

555-7101-801

CallPilot

Meridian Mail to CallPilot Migration Utility Guide

Product release 1.07

Standard 1.0

April 2000

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CallPilot

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April 2000

This is the Standard 1.0 version of the *Meridian Mail to CallPilot Migration Utility Guide*.

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Chapter 1

Introduction

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What's new in this guide

Introduction

This guide includes the following new information for CallPilot 1.07:

- how to perform selective migration (system data and voice message data)
- a comparison of Meridian Mail and CallPilot call routing
- how to configure Meridian Mail and CallPilot to run on the same switch

Overview

Introduction

This section describes the guide, its purpose and contents, and the users of CallPilot.

Purpose

This guide provides qualified personnel with the required Meridian Mail data collection and CallPilot migration information and procedures.

What this guide includes

This guide includes information and procedures about how to prepare and gather Meridian Mail data, move the gathered data to the CallPilot environment, and troubleshoot problems that can occur in either the data collection or the migration.

This guide provides information on running Meridian Mail and CallPilot in parallel. It also compares call routing between Meridian Mail and CallPilot.

Who are the users of this guide

The distribution technicians who are responsible for the installation of the CallPilot system are the main users of this guide and the migration utility.

Skills you need

Nortel Networks product knowledge

Experience with these Nortel Networks products is helpful:

- Meridian 1 switch
- Meridian Mail

PC experience or knowledge

Experience with these PC products is helpful. This guide does not document functionality for the following products:

- Microsoft Windows NT
- Microsoft Windows 95 or 98

Other experience or knowledge

Other useful experience or knowledge includes

- network management
- client-server systems

Related information products

Introduction

The following list of CallPilot technical documents are stored on the CD-ROM that you receive with your system. You can search the entire suite of documentation online, or you can print part or all of a guide.

Planning and engineering guides

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

Document Title

Planning and Engineering Guide

Meridian Mail to CallPilot Migration Utility Guide

Installation and configuration guides

These guides describe how to install hardware and software for the CallPilot server, client, and desktop messaging. They also provide instructions for configuring the switch:

Document Title

200i Installation and Configuration Guide

702t Installation and Configuration Guide

1001rp Installation and Configuration Guide

Desktop Messaging Software Installation and Maintenance Guide

Administration guides

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

Document Title

Getting Started Quick Reference Card

Administrator's Guide

Reporter Guide

Application Builder Guide

Monitoring and Security for the Administrator

Networking guides

These guides describe how to plan, install, set up, and troubleshoot networking services:

Document Title

Network Planning Guide

AMIS Implementation and Administration Guide

Integrated AMIS Implementation and Administration Guide

NMS Implementation and Administration Guide

Enterprise Implementation and Administration Guide

VPIM Implementation and Administration Guide

End user guides

These guides are intended for end users of CallPilot, such as phoneset users and desktop messaging users:

Document Title

Multimedia Messaging User Guide

Speech Activated Messaging User Guide

Desktop Messaging Quick Reference Guide

Trouble-shooting reference

This reference provides step-by-step troubleshooting procedures for CallPilot.

Document Title

CallPilot Troubleshooting Reference

Using the online Help, guides, and tutorials

CallPilot contains three online sources for information:

- Online Help provides brief answers to the questions “What’s this?” and “How do I...?”
- Online guides provide detailed conceptual information, as well as information on how to perform detailed tasks.
- Online tutorials provide a complete product overview, as well as specific information on how to use Application Builder.

You can access all the information using either the Help menu or Help buttons.

Contacting technical support

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

Contacting Nortel Networks

If you have comments or suggestions for improving CallPilot and its documentation, contact Nortel Networks at the following web site address:

http://www.nortelnetworks.com/callpilot_feedback

Chapter 2

Understanding migration

In this chapter

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Meridian Mail migration information

Introduction

Migration is the process of collecting and moving data from a Meridian Mail system to a CallPilot system. This chapter provides information about Meridian Mail systems and data that can be migrated. It also describes the migration process and gives the distribution technician the requirements for data collection and migration.

Meridian Mail releases that can migrate

Meridian Mail Releases 11 and higher can migrate to CallPilot Release 1.07. To migrate Meridian Mail Releases 8, 9, and 10, you must perform a comprehensive upgrade to Meridian Mail Release 11 or higher before migrating. For information on comprehensive upgrades, refer to the latest release of the Meridian Mail *System Installation and Modification Guide*.

Meridian Mail platforms supported for migration

The following Meridian Mail platforms that use Meridian Mail Release 11 or 12 are supported for migration to CallPilot:

- Option 11 Card Option
- Option 11 EC
- Compact Option
- Modular Option
- Modular Option EC
- Modular GP
- MSM

Types of data

There are two types of data:

- *System data* includes user data, system profiles, and networking data.
- *Voice message data* consists of information such as voice greetings and voice messages.

A tape drive system collects the data on blank data tapes.

Data groups collected for migration

The data groups collected for migration to CallPilot include

- system profiles
 - system and customer profiles
 - system name and greetings
 - restriction/permission lists
 - messaging settings
- networking
 - networking sites (local, remote, and NMS)
 - all site, location, and code information
 - Networking/AMIS configurations and network dialing defaults
 - Enterprise Networking delivery parameters
 - the DTT delivery parameters
 - the fax delivery parameters
- voice services
 - menus
 - announcements
 - fax segments
- users
 - Classes of Service (COS)
 - local voice users
 - personal greetings (internal, external, and temporary)
 - personal distribution lists

- user core and mailbox properties
- user voice messages
- Corporate Directory entries
 - System Distribution lists
 - remote voice users
 - directory entry users
 - personal verification recording

Data that does not migrate

The following data does not migrate:

- system profiles
 - language structure conversion
 - hacker monitor/alarm monitor
 - hospitality
 - backup schedules
 - voice forms
 - all the hardware information (channel allocation tables)
- networking
 - area and exchange codes
 - translation tables
- users
 - RN schedules
 - personal Classes of Service (COS)
 - users with personal COS
- voice service information, VSDN, and TN information

Meridian Mail to CallPilot migration

Parts of a migration

The migration consists of several processes:

- Collect and store the Meridian Mail data on tape.
- Migrate the collected data into the appropriate CallPilot database, as well as into the multimedia file system on CallPilot.
- End the migration by validating the migrated data and removing the migration hardware and software.

Execute the migration utility after the CallPilot installation.

Notes:

- The customer must determine whether full data collection or selective data collection is used. See [“Collection of Meridian Mail data” on page 28](#) for information.
- Do not run the data collection utility while the Meridian Mail system is online.
- The migration allows you to retain on CallPilot only some of the old feature settings from the Meridian Mail system.

Collect and store the data

Collect all the data to be migrated from the checklist on page [23](#). See [“Collection of Meridian Mail data” on page 28](#).

Meridian Mail data is collected and written to a 2.5 Gbyte data tape. If necessary, the utility continues the data stream onto another tape after the previous tape has been filled. There is no limit to the number of tapes used to copy the Meridian Mail data.

Migrate the data

To migrate the Meridian Mail data, place the data tape into a tape drive connected through a SCSI connector on the server, and run the migration utility from a Windows console application.

See [“Installing migration hardware and software” on page 48](#) for the migration hardware and software requirements and migration Standard procedures.

End the migration

When a migration is finished, a transaction log file indicates the state of the data migration. If there are any problems, the transaction log contains

- a detailed progress report of the migration
- warning messages
- error messages
- a migration status summary

Besides the transaction log, for further analysis the installer can use the Windows NT Event Viewer to view any events logged by the server APIs while performing the updates.

The Administrator then performs the post-migration data check. Where customer-specific entries change to default entries through migration, the Administrator must update those fields to make the data consistent with the migrated data. See [“Post-migration data check” on page 59](#).

Finally, remove the migration hardware and software, as described in [“Removing migration hardware and software” on page 58](#).

Error message and rollback option

If there is an error in the migration, an error message indicating the nature of the error appears, and is recorded in the log file. If the error in the migration is unrecoverable, the rollback happens automatically before the utility exits.

Meridian Mail data collection checklist

Use the following checklist before preparing and collecting data:

Item	Check
If the Meridian Mail system that you are migrating is Release 8, 9, 9.5, or 10, you must perform a comprehensive upgrade to your system to the most current release of Meridian Mail before you attempt the migration. For more information on upgrading, refer to the most recent release of the <i>Meridian Mail System Installation and Modification Guide</i> .	
Make sure that you have enough blank tapes available to store the data. See “Time estimates” on page 30 .	
Check System Event and Error Reports (SEERs) to ensure that the data you collect is clean and consistent.	
Ensure that you have the bootable “Data Collection Utility Preparation Tape” used to initialize the Meridian Mail system for the data collection.	
Ensure that you courtesy down the Meridian Mail system before you prepare it for data collection.	
Users with personal Classes of Service (COS) on Meridian Mail are <i>not</i> migrated to CallPilot. If you want to migrate these users, reassign the personal COS (perhaps to a dummy COS, which can be added to Meridian Mail). See the <i>Meridian Mail System Administration Guide</i> for details on how to add and reassign Classes of Service.	
Duplicate DNs found in Meridian Mail are <i>not</i> migrated to CallPilot. Review DN entries for typographical errors on secondary DNs, duplicate, primary, and secondary DNs, and obsolete entries that can conflict with current entries.	

Item	Check
To transfer all the networking information from all Meridian Mail sites, ensure that the CallPilot system has an equal number of networking sites.	
<p>CallPilot does not support multicustomer configuration. If you are migrating a multicustomer Meridian Mail system for which one of the customers uses networking, collect and migrate the networking data <i>only from the customer with the full set of networking data</i>.</p> <p>See “Post-migration data check” on page 59 for more information on the requirements and limitations of networking in CallPilot.</p>	

CallPilot migration checklist

Use the following checklist before you start the migration:

Item	Check
Install all hardware and networking (including the appropriate tape drive and SCSI adapter card and supporting software). For procedures, see “Installing migration hardware and software” on page 48.	
Install all the CallPilot software on the server. Installation includes the operating system, database servers, CallPilot applications, CallPilot base components, CallPilot framework components, and the data migration utility.	
Ensure that the CallPilot system is operational. All installed CallPilot services must be up and running. Dial the Voice Messaging application Service DN to ensure that calls can be placed and received.	
Ensure that all hardware used in the migration is connected and ready.	
Ensure that no client application is running while the migration is in progress.	
Ensure that no new users are added to the CallPilot system before migration.	
Migrate the Meridian Mail system data separately from voice messages. Migrate the system data first.	
Uninstall migration hardware and software after the migration is completed. For procedures, see “Removing migration hardware and software” on page 58.	

Chapter 3

Data collection from Meridian Mail

In this chapter

[Collecting Meridian Mail data](#)

[28](#)

Collecting Meridian Mail data

Introduction

This chapter describes the procedures to be performed for the Meridian Mail data preparation and data collection.

Overview

The data collection process from your Meridian Mail system is comprised of two parts:

- preparation of the Meridian Mail system
- collection of Meridian Mail system data and voice message data

Preparation of the Meridian Mail system

For information on what to do to prepare your Meridian Mail system for migration, see [“Meridian Mail data collection checklist” on page 23](#).

Collection of Meridian Mail data

Note: This guide refers to *system data* and *voice message data*. System data includes all data groups except for voice messages.

Determine the method by which data will be collected and migrated:

- *Full data collection and migration.* For small systems, collect all system data at once on one tape. Next, collect voice message data. Migrate system data, then migrate voice messages.
- *Selective data collection and migration.* For migration of larger systems, first collect the segments of system data on one or more tapes. Then collect the voice messages on one or more tapes after the system data is collected. Migrate the system data tapes first, and then migrate the voice message tapes.

For large-volume selective migrations, collect system data on tapes first. Collect voice messages by volume or department, using one tape for each collection. Migrate system data tapes first. Meridian Mail users must be defined in CallPilot before their voice messages can be migrated.

Full data collection

Full data collection collects all system data at one time, and then all voice messages at one time, on one or more data tapes.

Selective data collection

Selective data collection allows you to gather information from the following groups individually.

ATTENTION

You must select and migrate the data groups in sequence according to this list:

- system profile data
- network data

You can collect system profile data and network data on one tape.

Note: For multicustomer Meridian Mail systems, collect networking data only from the customer with a full set of networking data. Do not collect networking data from the other customers on a multicustomer system.

- user data
- personal distribution list data
- system distribution list data

You can collect PDLs and SDLs on one tape.

- VS voice segments / fax item data

Note: If you chose selective data collection and migration to collect and migrate system data, make sure that all of the users are migrated to CallPilot. Personal Distribution Lists (PDLs) and System Distribution Lists (SDLs) are not completely migrated if all the users are not defined.

Time estimates

The chart below shows estimated times for data and message collection and migration based on the number of users:

	One time migration/ customer group		Selective migration/ customer group	
	500 users	3500 users	500 users	3500 users
Data collection	20 minutes	90 minutes	15 minutes	80 minutes
Message collection	2 minutes per hour of voice storage used			
Data migration	30 to 60 minutes per tape			
Message migration	4 minutes per hour of voice storage migrated			

Trouble prevention

Before data collection, to prevent errors in the migration, do the following:

1. Look through the System Event and Error Reports (SEERs) of the past few days to see that there are no reported problems with the system or the files.
 - Pay close attention to Class 11, 31, and 66 SEERs. These classes indicate format errors or disk corruption. Report the errors to the CTS group to confirm that migration can take place.
2. Clean up Meridian Mail data before starting a data collection. See [“Meridian Mail data collection checklist” on page 23](#) for guidelines.

Tape drive hardware and software

See [“Installing migration hardware and software” on page 48](#) for information on the hardware and software that you need when you collect and migrate Meridian Mail data.

