loopback test, the remote network administrator must create a loopback mailbox.

If a test is unsuccessful and you do not find the cause of the problem locally, work with the remote administrators to determine the cause of the problem.

For quick results

When you test your implementation of Enterprise Networking, there are two ways to ensure quick results:

- Change the batch threshold to 1.
- Tag a test message as an urgent priority message.

An urgent tag ensures quick results. You do not need to change the scheduling parameters to perform the tests and return them to their original settings after you complete the tests.

Note: Messages tagged as urgent are handled according to the scheduling parameters. For example, if the urgent message hold time is five minutes, it may take five minutes before the test message is sent.

Call routing test

Introduction

The call routing test determines if the local system

- can make outbound calls to other sites using Enterprise Networking
- cannot make outbound calls to numbers that are configured as restricted on the system

Before you begin

Ask the switch technician for the ACD/UCD agent and trunk printouts for the switch.

To perform the call routing test

1. Use the ACD/UCD agent and trunk printouts to select an ACD/UCD agent.
2. Program a telephone to use the same NCOS and TGAR as the agent.

   Note: For instructions, consult your switch documentation.
3. Dial a network address.
4. Repeat steps 1–3 for a number that you know should be restricted.

   Example: Attempt to access a trunk directly.

Evaluating test results

The call routing test is successful if an outbound call goes through to the allowed system but is blocked to a restricted system.

If the test is not successful

If the call routing test fails or produces unexpected results, a switch technician must check the switch settings that control routing and restrictions on calls.

What's next?

After you successfully complete the call routing test, perform the local SDN test.

Local SDN test

Introduction

The local SDN test verifies that the local system can receive messages from a remote system. This test confirms that the SDN for Enterprise Networking in the SDN Table is correct.

The quick SDN test can be substituted for the local SDN test. See “Quick SDN test” on page 209.

Note: The SDN for Enterprise Networking is, by default, the same default used by AMIS Networking.

If Enterprise Networking and AMIS Networking share an SDN with another service, send the message to that SDN when you enter the system access number.

The SDN test consists of sending a message to a mailbox at your local site. You address the message as if it is being sent to an Open AMIS site. You enter the system access number in dialable format. For this test, the system access number consists of the following:

- the access code required to dial out of the system
- your local site’s number, including the exchange code and SDN

To perform the SDN test

1. Log in to CallPilot.
2. Press **75** to compose a message.
3. Enter the following:
   - the AMIS compose prefix
   - the system access number
   - # to indicate the end of the system access number

4 Enter the local mailbox number on which you are currently logged, followed by #.

Result: The system responds with the following message: `Open network user <mailbox number> at <system access number>`.

5 Press # again to indicate the end of the list of recipients.

6 Press **5** to record a message.

7 Record the message.

8 Press # to stop the recording.

9 Tag the message as urgent.

10 Press **79** to send the message.

Result: The system responds with the following message: `Message sent`.

11 Log off.

Evaluating test results

The message is sent according to the scheduling parameters for urgent messages.

The test is successful if you receive the message you recorded.

The test is not successful if you receive a non-delivery notification message.

If the test is not successful

If the SDN test is not successful, check the Enterprise Networking SDN in the SDN Table. Review the SDN setup requirements and make any necessary adjustments.

See also

For an overview of setting up SDNs, consult the *Advanced Administration Guide*.

For a detailed discussion of setting up SDNs for Enterprise Networking, consult “Adding and configuring SDNs” on page 112.

What’s next?

After you successfully complete the SDN test, perform the loopback test.

Quick SDN test

Introduction

The quick SDN test verifies that the local system can receive messages. This test confirms that Enterprise Networking is correctly configured in the SDN Table.

The quick SDN test does not require the participation of a remote network administrator.

The local SDN test can be substituted for the quick SDN test. See “Local SDN test” on page 207.

To perform the quick SDN test

1. Log in to CallPilot.
2. From your local telephone, enter the local SDN for Enterprise Networking.
3. Listen for the system to answer the call.
4. Repeat these steps for every SDN used by Enterprise Networking.

Evaluating test results

The quick SDN test is successful if the system answers and waits for a C-tone. The system times out after approximately 20 seconds.

The test is not successful if any prompts are heard.

If the test is not successful

If the quick SDN test is not successful, check the Enterprise Networking SDNs in the SDN Table. Review the SDN setup requirements and make any necessary adjustments.

For detailed information on setting up SDNs, consult the relevant section in the *Advanced Administration Guide*.

What’s next?

After you successfully complete the SDN test, perform the loopback test.

Loopback test

Introduction

A loopback test confirms that a message can be sent from a local site to a remote site, and returned to the local site.

You should perform this test after you add each remote site to the local database.

To perform the loopback test, compose and send a message to a loopback mailbox at a remote site. A loopback mailbox automatically returns a message to the originator.

Before you begin

Before you perform the loopback test, ensure that a loopback mailbox exists on each remote site tested.

Loopback mailbox

A loopback mailbox is a mailbox that is set up on every site in the messaging network. The only purpose of a loopback mailbox is to return a confirmation of receipt.

Get the loopback mailbox number from the network administrator of each remote site with which you are performing the loopback test.