The tape used is the 2.5 Gbyte QIC tape.

To prepare the Meridian Mail system for data collection

Note: You must complete step 1 before starting any of the other procedures in this section.

- 1 From the System Status and Maintenance menu, select the System Status screen and courtesy down your Meridian Mail system.

ATTENTION

On Card Option systems, disable the AML before you turn off the power to Meridian Mail.

- 2 Insert the bootable tape labeled "Data Collection Utility Preparation Tape" into the tape drive. (The tape drive is part of the Meridian Mail equipment, and the preparation tape is part of the migration media package.)
- 3 Power down Meridian Mail, or press the reset button on the MMP40 card.

Notes:

- Reset node 1 first, and then reset nodes 2 through 5 in sequence, if applicable.
 - For Card Option systems that use external tape drives, turn on the tape drive before starting up the Meridian Mail system.
- 4 For systems where the MMP40 card reset button has not been used, wait ten seconds and then power up the Meridian Mail system.

Result: Diagnostic routines are shown, followed by a pause of approximately five minutes while the tape is automatically retensioned.

ATTENTION

On Card Option systems, reenale the AML link after you turn on the power to Meridian Mail.

When tape retensioning begins, the following message appears:

```
Tape retension
```

Tip: You can monitor the status of the retensioning process by checking the timing by your watch and by the sound of the tape driver.

Note: Tape retensioning takes about five minutes. It takes about one minute to load the data preparation software from the Preparation Tape.

Result: Once the data preparation software is loaded, the CallPilot Data Collection Utility Preparation Menu appears.

```

CallPilot Data Collection Utility Preparation Menu
-----

1 Preparation for MM11 System
2 Preparation for MM12 System
3 Preparation for MM13 System
4 EXIT to support level

Please enter the operation number: █

```

ATTENTION

Make sure you know which Meridian Mail release is installed on your system before you choose and execute the menu option.

5 Use the following table to make your next selection:

IF you choose to	THEN go to
prepare your Meridian Mail system for migration	step 6 .
exit to support level	step 10 .

6 Select the menu operation number that matches your system's Meridian Mail release number, and press Enter.

Example: If you have Meridian Mail 13 installed, the following response appears:

```
You have chosen to Prepare for data migration of this MM13 system.
```

- 7 Do you wish to continue?
If No, go to step [5](#).
If Yes, go to step [8](#).
- 8 When preparation is complete, remove the tape and restart the system.
- 9 Perform a sanity check of the system (for example, call a mailbox and leave a message).
If problems occur, such as no ring, return to step [1](#).
If there are no problems, continue to ["To create a data migration tape" on page 34](#).
- 10 Select the EXIT to support level option.

ATTENTION

Only CTS or Nortel Networks support personnel are qualified to work in support level. Customers must restart the system once the support level prompt appears.

Result: The following support level prompt appears:

```
#TAPE:MMTAPE1>
```

- 11 Remove the tape and restart Meridian Mail.

To create a data migration tape

Note: The screens on the customer's system can differ from those shown in this guide, depending on the Meridian Mail release number and the type and number of features installed.

- 1 On your terminal, log on to the Tools menu, and type in the Admin level password.

Note: On a Meridian Mail 13 system, type the Tools user ID and the Tools level password.

Result: The following menu appears.

```

Special Tools Package
TOOLS Level Access

1 Change password          - Change TOOLS password
2 Move user                - moves user cabinets, one at a time
3 Modify hardware          - modify hardware database
4 Set silence compression  - compress out/leave in recorded silence
5 Control volume           - increase/decrease voice volume
6 Update MWI               - update Message Waiting Indicators
7 Block Meridian Mail      - block access to Meridian Mail
8 Session Trace            - View session trace data
9 Audit all volumes        - audit all volumes on the system
10 Rebalance directory     - rebalance the organization directory
11 COS conversion          - convert users to COS
12 Display system record   - show features and configuration
13 Universal Link Monitor  - monitor system links
14 Other                   - other system/feature dependent options

Select an item > █

Logoff      Redraw      Help      Release
           Version

```

- 2 Choose Other from the Tools menu, and press Enter.

Result: The following menu appears.

```
Special Tools Package
TOOLS Level Access
System/Feature Dependent Tools

1 Change local site ID      - set the site id to a new value
2 Transfer voice prompts    - read from/write to tape
3 ACCESS diagnostics        - verify ACCESS link is operational
4 Configure MATs            - configure Multiple Administration Terminal
5 Console Port              - Modify Console Port Speed
6 Clone Disk                 - copy disk ID=0 to disk ID=3
7 CallPilot Data Collection - Create CallPilot Data Tape

Select an item > _

Exit
```

- 3 Choose the CallPilot Data Collection—Create CallPilot Data Tape option from the menu, and press Enter.

Result: The following CallPilot Data Collection menu appears.

```
CallPilot Data Collection

1 Create Data Migration Tape

2 Create Message Migration Tape

3 Change Default Customer Number

4 Write Migration Log File to screen

5 Write Migration Log File to printer

Select an item > _

Exit
```

4 Use the following table to make your next selection:

IF you choose	THEN go to
Create Data Migration Tape	step 5.
Create Message Migration Tape	the procedure “To create a message migration tape” on page 41.
Change Default Customer Number	the procedure “To change the default customer number” on page 45.
Write Migration Log File to screen	the procedure “To write the migration log file to the screen” on page 46.
Write Migration Log File to printer	the procedure “To write the migration log file to the printer” on page 46.

5 Choose the Create Data Migration Tape option, and press Enter.

Result: The following screen appears.

```

CallPilot Migration Tool
CallPilot Data Migration Tape Backup

System Data
Network Data
User Data
Personal Distribution List Data
System Distribution List Data
VS Voice Segments / Fax Item Data

Move the cursor to the desired groups and press the space bar to select.

Exit      Write All      Write Selected
          Data      Data

```

Notes:

- Always do the data collection in sequence, from top to bottom, in the above menu.
- To copy all Meridian Mail data *except voice messages*, select the Write All Data softkey.

The following table provides you with information about selecting items in the above menu:

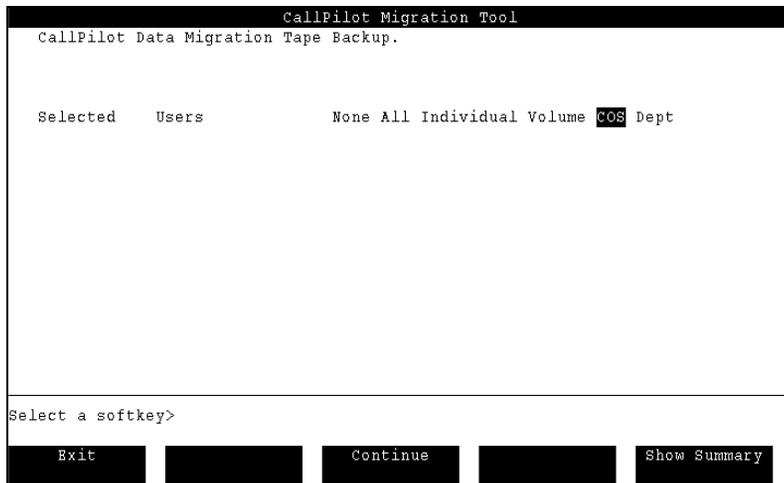
IF you highlight	THEN you selectively collect
some of the items in the menu	data for those highlighted items.
all of the items in the menu	data for all the items.

6 Use the following table to make your next selection:

IF you want to migrate	THEN go to
all the Meridian Mail data	step 13 .
all the Meridian Mail data except system data	step 13 .
system data	step 7 .

7 Use the left or right arrow keys to select the Write Selected Data softkey.

Result: The following screen appears only if the system data option is selected; otherwise, use the Tape ID screen displayed on page [39](#).



Note: The above screen allows you to select data for migration of one of the following:

- all users in the system

- individual mailboxes by mailbox number
- all mailboxes in the selected volume
- all mailboxes in the selected COS
- all mailboxes in the selected department

Note: The None option is not a valid choice.

- 8 Use the right or left arrow keys to move to your selection, and then press Enter.

Example: If you select COS, then, after you press Enter, the following screen appears.

```

CallPilot Migration Tool
CallPilot Data Migration Tape Backup.

Selected   Users           None All Individual Volume COS Dept
Enter Classes of Service by number.
-----
-----

Select a softkey>
Exit      Continue      Show Summary
  
```

- 9 In the spaces provided in the above screen, type the numbers of the users who belong to the classes of service you want to migrate.
- 10 Use the following table to make your next selection:

IF you select	THEN go to
Show Summary	step 11 .
Continue	Result: for step 12 , and continue.

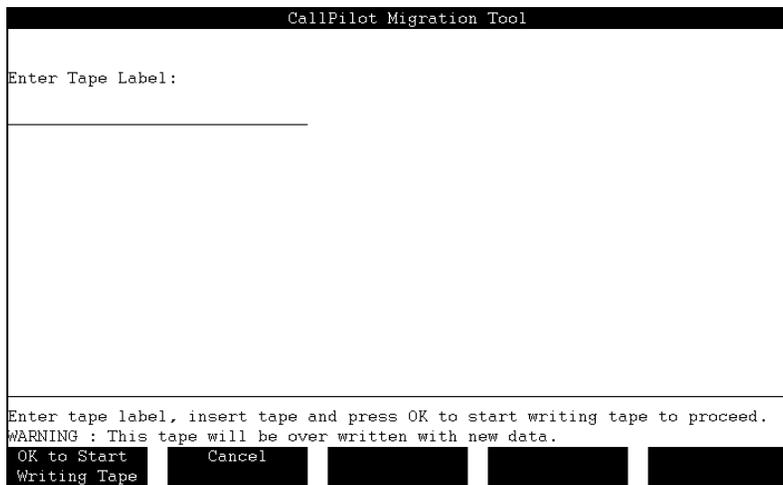
IF you select	THEN go to
Exit	<p>Result: for step 3, and continue; or to get back to Meridian Mail, remove the Preparation Tape and restart the system (see “To prepare the Meridian Mail system for data collection” on page 31).</p>

11 Select Show Summary.

Result: A summary screen shows the total number of mailboxes selected.

12 Choose Continue.

Result: The following screen appears.



13 Type in the tape label for the blank tape that you are using to collect the Meridian Mail data. Use a maximum of 27 characters.

14 Place the blank tape in the tape drive, and choose OK to Start Writing Tape.

Result: The data collection starts.

If you choose Cancel, go to step [5](#) to reselect.

Tip: For a Meridian Mail system with 700 mailboxes, it takes about 30 minutes to create data tapes.

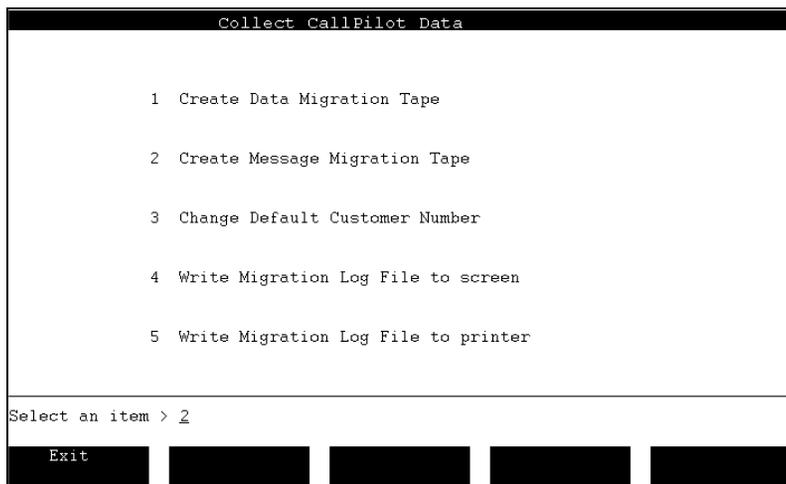
15 When data collection is complete, press Enter to return to the Create Data Migration Tape Backup screen.

- 16** Assemble all the data tapes created in this procedure (if there is more than one tape).
 - a.** See [“To create a message migration tape” on page 41](#) if you are collecting message data.
 - b.** Go to [Chapter 4, “Data migration to CallPilot”](#) if system data and voice message collection is complete and you want to start the migration process.

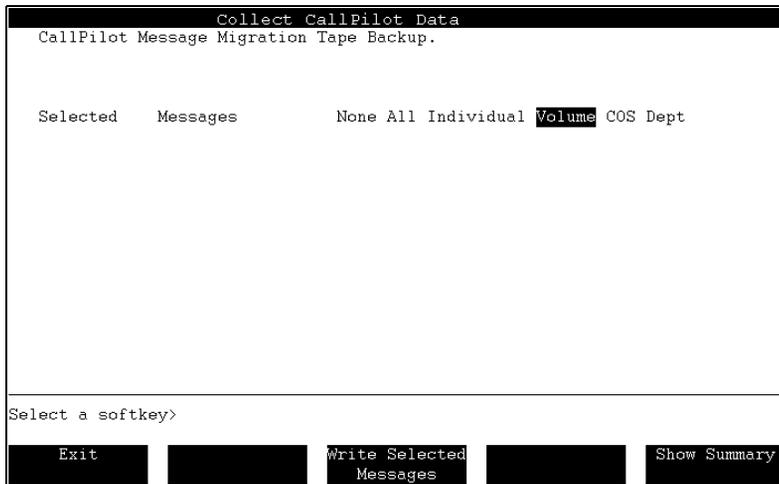
To create a message migration tape

Note: Only one collection tape at a time is allowed for user voice message migration. Nortel Networks recommends that if all messages on the system are to be migrated, and the total message capacity will exceed 2.5 Gbytes, then collect messages in stages (for example, based on volume or departments).