To perform the loopback test

1. Log in to CallPilot.
2. Press **75** to compose a message.
3. Enter the network address of the remote site.
4. Enter the loopback mailbox number of the remote site.
5. Press **5** to record a message.
6. Record the message, and press # to stop recording.
7. Tag the message as urgent.
8. Press **79** to send the message.

9 Wait for your Message Waiting Indicator light to activate. This light indicates that the message was successfully returned to you.

Note: Activation may take several minutes.

10 Log in and listen to the message.

11 Log out of the system.

Evaluating test results

The test is successful if you hear the message that you recorded.

The message is not successful if you receive a non-delivery notification message.

If the test is not successful

If the test is not successful, do the following:

- Check with the remote network administrator and confirm the loopback mailbox number.
- Perform the test again to ensure that the message was addressed correctly.
- Consult the operational measurement reports to determine the following:
  - Are the connection DNs correct?
  - Is the remote site operational?
  - Do the message transfer protocols match?

What's next?

After you successfully complete the AMIS loopback test, perform the end-to-end test.

End-to-end test

Introduction

An end-to-end test verifies that users at a remote site can receive messages from users at the local site.

To perform the end-to-end test, send a message to a mailbox at a remote site. Send the test message to the mailbox of the remote network administrator and request a confirmation.

Before you begin

You must coordinate with the remote network administrator of each site with which you wish to perform a loopback test. Each remote administrator must listen to the message you have sent before returning an acknowledgment to you.

To perform the end-to-end test

1. Log in to a mailbox.
2. Press **75** to compose a message.
3. Enter the mailbox address for a mailbox at a remote site.
4. Press #.
5. Press # again.
6. Press **5** to record a message.
7. Record the message, and then press # to stop the recording.
8. Tag the message as urgent.
9. Press **79** to send the message.
10. Log out of the system and hang up.
11. Ask the remote administrator to log in to the mailbox and listen to the message.
12. Wait for an acknowledgment to be returned to you.
13. Log in to the mailbox and listen to the acknowledgment.

Evaluating test results

The test is successful if the message is successfully delivered to the remote system.

The test is not successful if a non-delivery notification (NDN) is received, which indicates that the message was not delivered.

Confirming successful delivery

Even if you do not receive an NDN, you may want to confirm that the message was successfully delivered.

To confirm the delivery, either

- log on to the remote site and read the message, or
- ask the administrator at the remote site to log on and read the message

If the test is not successful

If the end-to-end test fails or produces unexpected results, check the following:

- Was the message correctly addressed?
- Does the mailbox on the remote system exist?
- Does the NDN provide any indication of the problem?

  If you receive an NDN, listen to the message to determine why the test message was not delivered.

IF the NDN states	THEN
it took too many attempts to send the message	the cause may be ■ incorrect message transfer protocol. ■ incorrect site ID. ■ incorrect connection DN. ■ incorrect passwords. ■ the remote site is disabled.

IF the NDN states	THEN
the address was incorrect	the message was delivered to the remote site but could not be delivered. The cause may be ■ the mailbox does not exist. ■ the wrong mailbox number was used. ■ the Receive Composed Messages box on the Class of Services screen is set to No. ■ the disk at the remote site is full.

- Do the alarms and events reports provide details of the possible causes?

  Since all previous tests have been successfully completed, the remote site probably caused the test to fail.

  Examples of remote site causes include the following:

  - Incorrect password pairs were assigned between sites.
  - Channels were not available.
  - Addresses were incorrect.
  - Connection DNs do not terminate on the networking DN.
  - A remote site that is not yet operational was specified.

What's next?

The end-to-end test is the final test in the Enterprise Networking test suite. When you successfully complete the loopback test, perform a backup of your configuration.

Backing up Enterprise Networking

Introduction

When all tests of the system are successfully completed and Enterprise Networking is working properly, perform a backup.

The backup ensures that the configuration is not lost due to system failure.

Backup schedule

Perform a manual backup as the final step in the AMIS Networking installation.

Note: You must perform a manual backup even if the system is configured to perform an automatic backup.

In the unlikely event that the system experiences a disk failure before the automatic backup takes place, the networking configuration could be lost.

Whenever you modify Enterprise Networking information during regular maintenance, perform a backup.

System backup components

A system backup consists of two parts:

- switch backup
- CallPilot backup

Switch backup

For detailed instructions on how to perform a switch backup, consult your switch documentation.

CallPilot backup

You can perform a full or partial backup of your CallPilot system. For detailed instructions on how to perform a CallPilot backup, consult the *Advanced Administration Guide*.

chapter 8

Maintaining Enterprise Networking

After you complete the Enterprise Networking implementation, you only need to perform regular maintenance.

This chapter describes maintenance procedures that must be performed regularly. The chapter also describes maintenance procedures that you perform only when required.

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About maintaining Enterprise Networking

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Overview

Introduction

After you successfully install and test Enterprise Networking, you need to perform two types of maintenance tasks:

- regularly scheduled
- as-required

Regularly scheduled tasks

Regularly scheduled tasks include

- checking the network status
- reviewing Operational Measurement (OM) reports

Although you can perform regularly scheduled tasks at any time, perform these tasks at least once a week. Since these tasks do not interfere with the operation of the Enterprise network, you can schedule them at a convenient time during a regular workday.

If you monitor the performance of your messaging network, you avoid future problems. Careful monitoring shows bottlenecks in the system and indicates how the system can be improved.

Monitoring can also help you to plan and forecast future messaging network requirements.

As-required tasks

Perform as-required tasks as needs arise. As-required tasks include

- modifying networking parameters
- disabling and enabling Enterprise Networking
- modifications to the Enterprise Networking configuration

When to perform as-required tasks

Since as-required tasks may affect the entire system, perform these tasks when the system is not in heavy use.

Modifications to the configuration may be necessary for the following reasons:

- New legal delivery times are announced for computer-generated calls.
- The system performance suggests that adjustments to the parameters are required.
- The system access number is changed.

ATTENTION!

Because as-required tasks may affect the performance of the entire system, schedule them for off-peak hours.

Perform a backup following maintenance

Perform a backup of the system whenever you modify the network parameters as part of your maintenance.

Maintain a network history

Introduction

Keep detailed records of a network's history. These records can

- indicate significant performance or equipment issues that real-time monitoring may not detect
- provide a background for comparing the current information
- provide information needed during support calls

Information to record

A network history should contain the following types of information:

- installation dates and descriptions
- contact information for all key personnel involved in the system installation and configuration
- details of software installed on the messaging server, including versions
- installation process and results, including tests
- diagrams of the initial and subsequent network configurations
- any problems encountered and their solutions
- hardware and software changes
- changes to the messaging network layout

Where to keep the records

Make the records of your messaging network easy to access and easy to read. Graphics, including hand-drawn sketches, can be very useful.

Keep records in a log or online. Note, however, that online records online cannot be accessed if the system fails.

See also

For a detailed description of messaging network histories, consult the *Networking Planning Guide*.

Printing configuration information

Introduction

Printouts of the system configuration are often included in a network history. You can print all configuration information contained in your local network database.

To print configuration information, you must open the relevant Properties dialog box. For example, to print an item in the Messaging Network Configuration tree view, you must open the Properties dialog box of the item.

If a Properties dialog box consists of more than one tab, the contents of all tabs are printed.

Note: You cannot print the tree view of the messaging network contained in the Messaging Network Configuration dialog box.

When to print configuration information

Although configuration information is always available in the most recent backup of your network database, you may find it convenient to make printouts as well.

Printouts of the configuration information are especially useful in the following situations:

- You must fax information to a remote network administrator.
- You are keeping a network history.
- You are planning to change a configuration or delete an item from the Messaging Network Configuration tree view, and you want a hard copy of the original configuration.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Message Delivery Configuration or Messaging Network Configuration

To print the configuration information

1. Open the dialog box that you want to print.
2. With the dialog box open, click the Print button.

   Result: The contents of the dialog box print. The printout includes the contents of all tabs.

Regularly scheduled maintenance tasks

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Reviewing OM reports and alerts

Introduction

Operational Measurement (OM) reports show how much of the CallPilot system is being used by Enterprise Networking.

Three OM reports provide Enterprise Networking information:

This OM report	provides
Open Networking Activity	information about open networking activity over a specified time interval.
Network Usage Bill-back	information to bill back the cost of users' networking activities.
Failed Networking Sessions alert	notification that the number of networking failures equals or exceeds the total number of networking attempts.

Although you can review OM reports at any time, you should review them at least weekly.

Access to OM reports is restricted

The generation of OM reports is a restricted activity that is determined by access level. If you do not have the necessary access, you must ask your system administrator to generate the reports.

The OM report request screens let you choose the reports that you want to view and print. For many reports, you can also customize the displayed results so that you receive the information in a format that best suits your needs.

See also

For additional information on OM reports, including how to interpret them, consult the *Reporter Guide*.

As-required maintenance tasks

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Overview

Introduction

You may need to modify the Enterprise Networking configuration, including

- whether the system can send or receive Enterprise messages
- the time periods when outgoing messages are allowed to be sent during business and nonbusiness days
- the minimum and maximum port allocation for Enterprise Networking
- how many messages to transmit in each Enterprise Networking session
- the scheduling parameters

Scheduling parameters

The scheduling parameters that may be modified are

- economy message send time
- stale times for economy, standard, and urgent messages
- batch threshold
- delivery days and times

Identifying required modifications

Changes to the Enterprise Networking configuration may be required if

- message delivery scheduling is not performing as anticipated
- there are changes to the long-distance charge period or to delivery days and times

Example 1

When you originally configured the system, you set the economy delivery start time to 8:00 p.m. and the stale time to 4 hours. Users find that many of their messages are going stale and are being returned with non-delivery notifications.

A coordination problem exists between the two scheduling parameters. If you compose an economy message in the morning, it may go stale before the delivery time begins. Therefore, you must reconfigure the stale time to 20 hours, for example. This reconfiguration ensures that messages can be composed throughout the business day and will not go stale before the delivery begins.

Example 2

When you originally configured Enterprise Networking, the lower rates for long distance came into effect at 11:00 p.m. Therefore, you set the economy delivery start time to 11:00 p.m.

However, the telephone company has announced new periods for lower long-distance toll rates. Lower rates now begin at 8:00 p.m. Therefore, you change the economy delivery start time to 8:00 p.m.

Modifying the Enterprise Networking configuration

Introduction

If you need to modify the Enterprise Networking configuration, follow these general guidelines.