- 1 If necessary, refer to the first three steps in [“To create a data migration tape” on page 34](#) for information and screens about the Tools menu and the CallPilot Data Collection menu.
- 2 From the menu below, select the Create Message Migration Tape option.



Result: The CallPilot Message Migration Tape Backup screen appears.



Note: The preceding screen allows you to select one of the following options for message migration:

- all messages in the system
- messages from individual mailboxes by mailbox number
- messages from all mailboxes in the selected volume
- messages from all mailboxes in the selected COS
- messages from all mailboxes in the selected department

Notes:

- The None option is not a valid choice. The All option is not recommended for a multinode system.
 - Use the Volume option to migrate user messages selectively or if the system has over 200 hours of voice messages.
 - Estimate two minutes of collection time for each hour of voice storage used.
- 3** Use the right or left arrow keys to move to and highlight your selection.

- When you make your selection, press Enter.

Example: If you select Volume, the following screen appears:



In the spaces provided, enter the volume IDs that you want to migrate. The example above shows a system with spaces for two volumes.

- Use the following table to make your next selection:

IF you select	THEN go to
Show Summary	step 6 .
Write Selected Messages	step 7 .
Exit	step 2 , and continue; or to get back to Meridian Mail, remove the Preparation Tape and restart the system (see " To prepare the Meridian Mail system for data collection " on page 31).

- Select Show Summary.

Result: A summary screen shows the total number of mailboxes selected.

7 Select Write Selected Messages.

Result: The following screen appears:

CallPilot Migration Tool

Enter Tape Label:

Enter tape label, insert tape and press OK to start writing tape to proceed.
WARNING : This tape will be over written with new data.

OK to Start Cancel [] [] []

Writing Tape

8 Type in the tape label for the blank tape that you use to collect the Meridian Mail messages. Use a maximum of 27 characters.**9** Place the blank tape in the tape drive, and select OK to Start Writing Tape.

Result: The message collection starts.

10 When the message collection is complete, assemble all the tapes created in this procedure (if there are more than one), and go to [Chapter 4, "Data migration to CallPilot"](#)

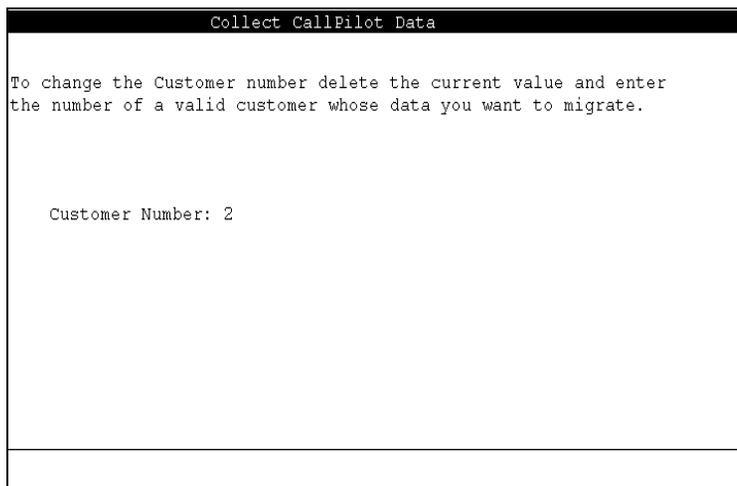
To change the default customer number

Use the following procedure to change the customer number on a Meridian Mail multicustomer system to collect the data of that specific customer.

Refer to the first three steps in [“To create a data migration tape” on page 34](#) for information and screens about the Tools menu and CallPilot Data Collection menu.

- 1 Choose the Change Default Customer Number option.

Result: The following screen appears:



```
Collect CallPilot Data

To change the Customer number delete the current value and enter
the number of a valid customer whose data you want to migrate.

Customer Number: 2
```

Note: If you select this option but you have a single-customer system, the message `This is single customer system, Customer number is x` appears.

- 2 Once the number is changed, to begin setting up for data and message collection, see [“To create a data migration tape” on page 34](#), or [“To create a message migration tape” on page 41](#).

To write the migration log file to the screen

- 1 From the CallPilot Data Collection menu, select the Write the Migration Log File to the screen option, and press Enter.

Example: The following screen shows a partial migration log file:

```

Meridian Mail Migration logs
-----
Version CallPilot1.0 - 21/Oct/98 13:00 - MM12
Tape Label - 7371
Version CallPilot1.0 - 21/Oct/98 13:00 - MM12
Data Collection for CallPilot begins: 23/10/98 15:20:49
MenuFlags Bitmap = 0
Total Blocks Written = 5780
Total Loc Users           = 1
Total Dir Users           = 0
Total Perm Remote Users   = 0
Total Temp Remote Users   = 0
Total Spns                 = 0
Total Rpls                 = 0
Total Cos                  = 0
Total Voice Services       = 0
Total Group Data           = 44
Press <Return> to continue...

```

To write the migration log file to the printer

Note: For this procedure, make sure a printer connection is available.

- 1 From the CallPilot Data Collection menu, select Write Migration Log File to printer, and press Enter.

```

CallPilot Data Collection

1 Create Data Migration Tape

2 Create Message Migration Tape

3 Change Default Customer Number

4 Write Migration Log File to screen

5 Write Migration Log File to printer

Select an item > _

Exit

```

Result: The log file is printed to your printer.

Chapter 4

Data migration to CallPilot

In this chapter

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Migrating Meridian Mail data to CallPilot	50
Removing migration hardware and software	58
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Troubleshooting	66
Terminology	68

Installing migration hardware and software

Introduction

To migrate the data collected on tapes from Meridian Mail to CallPilot, you need to install the appropriate tape driver hardware and software.



DANGER

Risk of electrical shock

Ensure that the TRP Server is powered down before you attempt any installation or removal of components.



CAUTION

Risk of equipment damage due to electrostatic discharge

Use an ESD wristband and attach it to the server chassis when you work on the interior of the server.

TRP server

The migration hardware for the Tower-Rack Platform (TRP) Server that runs the CallPilot software consists of a SCSI card and a tape drive with a SCSI cable. You need this hardware to migrate Meridian Mail data collected on the data tapes to CallPilot.

For procedures to install tape driver hardware and software on your specific server, refer to the *702t Installation and Configuration Guide* and the *1001rp Installation and Configuration Guide*.

Note: Some servers already have an internal tape drive installed. In this case, you do not need to install a tape drive.

IPE server

You can install the IPE server in new and existing Meridian switches. The server has a built-in SCSI connector on its faceplate.

ATTENTION

The installation technician can temporarily connect the SLR4 tape drive, used with the Meridian Mail Card Option system, to the CallPilot IPE server to migrate the Meridian Mail data to CallPilot. The Card Option tape drive must be uninstalled after the data migration is complete.

The standard CallPilot tape driver is the SLR5. Follow the manufacturer's instructions for installing an external tape driver where required.

For procedures to install tape driver hardware and software on this server, refer to the *200i Installation and Configuration Guide*.

Migrating Meridian Mail data to CallPilot

ATTENTION

Before you begin the migration, read the requirements for the CallPilot migration in the [“CallPilot migration checklist” on page 25](#).

System data migration

If you have performed selective data collection in preparation for migration, you must also perform selective data migration. In selective collection, system data is collected on tapes in the following order:

- system profile data
- network data
- user data
- personal distribution list data
- system distribution list data
- VS voice segments / fax item data

Migrate the information on the data tapes in the same order in which it was collected.

Voice message migration

- All users for whom the voice messages are to be migrated must already be defined or migrated on the CallPilot system.
- The tape containing the voice messages must be inserted into the tape drive before initiating the message migration, and kept there while in progress.
- The transaction log file shows the details and number of messages, along with any attachments that are migrated, including errors.
- Unsent messages in the user mailbox on the Meridian Mail system are migrated to CallPilot; however, after the migration, the unsent messages

become Sent messages. If users want to send these messages, they must forward the message instead.

- New messages are migrated to CallPilot tagged as new messages and thus activate the message waiting indicator (MWI) on the individual mailbox. Read messages are tagged as read messages and do not activate the MWI.
- After message migration on CallPilot, the messages sent by AMIS users are treated as messages from an unknown source.
- Voice messages collected from the Meridian Mail system can exceed the available free space on the CallPilot MISA volume. Once the available space reaches the threshold (less than 5 percent free space), no further messages are migrated. Logs are generated for this event.
- In this release, only one collection tape at a time is allowed for user voice message migration. If all the messages on the system are to be migrated, and the total message capacity exceeds 2.5 Gbytes, then the technician or administrator collects messages in stages (for example, based on volume or department). Each volume or department must fit onto a single tape at one time. See [“To create a message migration tape” on page 41](#).

To migrate to CallPilot

Note: The data migration utility is installed on CallPilot under \nortel\MPCX\Migration.

- 1 From the Windows Start menu, select Run... .
- 2 Type **Command** in the Open field. Click OK to initiate an MS-DOS prompt.
- 3 Edit the directory path to \nortel\MPCX\Migration.
- 4 Install the appropriate tape (system data tapes first, and then voice message tapes) in the tape drive.

ATTENTION

Be sure to install tapes in the order in which data was collected, following the order shown on page [29](#).

- 5 At the DOS prompt, type one of the following commands:
 - a. To migrate data, at the prompt, type one or more of the command options below:

```
migrate -x -c -d -h
```

where

-x specifies Tape data to be transferred to staging files [default – no data transfer]

-c specifies that migration continue after tape transfers [default – no migration]

-d specifies that the staging files are removed from the system [default – no files deleted]

-h displays usage details

- b.** To migrate voice messages, at the prompt, type

```
migrate -msg
```

where

-msg initiates the voice message migration

Notes:

- You must use the -msg option separately from the other options after system data migration is successfully completed.
- All the switches above are optional. If you specify one or more of the switches, then the remaining switches take their respective default action (except -msg). If none of the switches are specified, then the system prompts the user to specify all the switches explicitly online (except -msg).

Example: If you want to transfer the tape data into the staging area, then the command option is

```
migrate -x
```

To continue the migration immediately after the tape transfer and to delete the staging files, put the following switches in the command line:

```
migrate -x -c -d
```

Note: Nortel Networks recommends using the above command string to migrate data.

- 6** Press Enter to begin the migration.

Note: If migration must be redone due to problems in data transfer, then the migration time can increase by up to 50 percent. This is because the information already transferred to CallPilot must be validated.

- 7 When the migration is finished, check the transaction log file MigTransaction.Log in \norte\MPXC\Migration.

Notes:

- The transaction log is an ASCII file that you can view with Notepad or a similar text viewer.
- The transaction log file provides a summary of the data fields migrated from the given group/file/field to the specified field in the CallPilot database. For more information on transaction log files, see [“End the migration” on page 22](#). If you have run the migration utility more than once, the previous transaction log file is renamed to MigTransaction.Old to distinguish it from the current migration log file.
- If you have migrated the Meridian Mail Voice segments for voice menus, announcements, and thru-dials, you must run the Application Builder Data Integrity and Repair Tool to associate the voice segments for AppBuilder use. Once this is completed, a set of Application Builder applications will have been created to correspond to the Meridian Mail voice segments. See Chapter 3, “Application builder data integrity and repair tool,” in the *Support Tools Guide*.

Sample screen 1

The following text is an example of what you see on your monitor when you migrate system data:

Note: This example has been edited for length.

```
** Friday, February 11, 2000 [02:13:40 PM] **
Cleaning up the MigrationFiles directory ...
** Friday, February 11, 2000 [02:13:40 PM] **
Opening tape device ...
Setting tape block size ...
Loading tape ...
Reading Tape Descriptor ...
    UserTapeLabel: for derek
    SystemTapeLabel: Date=1/4/2000 Time=0:57:0
    TapeNumber = 1
Locking tape mechanism ...
Reading files from Group 1
Creating file: 0001000300000000
Creating file: 0001000300000001
.
.
```

```

.
WARNING:(GENERAL):(9):The Extract() function call failed:
No further PDLs found in MMail data for this User
----- Starting the next User PDL migration [24]-----
----- Starting the next PDL [0] migration for the user [ ATHER5]
WARNING:(GENERAL):(9):The Extract() function call failed:
WARNING:(GENERAL):(9):The Extract() function call failed:
No further PDLs found in MMail data for this User
----- Starting the next User PDL migration [25]-----
----- Starting the next PDL [0] migration for the user [ ATHER6]
WARNING:(GENERAL):(9):The Extract() function call failed:
WARNING:(GENERAL):(9):The Extract() function call failed:
No further PDLs found in MMail data for this User
----- Starting the next User PDL migration [26]-----
WARNING:(USERMOD):(422):The user for whom the PDL is being
updated does not exist in the database:Skipping the PDL update
for user [ ATHER7]
----- Starting the next User PDL migration [27]-----
----- Starting the next PDL [0] migration for the user [ ATHER8]
WARNING:(GENERAL):(9):The Extract() function call failed:
WARNING:(GENERAL):(9):The Extract() function call failed:
No further PDLs found in MMail data for this User
----- Starting the next User PDL migration [28]-----
WARNING:(USERMOD):(422):The user for whom the PDL is being
updated does not exist in the database:Skipping the PDL update
for user [ ATHER9]
----- Starting the next User PDL migration [29]-----
WARNING:(GENERAL):(9):The Extract() function call failed:
No more User PDLs to migrate..
The APB folder name [_F1\cust\cust1\nm_abd\nm_mig]
The Object Handle released successfully
The database connection relinquished successfully
The MCE Admin service was successfully started [0].
** Friday, February 11, 2000 [02:14:35 PM] **
*****| Summary of Data Migration |*****
System and Customer Profile Data Migration:
System Record: <Not updated>
Customer Record: <Not updated>
Tenant Record: <Not updated>
Messaging Parameters: <Not updated>
Security Parameters: <Not updated>
-----
Restriction and Permissions Lists:
Total Number of RPLs attempted: <80>
Total Number of RPLs created/updated successfully: <76>