Risk of loss of functionality

Changes to the networking configuration should be done during hours when users are not logged on. Making changes to the configuration while users are logged on may result in loss of messaging functionality.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Message Delivery Configuration > Enterprise tab

To modify the Enterprise Networking configuration

1. Review Chapter 5, “Configuring CallPilot for Enterprise Networking”, to ensure that you understand the impact of the changes.
2. Enter all required modifications on the Enterprise tab.
3. Click Save.

   Result: The system validates the modifications and, if they are valid, puts the modifications into operation immediately.

Announce some modifications

Most of the modifications that you make to the Enterprise Networking configurations are transparent to your users. Although modifications may affect the performance of the system, they do not require any new input from users.

However, if you modify the Enterprise site ID, you must announce this change to all local users.

If you modify the SAN, you must notify remote callers about this change. Also remind your local users to tell users at the open sites about the changes.

Perform a backup

After you modify the configuration of Enterprise Networking, perform a backup to ensure that these changes are not lost.

Also record the changes in your network history.

Disabling and enabling Enterprise Networking

Introduction

You may need to disable Enterprise Networking occasionally. When you disable Enterprise Networking, users cannot compose, send, or receive Enterprise messages.

You might disable Enterprise Networking to

- prevent system abuse
- temporarily suspend outgoing or incoming messages, or both

Messages sent while system is disabled

When you disable outbound Enterprise Networking, your local users can continue to compose and send messages. The messages composed by your local users are held in queue until the option is enabled or the message becomes stale.

When you disable inbound Enterprise Networking, messages from remote systems are rejected. The remote system that sends the message is informed of the status, and messages are not accepted.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Message Delivery Configuration > Enterprise tab

To disable and enable Enterprise Networking

1 Do the following:

IF you want to	THEN
disable your system from receiving Enterprise messages	clear the Incoming Enterprise Networking check box.
disable your system from sending Enterprise messages	clear the Outgoing Enterprise Networking check box.
enable your system to receive Enterprise messages	select the Incoming Enterprise Networking check box.
enable your system to send Enterprise messages	select the Outgoing Enterprise Networking check box.

2 To save your settings, click Save.

Other ways to disable and enable Enterprise Networking

There are several ways to disable and enable Enterprise Networking. Use the most appropriate method, depending on the circumstances.

In addition to the Message Delivery Configuration method described above, the following methods are available:

IF you want to	THEN
disable or restrict the sending of Enterprise Networking messages to specific or all SANs by a user	change the Enterprise Restriction/ Permission List for the user.

IF you want to	THEN
disable the sending of messages to any remote site, using any protocol, by the local server	clear the Send Messages to all other Servers option in the Messaging Network Configuration dialog box for the local server. **Note:** This option is available only if additional networking solutions are installed on your local system.
disable the sending of messages, using the defined protocol, to a specific remote site	clear the Send Messages to all other Servers option in the Messaging Network Configuration dialog box for the remote server. **Note:** This option is available only if additional networking solutions are installed on your local system.

Modifying message delivery parameters

Introduction

Message delivery parameters control when and how Enterprise Networking sends messages. You can modify the following message delivery parameters as required:

- batch threshold
- stale times
- economy delivery start and stop times

Impact of modifications

The message delivery parameters are closely interrelated. Modifications to one parameter may necessitate changes to others. Therefore, carefully plan modifications in advance.

You must test and monitor the performance of the system after you make any modifications to ensure that the modifications have the desired effect and no unplanned side effects.

Note: Before you modify the message delivery parameters, review the previous discussion of how these parameters are set in Chapter 5, “Configuring CallPilot for Enterprise Networking”.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Message Delivery Configuration > Enterprise tab

To modify message delivery parameters

1. Modify the delivery parameters on the tab as required.
2. Review the changes to ensure that there are no conflicts among the parameters.
3. Click Save.

Perform a backup

After any modification to the configuration, perform a backup to ensure that the modification is not lost.

Modifying the channel resource allocation

Introduction

When you implemented Enterprise Networking, you set the minimum and maximum channel resource allocation for both the inbound and the outbound Enterprise Networking SDNs. The channel resources determine how efficiently services are accessed.

Balance channel resources

You must carefully balance channels for each service when you allocate channel resources. You must allocate enough channels to ensure that users can access the service. However, you must not overallocate channels so that users are unable to access other services.

Determine if modifications are necessary

To determine if modifications to the channel resource allocation are necessary, monitor service usage. After Enterprise Networking is in service for a period of time, use the Reporter feature to determine how services are being used.

Reporter provides the following statistics:

- the number of calls queued for a service
- the average wait time for queued calls
- the maximum wait time for queued calls
- the number of callers who abandoned the queue

If you are dissatisfied with the performance of AMIS Networking after analyzing these statistics, modify the resource allocation. However, remember that modifications to the resource allocation for one service may affect the performance of other services.

Getting there Nortel SMI > Meridian Application Server > System Configuration > Service Administration > Service Directory Number > Service Directory Number Table

To modify an SDN

1. In the SDN Table, select the SDN you want to modify.
2. On the File menu, select Properties.

   Result: The Edit Service Directory Number properties dialog box appears.
3. Make the necessary modifications.
4. Click Save.