```

```
Total Number of RPLs skipped: <4>
Total Number of RPLs in Error: <0>
-----
Network Database:
-----
Total Number of Servers attempted: <0>
Total Number of Servers created/updated successfully: <0>
Total Number of Server updates in Error: <0>
Total Number of Locations attempted: <0>
Total Number of Locations created/updated successfully: <0>
Total Number of Location updates in Error: <0>
Total Number of Location Codes attempted: <0>
Total Number of Location Codes created/updated successfully: <0>
Total Number of Locations Code updates in Error: <0>
Total Server Connection Lists attempted: <0>
Total Server Connection Lists created/updated successfully: <0>
Total Server Connection List updates in Error: <0>
Customers General Delivery Parameters: <Not updated>
Customers AMIS Delivery Parameters: <Not updated>
Customers Enterprise Networking Parameters: <Not updated>
Customers Fax Delivery Parameters: <Not updated>
Customers DTT Delivery Parameters: <Not updated>
Customers DTT/DTF Prefixes: <Not updated>
Customers Default Dialing Parameters: <Not updated>
-----
Class of Services:
-----
Total Number of COSs attempted: <3>
Total Number of COSs created/updated successfully: <2>
Total Number of COSs skipped: <1>
Total Number of COSs in Error: <0>
-----
User Profile:
-----
Total Number of Local Users attempted: <29>
Total Number of Local Users created/updated successfully: <20>
Total Number of Local Users skipped: <9>
Total Number of Local Users in Error: <0>
Total Number of Spoken name verifications data attempted: <0>
Total Number of Spoken name verifications data created/updated
successfully: <0>
Total Number of Spoken name verifications data in Error: <0>
Total Number of User Greetings data attempted:<0>
Total Number of User Greetings data created/updated successfully:
<0>
Total Number of User Greetings data in Error: <0>
Total Number of Remote Users attempted: <0>
Total Number of Remote Users created/updated successfully: <0>
Total Number of Remote Users in Error:<0>
```

```

Total Number of Directory Entry Users attempted: <0>
Total Number of Directory Entry Users created/updated
successfully: <0>
Total Number of Directory Entry Users in Error: <0>
-----
System Distribution Lists:
-----
Total Number of SDLs attempted: <6>
Total Number of SDLs created/updated successfully: <1>
Total Number of SDLs in Error:<5>
-----
Personal Distribution Lists:
-----
Total Number of User PDL updates attempted: <0>
Total Number of PDLs created/updated successfully: <0>
Total Number of PDLs in Error:<0>
-----
Menu, Announcements, Fax Items:
-----
Total Number of Services attempted: <0>
Total Number of Services created/updated successfully: <0>
Total Number of Services in Error:<0>
*****| End of Summary |*****
Retaining the staging files on disk. Please clean up these files
(under MigrationFiles directory) later after the data migration
of all components is complete.

```

Sample screen 2

The following text is an example of what you see on your monitor when you migrate voice messages selectively:

Note: This example has been edited for length.

```

** Friday, February 11, 2000 [02:26:06 PM] **
MPCX System databases and NGen Servers are up and running.
The APB folder name [_F1\cust\cust1\nm_abd\nm_mig]
Message Map directory is created successfully
Starting migration of user voice messages ...
Start user [1]
** Friday, February 11, 2000 [02:26:06 PM] **
Opening tape device ...
Setting tape block size ...
Loading tape ...
Reading Tape Descriptor ...
    UserTapeLabel: mod GP message tape
    SystemTapeLabel: Date=1/4/2000 Time=19:0:18

```

```

    TapeNumber = 1
Locking tape mechanism ...
Reading files from Group 16
Creating file: 0016000100000000
Creating file: 0016000200000000
Creating file: 0016000200000000.vce
Creating file: 0016000300000000
Deleting file: 0016000300000000
Creating file: 0016025500000000
Creating file: 0016000200000001
Creating file: 0016000200000001.vce
Creating file: 0016000300000001
Deleting file: 0016000300000001
Creating file: 0016025500000001
ERROR:(MSGMOD):(509):The user mailbox does not exist on the
system:skipping migration of messages for the user [ ATHER1]
.
.
.
Deleting file: 0016025500280000
Deleting file: 0016025500280001
Deleting file: 0016025500280002
Deleting file: 0016025500280003
Deleting file: 0016025500280004
Start user [30]
** Friday, February 11, 2000 [02:30:38 PM] **
No more user messages to migrate. Message migration is completed
** Friday, February 11, 2000 [02:30:38 PM] **
*****| Summary of Message Migration |*****
User Voice Messages:
-----
Total Number of Messages attempted: <57>
Total Number of Messages created successfully: <57>
Total Number of Messages in Error: <0>
-----
Message Attachments:
-----
Total Number of Attachments attempted: <0>
Total Number of Attachments created successfully: <0>
Total Number of Attachments in Error: <0>
*****| End of Summary |*****

```

Removing migration hardware and software

Introduction

For detailed procedures on how to remove the hardware and software installed for migrating collected Meridian Mail data to CallPilot, refer to the *Installation and Configuration Guide* for your specific server.

ATTENTION

If the server has an internal tape drive installed, *do not* remove it as part of the migration hardware removal.

ATTENTION

Failure to remove the hardware and software components that were installed to perform the migration can cause problems when you start CallPilot.



DANGER

Risk of electrical shock

Ensure that the server is powered down before you attempt any installation or removal of components.



CAUTION

Risk of equipment damage due to electrostatic discharge

Use an ESD wristband and attach it to the server chassis when you work on the interior of the server.

Post-migration data check

Introduction

Where customer-specific entries change to default entries through migration, the system administrator must update those fields to make the data consistent with the migrated data.

The following sections provide information about areas on the CallPilot administration screens that the administrator must check, using the CallPilot Administration Client, once migration is completed.

Mailbox users

- Meridian Mail users with *personal* Classes of Service (COS) are not migrated to CallPilot. See the *CallPilot Administrator's Guide* for information on how to set up Mailbox Classes, which replace the Meridian Mail personal COS. (Users with system COS can be migrated.)
- All user passwords are migrated without validation from Meridian Mail to CallPilot. Once the password expires on CallPilot, the user must enter a new password.
- CallPilot can have mailbox numbers of three or more digits. A Meridian Mail user's mailbox number composed of less than three digits is not migrated. Warning messages are generated in the transaction log file and on the console.
- CallPilot does not allow duplicate DNs. This means that Meridian Mail users with duplicate primary and secondary DN entries are not migrated. Check the transaction log file for the duplicate DNs along with the existing user entry with which the DNs conflict. See [“Meridian Mail data collection checklist” on page 23](#) for information on updating Meridian Mail to prevent such transaction errors.
- All addresses in a Personal Distribution List (PDL) for a Meridian Mail user are migrated, including those that might be invalid; however, invalid addresses are reported in the transaction log file. It is possible that some of the user mailboxes associated with the address might not yet exist on CallPilot but will be migrated later in the process. The migration technician

or the administrator is responsible for determining whether reported invalid addresses are, in fact, invalid.

- As a part of messaging parameters, there is an entry for Alarm Mailbox that is migrated from Meridian Mail to CallPilot. If this user mailbox is already migrated or exists on CallPilot as part of an earlier attempt at migration, an error message is generated but no additional steps are required.
- The Remote Notification capability for all users is disabled by default.
- The CallPilot system is migrated to the maximum number of supported mailboxes allowed by the Meridian Mail keycode.
- Mailboxes are uniformly created on all volumes based on the available free space on the volumes.

Restriction/permission lists

- All 80 restriction/permission lists (RPLs) are migrated to CallPilot (some of which might not contain relevant codes).
- The RPL entries used by Classes of Service (COS) entries cannot be deleted (in the case where a migration is rerun), due to a database integrity check. These RPLs are retained.
- After data migration, the administrator must change RPL names that seem to conflict with existing CallPilot RPL entries.

Notes:

- In case of errors, not all data can be migrated during the initial migration attempt. It might be necessary, after the problem has been resolved, to rerun the migration utility with the same Meridian Mail data, to migrate the incomplete data components.
- If there is an error that prevents a complete migration of data, the error must be resolved before migration can be rerun.

System distribution lists

Note: Meridian Mail System Distribution Lists are known in CallPilot as Shared Distribution Lists.

- If a System Distribution List (SDL) mailbox number in Meridian Mail is less than three digits long, then the entry is not migrated to CallPilot.

- Invalid DNs in the SDL are removed before migration. The transaction log file, however, lists all the invalid entries.

Network database

- The local server and prime location entries are defined by default on a given CallPilot system. The migration utility updates records associated with the prime location with data that is specific to Meridian Mail only on the first migration attempt.
- The CallPilot system does not have all the forms of networking that were available on Meridian Mail, perhaps because the customer did not purchase those features. In Meridian Mail, the feature is called Meridian Mail Networking. It includes Enterprise Networking, Meridian Networking (with modems), and the ability to define Integrated AMIS sites. Meridian Mail was required to have Integrated forms of networking, such as Integrated AMIS and Enterprise Networking. However, the protocol for the sites still indicated Meridian (with modems), AMIS, or Enterprise.

Administrator actions after migration

- After migration, the administrator reviews the contents of the network data, and adds any subsequent missing information. The migration utility does not update the network data in later attempts. This step is taken to ensure that any changes the administrator might have added are not lost by repeat migration of network data. The installer must make sure that the network data from Meridian Mail is collected and migrated only once.
- In Meridian Mail, even if the dialing plan for a location is CDP, you can create ESN code entries for the location by adding the ESN prefixes in front of the codes. Such codes, when migrated to CallPilot, are shown as CDP codes. Therefore, the administrator must change code entries accordingly after the migration is complete.

Network protocol mappings

- To transfer all the networking information from all Meridian Mail sites, a CallPilot system must have an equal number of networking sites (the network site keycode for both systems must allow the migration of sites).

- The number of networking site values determines whether integrated AMIS/VPIM can be used (that is, whether a site can be defined with these protocols).
- For sites defined in the Meridian Mail Network database, there can be corresponding remote user entries in the directory, as well as remote user entries in PDLs and SDLs. The data pertaining to these users cannot be migrated if these sites were converted to a supported protocol and migrated.
- The SDLs and PDLs with users at deleted remote sites, as well as with remote users at deleted remote sites, are still in the list. However, a warning message indicates the invalid addresses.
- To avoid affecting remote user entries, and to migrate as much data as possible, the protocol for the site is mapped to the nearest one available on the system. Since the information for the protocol will not be correct (for example, incorrect access DN for the remote site networking service) or missing, some of the related fields are set to use default values, or are left blank. The administrator can then configure the site correctly and enable networking for the site. The following fields in the server record, and the connection list records, are set to blank (or the default value) in case the protocol was changed.

Connection list entry:

- ConnectionDN1 is set to blank
- ConnectionDN2 is set to blank
- ConnectionDN3 is set to blank
- InitiatingPassword is set to blank
- RespondingPassword is set to blank

Server entry:

- MessageTransfer = FALSE
- ExchangeRemoteUser = FALSE
- ExchangeTextData = FALSE
- As shown above, the Connection DNs for AMIS and Enterprise (and passwords in the case of Enterprise) must be reset. The Site and Location IDs are migrated to the Enterprise Site ID / Location ID fields. Since some information is not available, the database will be somewhat inconsistent, since the graphical user interface enforces the population of certain fields (for example, VPIM requires at least one prefix to be defined for local locations and remote locations for which VPIM is used).

- When the administrator next enters the screens for such a server, or for a location, all required fields must be completed before changes can be saved. Since networking is disabled for these sites, the administrator must enter the appropriate screens individually to make the necessary changes.

Note: For location screens, ESN/CDP selection and prefixes must be validated. As stated above, the administrator must enter the appropriate screens individually to make the necessary changes.

- The following table shows networking protocol mappings in order of preference when networking data is migrated from Meridian Mail to CallPilot:

From Meridian Mail	To CallPilot
Meridian	1 Enterprise
	2 AMIS
	3 VPIM
AMIS	1 AMIS
	2 Enterprise
	3 VPIM
Enterprise	1 Enterprise
	2 AMIS
	3 VPIM

Note: If a networking protocol is not supported on CallPilot, then the next preferred protocol is used instead. For example, from the table above, if the Meridian Mail networking protocol is AMIS but the CallPilot system does not support AMIS, the networking protocol goes to Enterprise if it is on the CallPilot system. If not, it goes to VPIM. Only protocols available through keycode are eligible. The transaction log files capture these protocol changes.

- If your CallPilot system is not keycoded for networking, then all of your remote site information will not be migrated. In this case, an appropriate warning appears while the migration is in progress. The migration technician or administrator is also notified of potential mappings on the system through the transaction logs.

- The network scheduling parameters (stale time, and so on) are not migrated from Meridian Mail. Instead, the default CallPilot values are used. When migration is complete, the installer must reenter these values as their Meridian Mail values; otherwise, network scheduling will not function as it did before.
- The server type of the migrated remote site on CallPilot is always set to one value (CallPilot), regardless of the actual type of remote server (since Meridian Mail does not have a server type field).
- The server name on CallPilot is taken from the Meridian Mail site name. The server name on CallPilot must be unique, as must the site names on Meridian Mail (the administrator changes the server names if duplicate entries exist). This also applies to location names.