Add, modify, or delete remote sites

Introduction

As your messaging network grows and changes, you may need to add or delete a remote site, or to modify the configuration of an existing remote site.

It is very important that all network administrators keep the information in their network database up-to-date.

Before you begin

Before you add, modify, or delete a remote site, create a printout of all configuration information that will be affected.

Add a remote site

When you add a site to the messaging network, all sites add the new site to their Messaging Network Configuration tree view. The remote administrator must provide the information necessary to add and configure a remote site.

Modify a remote site

You can modify the configurations of both the messaging server and the switch locations as needs change. For example, if a remote site upgrades its system, you must modify its configuration information in your network database.

It is important that the information in your network database reflect the actual configuration of the remote site. The remote network administrator must inform you of all necessary changes.

Delete a remote site

When you remove a site from the messaging network, the site must be deleted from the Messaging Network Configuration tree view.

Impact on network database

Your network database reflects any additions, modifications, or deletions to remote sites. For this reason, you should perform the Enterprise Networking test suite again, as well as a backup.

Locating an item in the tree view

Introduction

It can be difficult to locate a particular remote site, messaging server, or switch location in the Messaging Network Configuration tree view in a very large messaging network.

There are two ways to locate an item in a large messaging network:

- Scroll through the alphabetized list.
- Use the Find feature.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration

To locate an item using Find

1. On the File menu, select Find.

   Result: The Find dialog box appears.

2. Enter the name of the item to be located, and press the Find button.

   Result: The located item is highlighted in the Messaging Network Configuration tree view.

Modify a remote site configuration

Introduction

Modify the configuration of a remote site as required.

To modify a remote site, you must open the Messaging Network Configuration tree view and select the remote messaging server or switch location that you wish to modify.

Further information

Make modifications to the configuration on the Properties dialog box where the initial configuration was made. To review the settings, consult the instructions for the initial configuration.

To review the settings on this Properties dialog box	consult
Remote Messaging Server	“Configuring a remote messaging server” on page 166.
Remote Prime Switch Location	“Configuring a remote prime switch location” on page 175.
Remote Satellite Switch Location	“Configuring a remote satellite switch location” on page 187.

Impact of modifications

When you modify the configuration of a remote system, networking service between the remote site and your local site may be affected. Modifications to the following settings are especially important:

- site IDs
- connection DN
- dialing plans
- message transfer protocol

Enterprise Site IDs

Do not change the remote site ID unless the administrator at the remote site notifies you of a change in that ID, or if the ID is incorrect.

If you change the site ID to an invalid number by mistake, the system is unable to send or receive messages from the site.

Connection DN

Do not change the connection DN to a remote site unless

- the administrator at the remote site notifies you that the DN in the SDN Table is changed, or
- you are changing the message transfer protocol

Dialing plans

Do not change the dialing plan unless the dialing plan on the switch is changed.

Message transfer protocol

Do not change the message transfer protocol unless all network administrators who use the protocol to exchange messages with your site agree to the change.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration

To modify the configuration of a remote site

1. In the Messaging Network Configuration tree view, select the remote messaging server or server that you want to modify.
2. On the File Menu, select Open.

   Result: The Properties dialog box for the selected item opens.
3. Make all required modifications.
4. Click Save.

   Result: The modifications are validated and saved to the network database.
5. Repeat steps 1–4 for all items in the tree view that must be modified.

After modifications are complete

You must test modifications to the configuration of a remote site. Complete the test suite to ensure that the modifications work properly.

When you are satisfied that your system is working properly, perform a backup.

Deleting items in the tree view

Introduction

The Messaging Network Configuration tree view contains all sites in your messaging network with which the local site exchanges messages.

A site always consists of a messaging server and a prime switch location. A site may also include satellite switch locations.

Sites and satellite switch locations are deleted from the Messaging Network Configuration tree view.

Note: You cannot delete the local site. You can delete local satellite switch locations.

ATTENTION!

When an item is deleted from the Messaging Network Configuration tree view, it is permanently removed from the local network database. The information cannot be recovered.For this reason, it is strongly recommended that you print out the complete configuration of all items to be deleted. If an item is accidentally deleted, you can use the printed information to add the item again.

Multi-administrator environments

If several administrators maintain your local network database, ensure that your view of the Messaging Network Configuration tree view is up-to-date. The Messaging Network Configuration tree view is updated when it is initially opened. An open tree view is not updated when another administrator makes changes.

To check the status of the view

To see if another administrator has made changes to the Messaging Network Configuration tree view, on the View menu, click Refresh.

Getting there Nortel SMI > Meridian Application Server > CallPilot > Networking > Messaging Network Configuration

To delete a remote site

1. Print the configuration details of the site that you want to delete.
2. Open the folder of the remote site to see the messaging server, prime switch location, and any satellite switch locations.
3. In a multi-administrator environment, on the View menu, click Refresh.
4. Highlight the messaging server of the site that you want to delete.
5. Select File > Delete.

   Result: A confirmation box appears asking if you really want to delete the site from your local network database.
6. To delete the site, click Yes.

   Tip: You can also delete a highlighted remote site by clicking the Delete button.

Deleting several remote sites at once

If you must delete several remote sites from the local network database, you may find it more efficient to delete all the sites at once.