Selective user voice messages

- All users for whom the voice messages are to be migrated must already be defined or migrated on the CallPilot system.
- The transaction log file shows the details and number of messages, along with any attachments, that are migrated (including errors).
- The unsent messages in the user mailbox on the Meridian Mail system are migrated to CallPilot; however, after the migration, the unsent messages become Sent messages. If users want to send these messages, they must forward the messages instead.
- After message migration on CallPilot, messages sent by AMIS users are treated as messages from the unknown source.
- User voice messages collected from Meridian Mail might exceed the available free space on the CallPilot MISA volume. Once the available space reaches the threshold (less than 5 percent free space), no further messages are migrated. Logs are generated for this event.

VS voice segment/fax item data

- The VS voice segment/fax item is transferred during migration. Use Application Builder to create the application for migrated voice and fax. For more information, refer to the *Application Builder Guide*.
- The migration technician or administrator must run the Application Builder Data Integrity and Repair Tool after the voice/fax data is migrated. If this is

not done, the customer does not see any migrated voice/fax items in the Application Builder and assumes the migration failed.

For more information, see Chapter 3, “Application builder data integrity and repair tool” in the *Support Tools Guide*.

Troubleshooting

Reasons for errors

Most of the errors in a migration occur due to the following reasons:

- The data on the Meridian Mail system is inconsistent or corrupted (refer to [“Trouble prevention” on page 30](#)).
- The data on the data tape is corrupted.
- Some of the CallPilot components are not installed properly.
- Some of the data on the data tapes is not accessible, and default values are substituted. This can sometimes cause errors in the data migration of other components that depend on the true values. In such cases, appropriate warning messages appear.

Where to find explanations

The following logs and reports provide information on faulty migrations:

- the transaction log file (MigTransaction.Log)
- Windows event logs
- online error reports

By reading and reviewing these logs and reports, you can locate the errors in the migration and correct them. Normally, you can rerun the data tape to correct migration errors.

Removing VMBA from X11 Database

If you do a wholesale swap from Meridian Mail to CallPilot, any VMBA data becomes meaningless, because there is no longer a link between the Meridian 1 and voice mail. You can choose to leave the VMBA data or remove it.

Some customers might want to do a phased “cut-over” to CallPilot, supporting both Meridian Mail and CallPilot on a single Meridian 1 for a specified time. Nortel Networks recommends that these customers delete the VMBA data in X11 for those sets that were migrated over to CallPilot.

Using MAT when upgrading from Meridian Mail

If VMBA data is programmed in MAT for a set that is to be migrated to CallPilot (and Meridian Mail is still present on the Meridian 1), delete (through MAT) on a per set basis. There is no global change for modifying VMBA data, so this must be done one set at a time. If removing VMBA is done through MAT, and these set changes are synchronized with the Meridian 1 database, VMBA is removed in the X11 database for these sets.

If CallPilot is installed and Meridian Mail is removed entirely, VMBA data is meaningless in both X11 and MAT. The VMBA data can be removed or remain in the database(s) at the discretion of the system administrator. In either case, the data has no meaning without a Meridian Mail system, due to the absence of a link to create or delete Meridian Mail voice mailboxes.

Terminology

List

The following list provides equivalent Technology, Meridian Mail, and CallPilot naming conventions.

Technology name	Meridian Mail name	CallPilot name
CallPilot	Meridian Mail	CallPilot
Interface name		
Integrated Voice/Fax Messaging	Meridian Mail Voice Messaging	Multimedia Messaging
CallPilot Integrated Voice/Fax Messaging Proprietary Mail telset interface (MMUI)	Meridian Mail User Interface (MMUIF)	Multimedia messaging user interface (MMUI)
CallPilot speech recognition user interface	N/A	Speech Activated User Interface
Service name		
Call Answering	Meridian Mail Call Answering	Call Answering
Express Messaging	Meridian Mail Express Messaging	Express Voice Messaging
Fax Call Answering	N/A	Fax Call Answering
Fax Auto-Attendant	N/A	Express Fax Messaging
Speech Recognition Messaging	N/A	Speech Activated Messaging
Desktop Messaging	Symposium Messenger	Desktop Messaging

Technology name	Meridian Mail name	CallPilot name
Outcalling	Meridian Mail Outcalling	Outcalling
Application Builder	Meridian Mail Voice Services Administration	Application Builder
Voice Forms	Meridian Mail Voice Forms	Not applicable
Voice Forms Transcription Service	Meridian Mail Voice Forms Transcription Service	Not applicable
Maintenance Services		
Fax Item Maintenance	Fax Item Maintenance	Fax Item Maintenance
Voice Prompt Maintenance	Voice Prompt Maintenance	Voice Item Maintenance
Remote Activation	Remote Activation	Remote Application Activation
Networking/Network Services		
AMIS Analog Networking	AMIS Networking	AMIS Networking
Integrated AMIS Networking	AMIS Virtual Node Networking	Integrated AMIS Networking
Enterprise Networking	Enterprise Networking	Enterprise Networking
VPIM Networking	Meridian Mail Net Gateway	VPIM Networking
Network Message Service	Network Message Service (NMS)	Network Message Service (NMS)
Remote User Propagation	Remote User Propagation / Names Across the Network	Names Across the Network
Outcalling Services		
Remote Notification	Meridian Mail Remote Notification	Remote Notification

Technology name	Meridian Mail name	CallPilot name
Delivery to Telephone	Delivery to Non User (DNU)	Delivery to Telephone
Delivery to Fax	Fax Call Back	Delivery to Fax
Desktop Messaging Clients		
Proprietary Client	Nortel Messenger Client	Not applicable
Microsoft Exchange Integrated Client		Desktop Messaging for Microsoft Exchange
Microsoft Outlook Integrated Client		Desktop Messaging for Microsoft Outlook
Lotus Integrated Client		Desktop Messaging for Lotus Notes
GroupWise Integrated Client		Desktop Messaging for GroupWise
Mailbox Management		
Mailbox Class	Class of Service (COS)	Mailbox Class
Personal Distribution List (PDL)	Personal Distribution List (PDL)	Personal Distribution List (PDL)
System Management		
MAT Navigator	MMI	MAT Navigator
OA&M Client	MMI	CallPilot Administration Client
Reporter	Meridian Mail Reporter	Reporter
Hacker Tracker	Hacker Monitor	Hacker Monitor
Bulk Add	AutoAdmin	AutoAdd
Restriction/Permission List	Restriction/Permission List	Restriction/Permission List

Technology name	Meridian Mail name	CallPilot name
Organizational Distribution List (ODL)	System Distribution List (SDL)	Shared Distribution List (SDL)
Alarms & Events	SEER Reports/Codes	Alarms & Events
Multi-Tenant (Meridian View)	Meridian Mail Multi-Customer	Multi-Tenant
Multi-Customer (Meridian definition)	Multi-Customer	Not applicable
Local Voice User	Local Voice User	Local User
Remote User	Remote User	Remote User
Directory Entry User	Directory Entry User	Local Directory Entry
Application Builder Blocks		
Menu	Meridian Mail Voice Menu	Menu
Announcement	Meridian Mail Announcement	Announcement
Thru-Dial	Meridian Mail Thru-Dial Service	Thru-Dial
Time Control	Meridian Mail Time-of-Day Controller	Time Control
Day Control	Meridian Mail Time-of-Day Controller	Day Control
Date Control	Meridian Mail Time-of-Day Controller	Date Control
Fax Select	Meridian Mail Fax on Demand	Fax Select
Fax Send	Meridian Mail Fax on Demand	Fax Send

Technology name	Meridian Mail name	CallPilot name
Password Check	(performed by voice menu)	Password Check
Call Transfer	(performed by voice menu)	Call Transfer
Rotary Dial	(performed by voice menu)	Rotary Dial
Begin	N/A	Begin
End	(performed by voice menu)	End
Continue	N/A	Continue
Language Select	(performed by voice menu)	Language Select
Imported Application	N/A	Imported Application
N/A	N/A	Attendant Block

Chapter 5

Networking Meridian Mail and CallPilot

In this chapter

_Configuring CallPilot and Meridian Mail to run on the same switch	74
_Configuration of local and remote systems	76

Configuring CallPilot and Meridian Mail to run on the same switch

Introduction

These are guidelines for configuring Meridian Mail and CallPilot to run in parallel, connected to the same switch. The installer and administrator must pay close attention to the limitations described in this section.

Networking limitations

When configuration of both systems on the same network is complete, the following limitations remain:

1. *Local users* who are addressing network messages between the CallPilot and Meridian Mail local systems use dialing prefixes (for example, a mailbox dialing prefix of 81 can be used). Local users cannot be addressed using only their extensions.
2. *Remote users* must address network messages to each system differently. For example, an Electronic Switched Network (ESN) dialing plan with the switch is assigned the access code 6 and the ESN location code 338. Remote users address Meridian Mail mailboxes with 6 338 xxxx, and CallPilot mailboxes with 81 xxxx.

Site administrators must communicate this information to remote users. If the remote user makes an error and sends to the wrong system, a Non-Delivery Notification message informs the sender that the messages were not delivered correctly.

3. Either Meridian Mail or CallPilot, but not both, can use a private dialing plan such as ESN; the other system is configured as *None*. If the Meridian Mail local system is switching dialing plans (for example, from ESN to *None*), you must make this change on all remote systems before configuring the CallPilot system on those sites. You can make a change in dialing plan at a later date, but this requires additional administration at that time.

4. Configure remote sites for both Meridian Mail and CallPilot with the *None* dialing plan, where neither ESN nor Coordinated Dialing Plan (CDP) is used. Assign a unique dialing prefix (such as 81) to each site. Specify that mailbox addressing follows the dialing plan, and the dialing prefix is left blank. If the site is a Network Message System (NMS) site, then satellite locations are similarly defined, and each are allocated unique dialing prefixes (such as 82, 83).
5. To allow network delivery of messages between systems, configure networking site information on the local and remote systems. However, to have the Reply and Call Sender functions operate correctly on Call Answering machines, add remote user entries on both the remote and local sites.
6. You can configure the Meridian Mail system as a backup to CallPilot so that calls can still be directed if CallPilot is down for any reason. However, networking messages from remote sites are not routed automatically to Meridian Mail under these conditions.

Configuration of local and remote systems

Assumptions

To simplify the use of these guidelines, the following assumptions apply:

1. CallPilot is being added to an M1 server that already has Meridian Mail.
2. The mailboxes are migrated from Meridian Mail to CallPilot in stages. Initially, only a small percentage of users are on CallPilot.

Note: Some customers can choose to operate CallPilot and Meridian Mail in parallel on the same switch for indefinite periods.

3. Since most of the users initially remain on Meridian Mail, Meridian Mail keeps the private numbering plan for addressing messages. The CallPilot system is addressed using a custom *None* address plan that is different from the dialing plan.

Networking recommendations

- Nortel Networks recommends using Enterprise Networking between the two systems. While you can use VPIM or AMIS between the two systems, Enterprise is the easiest to set up.
- The CallPilot VPIM implementation does not support the *Names across the Network* feature. This feature is available using only Enterprise Networking on CallPilot.
- Use either Enterprise Networking or VPIM between the CallPilot and Meridian Mail systems. If VPIM is used, the Meridian Mail Net Gateway product must be at the front end of the Meridian Mail system.
The AMIS protocol can also be used between Meridian Mail and CallPilot and other remote sites.

Local system setup

1. Allocate a new, unique Enterprise Site ID to the CallPilot system.
2. Define the CallPilot system in the Meridian Mail network database as a new site. Define the Meridian Mail system in the CallPilot network database as a new site.
 - Configure both sites with the *None* dialing plan, where neither ESN nor CDP is used.
 - To each site, assign a unique compose prefix (such as 81). Specify that mailbox addressing follows the dialing plan (in this case, *None*), and the dialing prefix is left blank. If the site is an NMS site, satellite locations are similarly defined and each is allocated unique compose prefixes (such as 82, 83).
3. Users can have mailboxes on CallPilot or Meridian Mail, or both, but you can set up only one system to take Call Answering messages. This system activates the Message lamp on the user's phone. You can set up the other system to use Remote Notification on the user's phone. Remote notification results in a message in the Call Answering mailbox indicating that there is a message on the other system.
4. Users who want to address messages between the local systems use the compose prefix and mailbox number (for example, enter 81 1234 to address to mailbox 1234).
5. Reply and Call Sender function correctly on messages composed and sent between the two systems. However, Call Answering requires special setup. On the system on which the Call Answering message is being left (assuming a local caller), the following limitations apply:
 - If the caller does not have a mailbox, a remote user entry must be added manually. If there is no remote user entry, messages are identified as being from a phone number, not from a mailbox on the other system. The Call Sender feature functions, but Reply is possible only by Delivery to Telephone.
 - If the caller has a mailbox, the message is identified as being from a mailbox on the same system (a Reply goes to that mailbox). A remote user entry must not be added in this case.
6. Remote user entries for local users are added manually, one at a time, as permanent entries. *Names across the Network* must not be used to transfer

such information automatically between Meridian Mail and CallPilot. The entry must specify the user's extension number as the phone number, without any network prefixes. As mailboxes are moved between systems, remote user entries are added or deleted as necessary.

7. If the Meridian Mail system uses the VPIM protocol (with Meridian Mail Net Gateway), specify the CallPilot system as a defined site (that is, do not use the overflow mechanism). In addition, the VPIM network shortcuts that are defined for the local CallPilot system must not conflict with the Net Gateway system, or those used by any other site that uses VPIM. The local Net Gateway system can use ESN prefixes (such as 6 338), and the CallPilot system uses a public format prefix (such as 1 416 597). Public prefixes on both systems can cause a conflict; in this case, assign a dummy prefix to the CallPilot system.

Remote system setup

1. You can set up CallPilot with network database entries that are similar to those in Meridian Mail. This information can be collected from Meridian Mail and migrated to CallPilot using the Migration utility.
2. Remote sites must add the site definition for the new CallPilot system. Since only one system can use a dialing plan (such as ESN), the other system must be configured as *None*. If the local Meridian Mail system is switching dialing plans (for example, from ESN to *None*), then you must make this change on all remote systems before configuring CallPilot on those sites. You can make a change in dialing plan at a later date, but this requires additional administration at that time.
3. You must define the local system with the *None* dialing plan in the remote sites' network configuration using guidelines similar to the local system's. However, a dialing prefix is required, and only a single dialing prefix can be specified. If multiple dialing prefixes are required (for example, multiple ESN codes or multiple CDP steering codes with no overlap), specify that mailbox addressing does not follow the dialing plan, and no dialing prefix is configured. In this case, you must enter Remote user entries as mentioned below to allow Call Sender and Reply to function properly.
4. Remote user entries are defined on the remote sites for users on the local system with the *None* dialing plan. This setup allows Call Answering messages to the remote sites from these users to be identified as being from

a network user on the correct system. If remote user entries are not defined in this way, then the remote system assumes that the caller has a mailbox on the system that matches the caller's private dialing plan prefix, and replies can be processed incorrectly.

For example, if a local user a with private dialing plan phone number of 6 338 1234 calls a remote site, the site can match up the 6 338 prefix as belonging to Meridian Mail. However, the user only has a CallPilot mailbox (set up on the remote system with a *None* dialing plan, compose prefix 81). To identify the caller correctly as a CallPilot user, set up a remote user entry for mailbox 81 1234, specifying the phone number as 6 338 1234. If a remote user entry is defined, the number specified in the entry is used for Call Sender purposes.

5. The remote user entries can be added automatically with the *Names across the Network* feature (using Enterprise Networking). However, if multiple dialing prefixes are required for the site with the *None* dialing plan, the administrator must manually add the remote user entries associated with that site to ensure the correct phone number is entered.
6. As mailboxes are moved between systems, remote user entries are added or deleted as necessary.

Broadcast messages

You must send broadcast messages individually on both Meridian Mail and CallPilot. Alternatively, you can set up distribution lists on each system containing only the users on that system.

You can address messages to the local and remote lists. When a message is sent to a remote list, it is distributed to all members of the list with mailboxes on that remote system.

Chapter 6

Comparison of Meridian Mail and CallPilot call routing

In this chapter

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Comparing switch and server configuration	86
Comparing call routing	93

Overview

Introduction

This chapter presents a high-level overview of the differences in how CallPilot and Meridian Mail route calls.

The key difference is that CallPilot uses a Controlled Directory Number (CDN) queue (similar to an ACD queue in Meridian Mail). Calls in the CDN queue are managed by the CallPilot system, while calls in an Automatic Call Distribution (ACD) queue are managed by the Meridian 1 switch.

Setup and call routing comparison

The following table compares a number of setup and call routing elements for CallPilot and Meridian Mail.

Comparison	CallPilot	Meridian Mail
Customer	single customer only	single customer or multiple customers (corresponding to Meridian 1 tenants)
Application Module Link (AML) connection	ELAN (Ethernet LAN)	RS-232 serial cable attached to the backplane
Call routing from switch	CDN	ACD DN
Channels/ports	interface to multimedia agents programmed as a 2008 Digital (Aries) phone on the switch	interface to virtual agents programmed as an SL-1 phone on the switch
Queuing	control by a CDN managed by CallPilot	control by an ACD DN managed by the switch

Comparison	CallPilot	Meridian Mail
Meridian 1 voice connectivity	200i: DS0 channels on the IPE shelf backplane 702t or 1001rp: DS0 channels on an MGate card connected to an MPB16 card	ENET card in the Network module on the M1 (EC or larger system)
Routing a call to a service	<ul style="list-style-type: none"> ■ phantom DNs DCFW to a CallPilot CDN ■ dummy ACD queues NCFW to a CallPilot CDN 	<ul style="list-style-type: none"> ■ phantom DNs DCFW to a Meridian Mail ACD DN ■ dummy ACD queues NCFW to a Meridian Mail ACD DN

Setting up the CallPilot system

Introduction

Setup for CallPilot is different from setup for Meridian Mail. It is useful to think of the CallPilot installation in three layers:

- the server hardware and software layer
- the Windows NT layer
- the CallPilot application layer

Even though all three layers are required for CallPilot to take a call, you must set up and configure each layer individually.

Required documentation

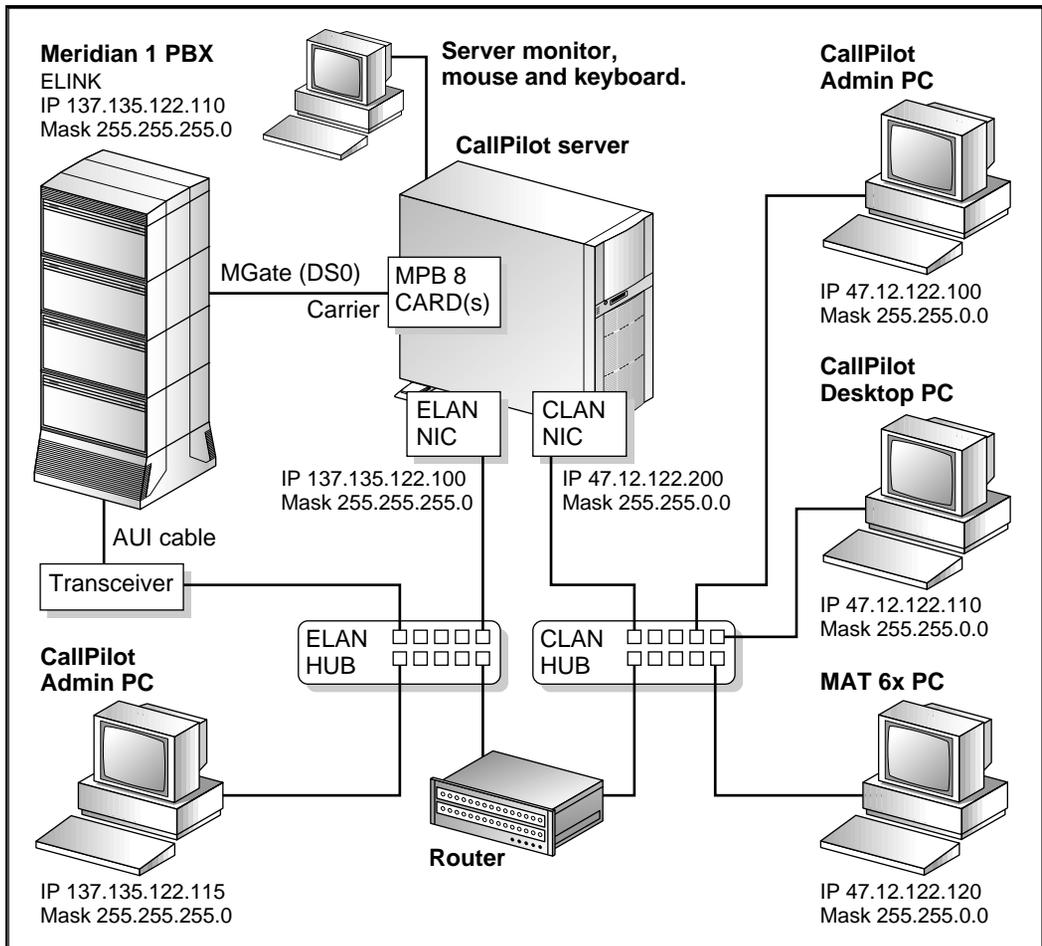
You require the following documentation to complete a CallPilot installation. You receive these documents as part of your base documentation package. They are also packaged in Adobe Portable Document Format (PDF) on the CD-ROM:

- the *Network Planning Guide*
- the *Administrator's Guide*
- the most recent version of the General Release Bulletin (GRB)
- the *Installation and Configuration Guide* for your server type

Refer to <http://www.nortelnetworks.com/nic> for the most recent GRB. You must be a Nortel Networks distributor registered with NIC to access this site.

Sample hardware configuration

The following diagram shows a CallPilot 702t configuration with two administrative PCs—one on the ELAN and one on the CLAN. In this example, the router is required for Ethernet connectivity because the MAT PC is on the CLAN. If the MAT PC were on the ELAN, the router would not be required.



Comparing switch and server configuration

Introduction

This section defines some key concepts for CallPilot configuration and then highlights switch and server configuration in CallPilot and Meridian Mail. For CallPilot details, refer to the following guides:

- the Installation checklist for your server type
- the *Installation and Configuration Guide* for your server type
- the chapters on “Configuring the Meridian 1 Switch” and “Assigning SDNs to Services” in the *Administrator’s Guide*

CDN queue

For CallPilot, configure one Controlled Directory Number (CDN) on the switch for each of the following services:

- a primary CDN for Voice Messaging
- a secondary CDN for Multimedia Messaging (including fax capability)

CallPilot manages calls in the CDN queue, while the Meridian 1 switch manages calls in an ACD queue.

Calls are routed to the CDN queue directly, or by terminating on a phantom DN or dummy ACD queue, which is forwarded to the CDN.

How CallPilot uses CDNs

Normally, a CDN operates in control mode. In control mode, the CallPilot server controls call treatment and call routing. The switch simply provides routing to CallPilot. The server specifies the type of default treatment to be given to waiting calls. It processes the calls on a first-come, first-served basis and determines the DS0 channel to which the call is routed. DS0 channels are configured as agents of an ACD queue.

A CDN can also operate in default mode—that is, CallPilot is offline or the Application Module Link (AML) is down. In default mode, the switch takes over call routing control. Incoming calls receive default treatment provided by the default ACD DN associated with the CDN.

Phantom DN

Instead of using phonesets or dummy ACD queues to route calls, CallPilot can use “virtual telephones” that exist only in software and have no associated hardware. The directory number (DN) associated with one of these phantom phones is called a phantom DN.

Services that should use phantom DNs

Nortel Networks recommends that you use a phantom DN for each service that callers dial directly, such as the following:

- all services created with Application Builder that are dialed directly by callers
- Speech Activated Messaging
- Custom Commands
- Voice Item Maintenance
- Fax Item Maintenance
- Express Voice Messaging
- Express Fax Messaging

Creating a phantom DN

To create a phantom DN, first create a phantom loop. Then, define a terminal number (TN) within that loop. Each phantom TN is assigned a DN (the phantom DN). This DN becomes a service’s dialable number when you enter the DN in the Service Directory Number Table.

SDN Table

In the SDN Table, enter the CDNs and phantom DNs that you have configured on the switch for your CallPilot services. In this table, the DN (now called a Service Directory Number or SDN) is associated with a specific service.

What the SDN Table controls

The SDN Table specifies which service should be activated when a number is dialed. In addition, the SDN configuration controls the following:

- the type of channel the service acquires (voice, fax, or speech recognition)
- the number of channels allocated to the service (the minimum number of channels guaranteed to a service for simultaneous use, and the maximum number of channels you can use at one time)
- the definition of session behavior for certain services, such as those created with Application Builder

Service Directory Number

When a call arrives at a CDN queue either directly or indirectly from a phantom DN, the switch gives the caller ringback treatment. While this happens, the dialed DN is looked up in the SDN Table on the CallPilot server.

There are two types of SDNs:

- inbound SDNs, which require DN on the switch
Services that callers dial directly require inbound SDNs. An inbound SDN corresponds to either a CDN or a phantom DN on the switch.
- outbound SDNs, which do not require DN on the switch
Callers do not dial outbound SDNs. The system uses outbound SDNs to place outbound calls for services such as Outcalling and Networking. Since outbound SDNs do not accept incoming calls, a corresponding phantom DN or CDN is unnecessary on the switch.

ACD multimedia agents

Automatic Call Distribution (ACD) is a feature on the Meridian 1 switch that allows a number of phonesets connected to the switch, known as agents, to share equally in answering incoming calls. In CallPilot, the call queuing capability of ACD is not used (the CallPilot CDN manages the queuing), but the call handling capability of ACD agents is used.

How CallPilot uses ACD virtual agents

All ACD agents that service CallPilot are put into a single ACD agent grouping. These agents correspond to DS0 channels on the CallPilot server. Agents are programmed in Overlay 11 as 2008 Digital (Aries) sets with Multimedia Messaging Allowed (MMA) class of service. However, these are not physical phonesets. These are Terminal Numbers (TNs) that are programmed to look like real digital sets to the switch.

Multimedia processing units

Calls that come in to CallPilot services need processing power to convert data back and forth between voice, fax, or speech-recognition data and digital signals.

DS0 channels establish the connection between the switch and the server. However, they do not have any signal-processing capability. DS0 channels, therefore, terminate on multimedia processing units (MPUs) that do the necessary signal processing.

MPUs provide the following types of signal processing:

- voice playback and recording
- tone detection (DTMF, call progress, fax CNG, modem)
- tone generation
- speech recognition

Eight MPUs are provided on the 200i server, and 16 MPUs are provided on the MPB-16 on the TRP. Additional MPUs reside on the MPC-8.

Multimedia channels

A DS0 channel plus one or more MPUs is a multimedia channel. A multimedia channel provides all the necessary capability since the DS0 channel provides the connection between the switch and the server, and the MPUs provide the processing power.

Types of multimedia channels

Different services process different types of media, and certain types of media need more channel resources to process them. To handle the resource requirements, three types of multimedia channels handle the various types of CallPilot services.

Each type of channel terminates on a different number of MPUs, based on how much processing power is required. For example, integrated voice and fax take twice as much processing power as voice-only media. A multimedia channel, therefore, terminates on two MPUs.