To delete several remote sites at once

1. Print the configuration details of all the sites that you want to delete.
2. In the tree view, highlight all the remote sites that you want to delete.

   Tip: To select more than one item in the tree view, press Ctrl and right-click the mouse.
3. Select File > Delete.

   Result: A confirmation message appears. To delete the sites, click Yes. To keep the sites, click No.

Deleting a satellite switch location

If there are changes to an NMS site, you can delete one or more satellite switch locations from the local site or from any remote sites.

If you remove a satellite switch location from an NMS site, you must also remove it from the local network database.

To delete a satellite switch location

1. Print the configuration details of the satellite switch location.
2. In a multi-administrator environment, on the View menu, click Refresh.
3. Highlight the satellite switch location that you want to delete.
4. On the File menu, click Delete.

   Result: A confirmation message appears. To delete the sites, click Yes. To keep the sites, click No.

Modifying dialing plan information

Introduction

After you establish a dialing plan, you rarely modify it. Modifications to a dialing plan affect users and may require considerable relearning of the system.

However, if modifications are necessary, they are usually guided by changes made by the switch technician. These changes can be local or remote.

Switch changes

If any changes to the dialing plan are made on a switch, the network databases of the sites in the messaging network must reflect these changes. If changes are made locally, ensure that all remote sites are notified.

To modify the dialing plan information

If you need to modify the dialing plan, follow the general instructions to modify the local and remote sites.

Modifying CDP steering codes

Modifications to the CDP steering codes are more complicated. For a detailed review of how to plan for and implement changes, consult Chapter 4, “Dialing plans and networking,” in the *Networking Planning Guide*.

Initiating and responding passwords

If you modify the initiating or responding password for a remote site in your network database, you must ensure that the same change is made in the network database of the remote site.

The initiating and responding passwords in both databases must match to ensure proper communication between sites.

See also

For a review of how initiating and responding passwords must be set up, consult “Initiating and responding passwords” on page 72.

Maintaining remote users

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Overview

Introduction

After you have added remote users, you will have to perform regular maintenance activities to keep your system working optimally.

Maintenance activities

Common maintenance activities include the following:

- Add remote users.
- Find remote users.
- List remote users.
- Print remote users.
- Modify remote users.
- Delete remote users.

Adding remote users with User Administration

User Administration

With User Administration, you can manually add temporary and permanent remote users. Remote users are added one at a time.

User Administration requires you to enter detailed information for each remote user, including

- general information
- settings information

General information

Personal identification information is required for every remote user. This information includes

- last name, first name, and initial
- comments
- title and department

The personal identification information should be as complete as possible.

Check the spelling of the remote user's name. The name that you enter is used by Name Dialing and Name Addressing.

Setting information

Setting information includes the following:

- mailbox number
- primary, secondary, and tertiary DNs
- whether a personal verification is recorded
- whether the remote user can be name-dialed by external callers
- whether the remote user has temporary status

Mailbox number

The remote user's mailbox number must be in network format and must include the network prefix or steering code required to address to the mailbox. For example, if the remote user's mailbox number is 4433 and the ESN prefix is 6233, enter 62334433.

DNs

A remote user can have up to three extension DNs. This means that a caller can dial any one of these numbers and reach the remote user.

The DNs must be in network format and must include the network prefix or steering code required to call the remote user.

Personal verification recorded

When a remote user is added with User Administration, the remote user's own voice cannot be used for the personal verification. The system administrator must record a personal verification on behalf of the remote user.

When a personal verification has been recorded for the remote user, the Personal verification recorded box says Yes.

When a personal verification has not been recorded for the remote user, the Personal verification recorded box says No. Instead of a personal verification, callers hear the mailbox number and the site spoken name, if one exists.

Name-dialable by external callers

The remote user can be name-dialed by external callers who are not part of your network.

Temporary user

The remote user can either be a temporary user or a remote user. This status can be changed as required.

Last access time

Monitor the activity of remote users to ensure that the system is used optimally. For example, if a permanent remote user has not used the system for a year, it may be best to change the user's status from permanent to temporary.

When you add a remote user to your database, the last access time is automatically filled in. The last access time is automatically updated whenever the remote user uses the system.

Adding a remote user manually

You can add a remote system to your network database manually.

Getting there Nortel SMI > Meridian Application Server > CallPilot > User Administration > User Creation Template

To add a remote user with User Administration

1. In the User Creation Template list, select Remote User Template.

   Result: The New User Template appears.

2. Ensure the User Properties and Mailbox Capabilities check boxes are selected.
3. On the General tab, complete all required information.
4. On the Settings tab, complete all required information.
5. Click Save.

Finding remote users

Introduction

CallPilot enables you to find all users on your local system, including remote users.

Finding a remote user is often your first step in a maintenance activity.

Methods available

There are two ways to find a remote user or a group of remote users.

IF	THEN
you know the remote user's mailbox number	use the Remote User dialog box.
you do not know the remote user's mailbox number	use the Find Remote User dialog box.

To find a remote user whose mailbox number is known

1. From User Administration, select Remote User.
2. Select the Remote User item and press Enter.

   Result: You are prompted to enter a mailbox number.
3. Enter the remote user's mailbox number, including the access code and network prefix, and press Return.

   Result: The information for the remote user appears.