Channel type	Description	# of MPUs
Voice	There is a one-to-one correspondence between channels and MPUs.	1 MPU
Fax	Integrated fax and voice data need twice as much processing power as voice-only media. Fax channels support both fax and voice media.	2 MPUs
Speech recognition (ASR)	Speech-recognition data needs four times as much processing power as voice media.	4 MPUs

Summary of switch and server configuration

Meridian Mail	CallPilot	CallPilot reference
<p>On the Meridian 1:</p> <p>Create one or more ACD queues for call handling.</p>	<p>On the Meridian 1:</p> <p>Create one ACD agent queue to hold all agents that service CallPilot.</p>	<p>“Configuring the ACD agent queue,” “Configuring server channels as ACD agents,” and “Defining the default ACD DN” in <i>Installation and Configuration Switch Setup (Part 3)</i></p>
<p>Define the ACD agents.</p>	<p>Define the ACD agents.</p>	<p>“Configuring the ACD agent queue,” “Configuring server channels as ACD agents,” and “Defining the default ACD DN” in <i>Installation and Configuration Switch Setup (Part 3)</i></p>
	<p>Create two CDN queues: a primary CDN for Voice Messaging and a secondary CDN for Multimedia Messaging.</p>	<p>“Configuring CDN queues for messaging services” in <i>Installation and Configuration Switch Setup (Part 3)</i></p>
<p>Create a dummy ACD DN for each Meridian Mail service that callers must be able to dial directly.</p>	<p>Create a phantom DN for each service that callers must be able to dial directly.</p>	<p>“Configuring phantom DNs” in <i>Installation and Configuration Switch Setup (Part 3)</i></p>

Meridian Mail	CallPilot	CallPilot reference
<p>In Meridian Mail:</p> <p>Enter the ACD DN's and agent TN's into the Channel Allocation Table.</p>	<p>On the server:</p> <p>Enter the CDNs and agent TN's that are configured on the switch in the TAPI Configuration window.</p>	<p>“Configuring the Telephony Service Provider” in <i>Installation and Configuration Switch Setup (Part 3)</i></p>
<p>Add each ACD queue DN for each queue created on the Meridian 1 to the VSDN table.</p>	<p>Enter the CDNs and phantom DN's that are configured on the switch as SDNs in the Service Directory Number Table.</p>	<p>“Configuring the Telephony Service Provider” in the <i>Installation and Configuration Switch Setup (Part 3)</i></p>

Comparing call routing

Introduction

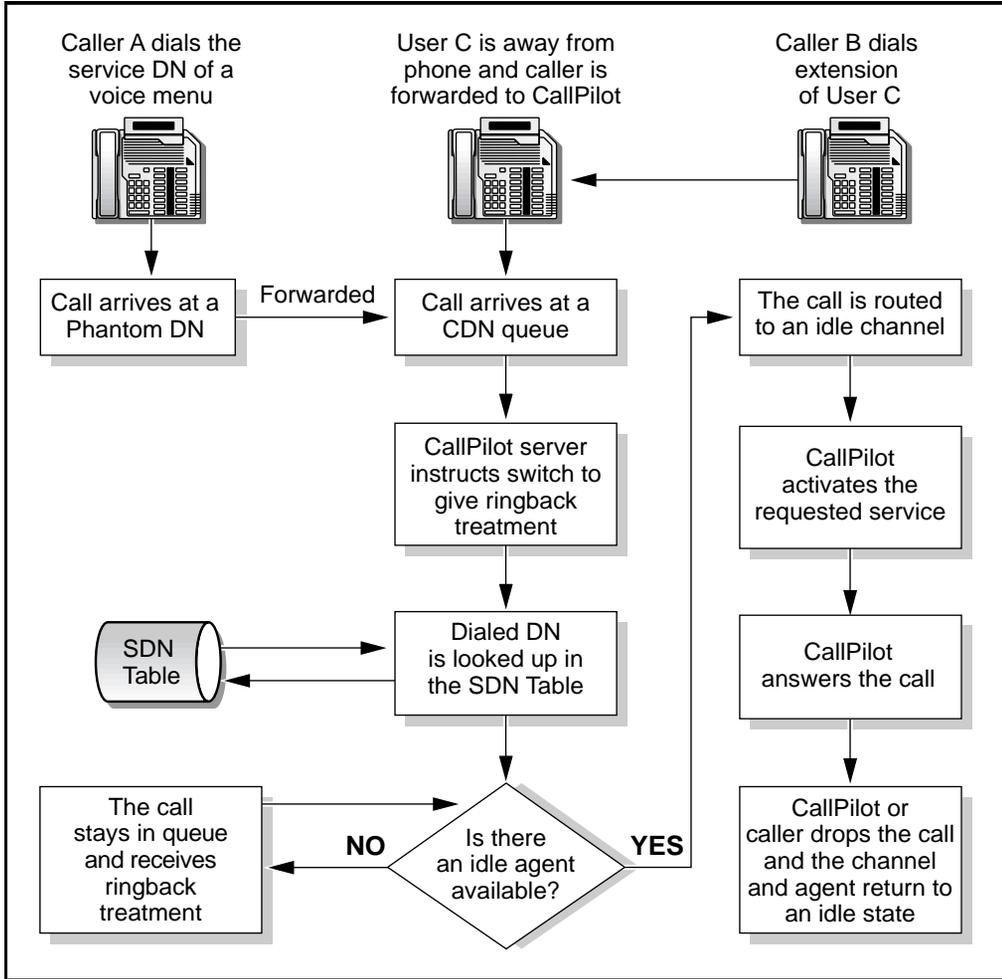
CallPilot uses a CDN to handle call routing. When a caller dials a number to access a service, the switch accepts the incoming call and routes the call to the CallPilot CDN. CallPilot queues the call and directs the call to the first available free channel.

Pages [94](#) and [95](#) show a sample CallPilot call flow diagram and a sample CallPilot setup. Page [96](#) describes what happens when a caller dials a CallPilot service.

In Meridian Mail, the switch handles call routing. The switch accepts the incoming call and places it in an ACD queue to await the first available ACD virtual agent (the first free Meridian Mail port).

Pages [97](#) and [98](#) show a sample Meridian Mail callflow diagram and a sample Meridian Mail setup. Page [99](#) describes what happens when a caller dials a Meridian Mail service.

Sample call flow in CallPilot



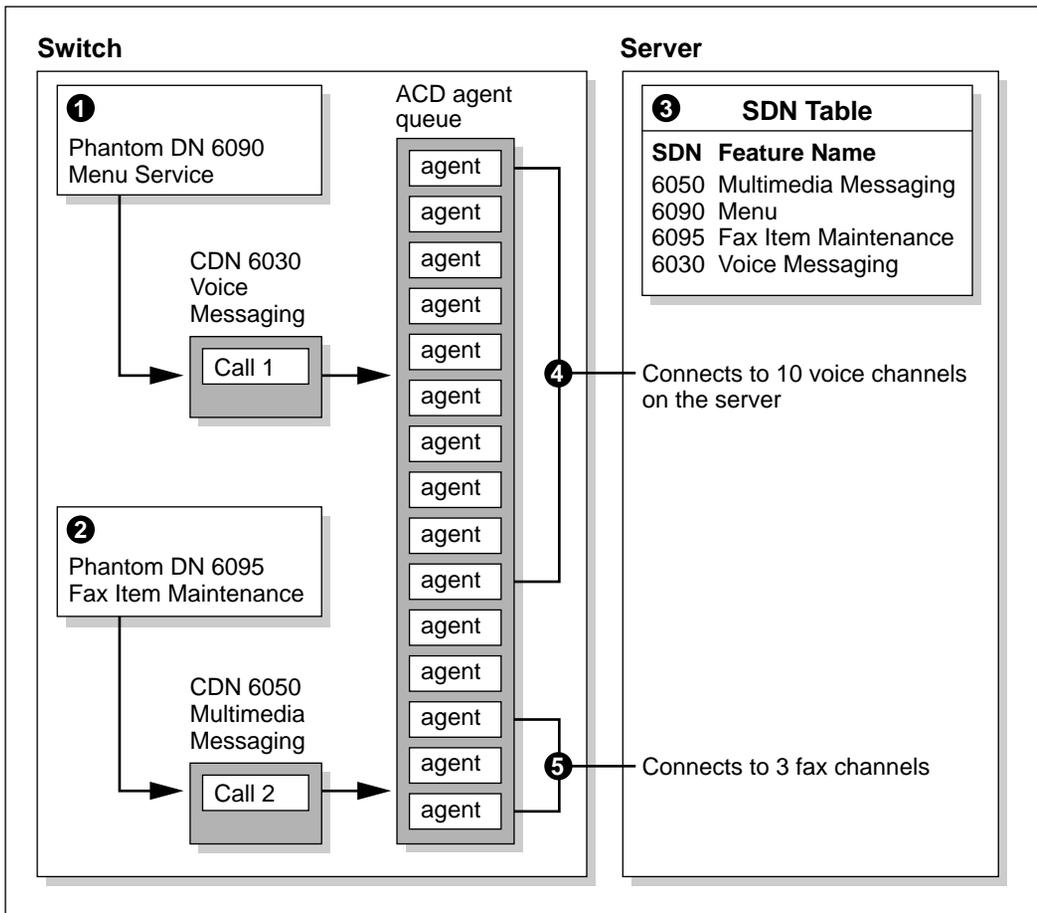
Sample CallPilot setup

In this example, two CDN queues have been configured:

- Voice Messaging (6030)
- Multimedia Messaging (6050)

Two phantom DNs have been configured:

- 6090 is the DN for a menu service (without fax items)
- 6095 is the DN for Fax Item Maintenance

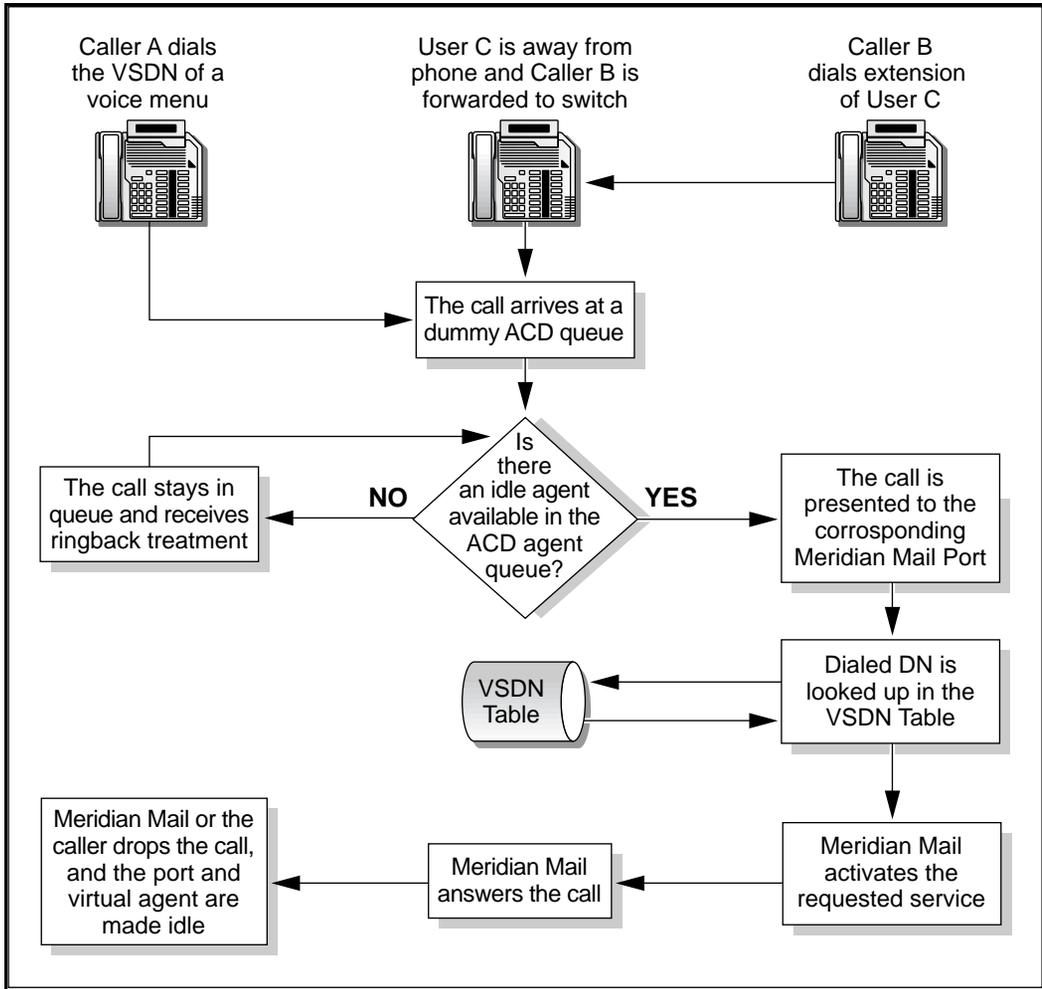


What happens when a caller dials a CallPilot service

Refer to the CallPilot example on page [95](#).