Finding a remote user whose mailbox number is not known

If you do not know a remote user's mailbox number, you can find the user by performing a search of the remote user database. You can use this method to find a single remote user or a group of remote users who share some characteristics.

You can use various search criteria to help narrow your search. The search criteria are what you know about the remote user, or group of remote users. CallPilot searches your database and returns a list of all users who meet the specified criteria.

Search criteria

You can perform a search based on the following fields:

- Mailbox number
- Last name
- First name
- Department
- Title

Wildcards in search criteria

When you are unsure of a character or string of characters in your search criteria, you can use wildcards. Wildcards represent the unknown characters.

For example, if you do not know if a remote user's last name is spelled Johnski or Jonski, you can enter Jo+nski. Your search will locate all remote users whose last name begins with Jo and ends with nski.

There are two valid wildcards:

- The underscore (_) replaces a single character.
- The plus sign (+) replaces a string of characters.

Wildcards can be used in the following fields:

- Mailbox number
- Last name
- First name
- Department
- Title

Examples

The following examples illustrate how the Find function can be used:

- You need to find Robert Jones in the Technology Department.
- You need to find an employee whose last name is Mordavia, but you do not know if she uses the first name Elizabeth, Beth, or Liz.
- You must locate all users who have not yet recorded a personal verification.
- You must find all users in the New Productions department so that they can be reassigned to the new Research and Development department.

Results: When the remote users are found, they are presented in a list. The following information is provided for each found remote user, if available:

- last name
- first name
- title
- department
- comments

Uses of the results list

The list of remote users that is displayed as a result of a search has various uses.

View or modify a found remote user

You can view the information contained in the database for any remote user in the list.

To view the information, select the remote user whose information you want to view, and press Enter. The remote user's User Administration screen appears.

You can modify the information about the remote user, including recording a personal verification for a remote user or changing the status of a remote user between temporary and permanent.

To modify the information, make all required changes to the information and press Enter. The database is updated.

Delete a remote user

Delete all remote users who are not required.

See also

For more information about working with users, consult the *Basic Administration Guide*.

Printing a list of remote users

Introduction

You can print a list of all the remote users in your network database. This list provides detailed information about the remote users and their activities. Review this list as part of the regular maintenance of remote users in your network database.

Getting there Nortel SMI > Meridian Application Server > User Administration > Users

To print the list of remote users

1. In the Users dialog box, on the File menu, click Open Search.

   Result: The Search Users dialog box opens.
2. In the Condition box, select User Type.
3. In the Operator box, select “Is.”
4. In the Value box, select Temporary or Permanent Remote Users.
5. Click Search.

   Result: A list of all remote user appears.
6. On the File menu, select Print.

Modifying records of remote users

Introduction

You can modify the information about remote users when required. Modification of remote user records is important for keeping records up-to-date.

Example

Hanna Moos is a permanent remote user at your site. Recently she was promoted and moved from the sales department to a senior management position in marketing. She received a new mailbox number as well.

You modify the information contained in your database to reflect these changes. In addition to changing the department and mailbox number fields, you change Hanna's status from temporary to permanent.

Before you begin

To modify any information about a remote user, first find the remote user's records.

Getting there Nortel SMI > Meridian Application Server > User Administration > Users

To modify a remote user

1. Find the record of the remote user that you want to modify.

   Note: For procedures on finding a remote user, consult "Finding remote users" on page 254.
2. Open the record of the remote user.
3. Make any necessary changes.
4. Click Save.

Manually deleting remote voice users

Introduction

You can manually delete any remote user, both temporary and permanent.

Example

Two remote users, Pedro Afonso and Yang Wang, recently left your company. You would like to remove them from your database. Pedro is a permanent remote user. If you do not manually remove his record, it will remain in your database indefinitely. Yang is a temporary remote user. If you do not manually remove his record, it will remain in the system until a nightly audit eventually removes it.

Before you begin

To manually delete a remote user, first find the remote user's records.

To manually delete a remote user

1. Find the record of the remote user that you want to delete.

   Note: For procedures on finding a remote user, consult "Finding remote users" on page 254.

2. Open the record of the remote user and make sure that it is the correct remote user.
3. To delete the record, click Remove.
4. Click Save.

chapter 9

Troubleshooting Enterprise Networking

Although testing and regular maintenance procedures ensure that Enterprise Networking is operating properly, the system may experience occasional problems. This chapter describes how to diagnose and correct these problems.

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About troubleshooting Enterprise Networking

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Overview

Introduction

If you are experiencing problems with Enterprise Networking, this chapter will help you to identify and solve these problems.

Common causes of Enterprise Networking problems include the following:

- Enterprise Networking is disabled.
- The status of a remote site prevents it from receiving messages from the local site.
- Networking configuration is incorrect or incomplete.
- The switch is configured incorrectly.
- There are hardware problems.

Identifying the source of the problem

To identify the source of the problem, first determine if Enterprise Networking is disabled.

If Enterprise Networking is properly enabled, then review the following:

- appropriate Alarm and Event reports
- network status
- Operational Measurement (OM) reports

Configuration errors

Configuration errors may include the following:

- incorrect connection DNs
- message transfer protocols that do not match between the remote and local sites
- incorrect dialing plan information, including ESN prefixes and CDP steering codes
- scheduling parameters that need to be modified

Site status errors

A site can be either intentionally disabled or put into error status.

A remote site may be put into error status because of unsuccessful attempts by the local site to deliver messages to the remote site. Failed message delivery can happen for the following reasons:

- The remote site is experiencing hardware or software problems.
- There are site configuration errors.

Switch-related problems

If you are unable to identify the problem using CallPilot, the error may be switch-related. Perform the call trace test.

Call trace

Call trace helps you to determine if network calls are being blocked for one or more of the following reasons:

- Digit manipulation is performed incorrectly. Either not enough or too many digits are inserted or deleted.
- Class of service restrictions are either too stringent or too loose.
- Dialing is incorrect. More digits are required by the trunks or trunk routes.

On the switch, you can perform a call trace on a telephone or on a trunk and a trunk route.

Hardware problems

If you are unable to locate the problem in the CallPilot networking configuration or in the switch, your system may be experiencing hardware problems that are not related to networking.

Solution

Perform a basic hardware check. Examine all connections.

Determining if Enterprise Networking is disabled

Introduction

You must enable Enterprise Networking to receive incoming Enterprise messages and to deliver outgoing Enterprise messages.

Begin any troubleshooting session by determining if Enterprise Networking is properly enabled.

There are several methods of disabling and enabling the sending and receiving of Enterprise Networking messages.

IF	THEN check this setting
the system does not receive incoming messages	Incoming Enterprise messages enabled.
the system does not deliver outgoing messages	Outgoing Enterprise messages enabled.

To determine if Enterprise Networking is disabled

To determine if Enterprise Networking has been disabled to receive incoming messages or to send outgoing messages, or both, check the settings on the Enterprise tab of the Message Delivery Configuration dialog box.

1. From the Message Delivery Configuration dialog box, select the Enterprise tab.
2. Check the settings of the Outgoing Enterprise networking and Incoming Enterprise networking check boxes. Ensure that these check boxes are selected as required for your system.
3. Click Save to exit and save any changes that you made.

Reviewing Alarm and Event reports

Introduction

Alarm and Event reports track and report system errors and unusual events. These reports can be viewed on-screen or printed, or both.

Reports related to Enterprise Networking

The following reports are useful for monitoring Enterprise Networking:

- Networking Activity report
- Network Usage Bill-back report
- Failed Networking Sessions alert

See also

For instructions on reviewing and interpreting Alarm and Event reports, consult the *Reporter Guide*.

Reviewing Operational Measurement reports

OM reports

Operational Measurement (OM) reports contain detailed information on how the system is functioning. When you attempt to locate problems with Enterprise Networking, review these reports.

When you review the OM reports, consider the following:

This OM result	suggests
large number of accesses	the holding time may be too low, or the batch threshold is too small.
excessive “Failed to Send” messages	the remote system may be down, or the dialing translations are incorrectly configured, or the call maximum number is too small.
high number of NDNs	users are entering incorrect addresses, or mailboxes do not exist on the remote system.
networking traffic is excessive	an unusual or cyclical event affected the system, or the number of channels used by Enterprise Networking is too small, or the number of channels available to Enterprise Networking is too small.
failures	the remote system does not support the Enterprise Networking protocol, or the number of channels is too small.

See also

For detailed instructions on producing, reviewing, and interpreting Operational Measurement reports, consult the *Reporter Guide*.

Determining if problems are switch-related

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Switch-related problems

Enterprise Networking problems and the switch

If you cannot identify the cause of the Enterprise Networking errors using CallPilot, the problem may be switch-related.

The following tests identify switch-related problems:

- call trace
- link diagnostic

Call trace test

Purpose

If you cannot identify the Enterprise Networking problem using CallPilot, calls may be blocked by the switch. The call trace test determines

- if calls are blocked
- why calls are blocked

Why calls are blocked

A network call can be blocked for one or more of the following reasons:

- Digit manipulation is performed incorrectly. Not enough or too many digits are inserted or deleted.
- Class of service restrictions are too stringent or too loose.
- Dialing is incorrect. More digits are required by the trunks or card trunk routes.

Where a call trace is performed

On the switch, you can perform a call trace on a telephone or on a trunk and trunk route.

Before you begin

To interpret the results of a call trace test, you need to understand

- how the switch processes calls
- how to interpret the results of a call trace session

A switch technician should perform the call trace test and interpret the results.

The information that is required to perform the call trace test varies for each type of switch. However, the following information is usually required:

- your customer number
- the directory number that will be tested
- the type of telephone and key number (for multiline telephones)
- the terminal number (loop, shelf, card, unit) of the telephone or trunk that will be tested
- the route type and trunk number of the trunk and trunk route that will be tested

To perform the call trace test

Follow the instructions in your switch documentation.

How to interpret the results

For guidelines on how to interpret the results of the call trace test, consult your switch documentation.

Link diagnostic test

Purpose

If you cannot identify the cause of the networking problem on the CallPilot or by performing the call trace test, the problem may not be related to networking.

The link diagnostic test determines if the link between the switch and the name of server is working.

Before you begin

The link diagnostic must be performed by a switch technician.

To perform the link diagnostic test

Follow the instructions in your switch documentation.

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CallPilot

Enterprise Networking Implementation and Administration Guide

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