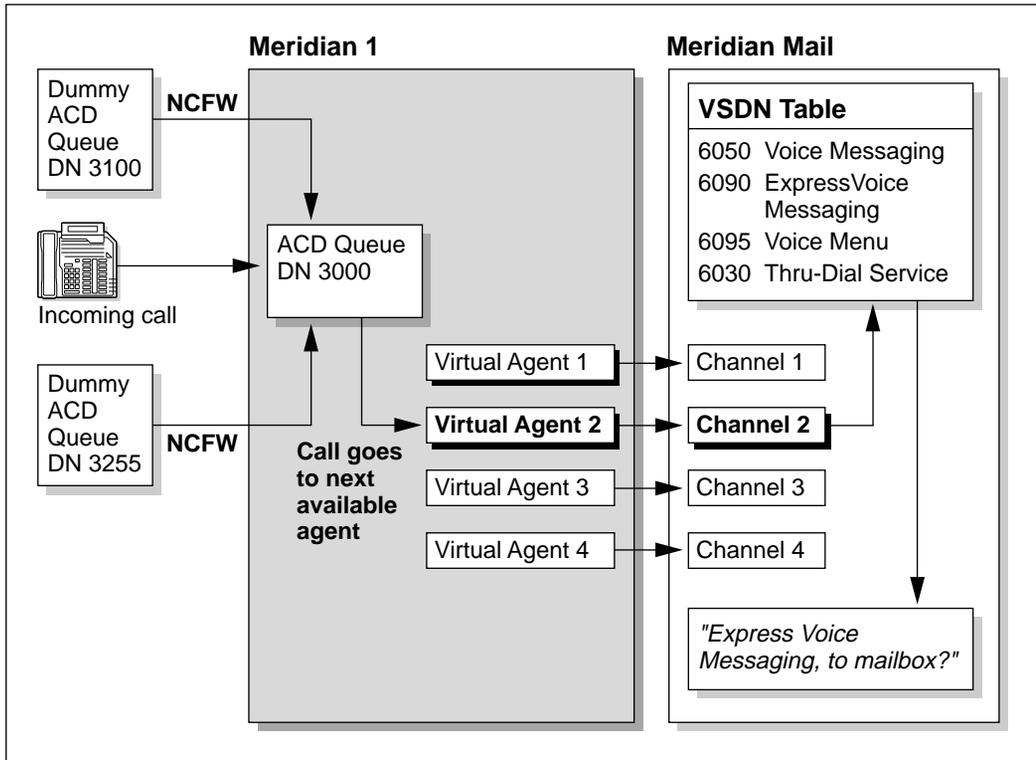
1. A caller dials 6090 to access a menu service. This phantom DN forwards to CDN 6030 because the menu contains no fax or speech recognition capability.
2. Another caller dials 6095 to access the Fax Item Maintenance service. The call is forwarded to CDN 6050.
3. The DN's are looked up in the SDN table on the server to check which service is being requested, the media type required, and the channel allocations for each service.
4. Call 1, to the menu service that contains only voice functions (no fax items), is routed to an ACD agent that is available to handle voice.
5. Call 2, to the Fax Item Maintenance service, is routed to an ACD agent that is available to handle fax.

Sample call flow in Meridian Mail



A sample Meridian Mail setup

In this example, one ACD queue (3000) has been configured.



What happens when a caller dials a Meridian Mail service

Refer to the Meridian Mail example on page [98](#).

1. A caller dials 3100.
2. The call is forwarded to ACD queue 3000.
3. The call is directed to the first available ACD agent and is connected to a Meridian Mail channel (port).
4. Meridian Mail looks up the DN that was dialed (3100) in the VSDN Table to see which service is associated with it. Meridian Mail then starts Express Voice Messaging, answers the call, and plays the appropriate prompts.

Appendix A

Error messages

In this chapter

Meridian Mail data collection error messages	102
CallPilot migration error messages	104

Meridian Mail data collection error messages

cMMer001 = 1 — Could not retrieve Mail Box Data for given Mailbox

cMMer002 = 2 — Could not rewind tape

cMMer003 = 3 — Could not write tape descriptor file

cMMer004 = 4 — Could not write org profile data

cMMer005 = 5 — Could not write COS data

cMMer006 = 6 — Could not write RPL data

cMMer007 = 7 — Could not write system greeting data

cMMer008 = 8 — Could not group data for org profile group

cMMer009 = 9 — Could not write SDL data

cMMer010 = 10 — Could not write Group data for SDL

cMMer011 = 11 — Could not write directory user data

cMMer012 = 12 — Could not write directory user group data

CMMer013 = 13 — Could not write local user data

cMMer014 = 14 — Could not write local user group data

cMMer015 = 15 — Failed to retrieve networking information

CMMer016 = 16 — Could not write voice services data

cMMer017 = 17 — Could not write voice services group data

cMMer019 = 18 — Could not write end tape descriptor file

cMMer018 = 19 — Could not write end of file marker

cMMer020 = 20 — Error unloading tape

- cMMer021 = 21 — Failed to create MPCX Cabinet
- cMMer022 = 22 — Personal class of user messages not migrated
- cMMer023 = 23 — Error reading message header
-
- cMMer024 = 24 — Message not migrated. RC gives message type as defined in mt_types.
- cMMer025 = 25 — Empty message not migrated
- cMMer026 = 26 — ***unused****
- cMMer027 = 27 — ***unused****
- cMMer028 = 28 — Error opening Mailbox for cabinet for Message dumping
- cMMer029 = 29 — Error finding messages in MailBox
- cMMer030 = 30 — Error opening an individual message or not a message file
- cMMer031 = 31 — Error writing messages to tape
- cMMer032 = 32 — Empty outcalling AD record
- cMMer033 = 33 — Empty AMIS AD record
- cMMer034 = 34 — Empty FAX AD record
- cMMer035 = 35 — Unable to retrieve network site information
- cMMer036 = 36 — Unable to retrieve default translation information
- cMMer037 = 37 — Unable to retrieve network configuration information

CallPilot migration error messages

GENERAL error messages 000 - 099

- 000 — File open error
- 001 — The Utility is not aware of the specified datatype
- 002 — The API call failed
- 003 — The C structure update failed
- 004 — Unknown Exception encountered
- 005 — Error in opening a handle to database
- 006 — NMobj_Init() function call failed
- 007 — The NMobj_CloseHandle() function call failed
- 008 — The NMobj_Shutdown() function call failed
- 009 — The Extract() function call failed
- 010 — The structure read from database using API failed
- 011 — Invalid Object handle passed
- 012 — Error while deleting the contents using the API
- 013 — Only one row(record) is expected in the database table
- 014 — Unknown MMail data type found
- 015 — Object creation failed due to internal system error
- 016 — The field value is not found in the staging file
- 017 — MMINVALID data type returned by the extract() function
- 018 — MMUNKNOWN data type returned by the extract() function

- 019 — There was an error while data transfer from the tape; Please try again
- 020 — The handling of treatment type USEDEFAULTCD is not yet implemented
- 021 — The handling of treatment type ENUMERATEDCD is not yet implemented
- 022 — There was an error in file pathname creation, Could not delete the files; Aborting
- 023 — Invalid error code (value out of range)
- 024 — Could not obtain the current working directory path name
- 025 — Could not obtain the MISA volume list on this server
- 026 — Could not obtain the MISA volume information
- 027 — The available voice block limit has been reached, only 5% free space now available on the volume
- 028 — The available text block limit has been reached, only 5% free space now available on the volume

MAPFILE error messages 100-199

- 100 — Map directory creation error
- 101 — No record was found in the Map file for the element
- 102 — Map line index does not match with the C structure element ID
- 103 — Unknown Treatment code
- 104 — Map record formatting error
- 105 — Invalid token encountered
- 106 — The structure name must not be left blank
- 107 — The field name must not be left blank

- 108 — The Data Type must not be left blank
- 109 — MM Data Type must be specified
- 110 — The Key field must have valid treatment code
- 111 — The Special code must be specified
- 112 — Default value must be specified
- 113 — Unexpected number of tokens found in a map record
- 114 — All the MMail Ids (Group, File & Field) must be specified
- 115 — If the MMail Ids are specified then Treatment code must be defined
- 116 — The value obtained from MMail data file is out of range
- 117 — The string length obtained from Mmail data file is out of range
- 118 — The MMail field data type returned from Extract() is different
- 119 — The Map record line length exceeds the maximum line length
- 120 — If the Treatment code is specified then MMail Ids must be defined

MMINPUT error messages

- From 200 - 209 = Debug messages
 - From 210 - 219 = Tape IO messages
 - From 220 - 229 = File IO messages
 - From 230 - 239 = Other messages
-
- 200 — TapeRead Debug
 - 201 — FileCreate Debug
 - 202 — FileOpen Debug

- 203 — FileRead Debug
- 204 — FileWrite Debug
- 205 — Extract Debug
- 206 — GetToken Debug
- 207 — FileDump Debug
- 210 — TapeOpen Function
- 211 — TapeLoad Function
- 212 — TapeRead Function

- 220 — SetPath Function
- 221 — FileCreate Function
- 222 — FileWrite Function
- 223 — FileRead Function
- 224 — FileOpen Function
- 225 — DeleteFile Function
- 226 — ReadFile Function
- 230 — GetFile Function
- 231 — GetToken Function
- 232 — GetTapeDescriptor Function
- 233 — InitTape Function
- 234 — Extract Function
- 235 — GetVoiceFile Function

236 — GetX and GetVoiceX Function

SYSMOD error messages 300-399

300 — The MM RPLID value obtained from staging file is zero; using default value.

301 — The RPLID mapping failed;

302 — Invalid value obtained for Alarm Filter from the MMail data; using default value

303 — The Customer greetings FID creation error

304 — Invalid FID; Can not migrate the Customer greetings

305 — MISA file open error; skipping the customers greeting data migration

306 — No voice data file for the System greetings

307 — MISA file load error; Retaining the previous Customer greetings voice data

308 — The RP list is currently in use (DB integrity check failure); Retaining the RPL

309 — The RPL header could not be removed due to internal error; Retaining the RPL

310 — No RPL codes found in the mail data

311 — The data value for Throttling feature could not be obtained

312 — The data value for Throttling interval parameters could not be obtained

USERMOD error messages 400-499

401 — Error obtaining the User List from the NGen database

402 — COSID mapping failed, unable to find a match

403 — The address could not be validated due to an internal error

- 404 — Invalid address
- 405 — NMadd_DestroyAddressList call failed
- 406 — The entry of MMail COS Number already exists in the COSMAP list
- 407 — Error obtaining the DN list for the user
- 408 — Invalid COSNumber obtained from MMail data
- 409 — Personal COS migration is not supported
- 410 — Invalid FID; Can not migrate the spoken name data
- 411 — MISA file open error; skipping the spoken name data migration
- 412 — No voice data in the file for spoken name
- 413 — MISA File load error; skipping the spoken name data migration
- 414 — Invalid FID; Can not migrate the greetings data
- 415 — Invalid recID provided for the greetings FID, skipping greetings migration.
- 416 — MISA file open error; skipping the Greetings data migration for the user
- 417 — No voice data file for the User greetings.
- 418 — MISA file load error; skipping the migration of the greetings voice data file.
- 419 — Error in creating the List of the Users to be migrated
- 420 — More than one record found in the database for the given search criteria; only one record is expected
- 421 — Unknown User type obtained from MM data
- 422 — The user for whom the PDL is being updated does not exist in the database
- 423 — The PDL list could not be obtained

- 424 — Unknown Address type obtained from MMail
- 425 — The MM mail PDL record data may be corrupted
- 426 — This Address type should not be specified in a PDL record
- 427 — The DN list is empty
- 428 — The User COS Number field value could not be obtained
- 429 — The System COS number field value could not be obtained
- 430 — No SDL codes found in the mail data
- 431 — The number of digits in the Mailbox is less than 3 digits long which makes it an invalid mailbox on CallPilot
- 432 — Could not search the specified user in the database
- 433 — Could not resolve the user since found more than one entries in database for a given search criteria
- 434 — Invalid User type obtained from MMail
- 435 — Can not add any more Mailboxes/Users, The mailbox limit is reached
- 436 — There is no available MISA volume, aborting User data migration
- 437 — Less than 5% free space on this Volume, this volume will not be available for data migration

MSGMOD error messages 500-599

- 500 — The Voice data file is empty
- 501 — The "From" address list could not be obtained
- 502 — The user name could not be obtained
- 503 — The user surname could not be obtained
- 504 — The user mailbox number could not be obtained
- 505 — The user site and location IDs could not be obtained

- 506 — The user primary DN could not be obtained
- 507 — There was an error obtaining the user information, skipping this User messages migration
- 508 — Error reading the User entry
- 509 — The User mailbox does not exist on the system
- 510 — Could not resolve the user since found more than one entries in database for a given search criteria
- 511 — There was an error in obtaining the voice message data
- 512 — There was an error while creating the "To" and "From" address lists
- 513 — Could not delete the message file, Please remove the message manually later
- 514 — Could not obtain the voice data block, can not continue further
- 515 — There was an error obtaining the Message Attachment information
- 516 — Error in message attachment creation
- 517 — Could not obtain the voice data block, can not continue further
- 518 — Could not obtain the Message tag value
- 519 — The volume ID could not be obtained for this user
- 520 — The free space on MISA volume is now less than 5%
- 521 — The senders address data record is not of Text type, can not obtain the From address information
- 522 — You have reached the storage limit of the user mbox in MISA volume

NETMOD error messages 600-699

- 601 — The Location code array could not be obtained from MM data files

- 602 — The location Overlap code array could not be obtained from MM data files
- 603 — Invalid code type obtained from MM data
- 604 — The database contains an invalid server entry which should be removed manually later
- 605 — The Network prefix array is empty
- 606 — The Network codes array is empty
- 607 — The Meridian Networking is not supported on CallPilot; Using the Enterprise Networking protocol instead
- 608 — The Meridian Networking is not supported on CallPilot; Using the AMIS Networking protocol instead
- 609 — The Meridian Networking is not supported on CallPilot; Using the VPIM Digital Networking protocol instead
- 610 — No network protocols are supported on this server
- 611 — The AMIS protocol is not supported on this server; Using the Enterprise Networking protocol instead
- 612 — The AMIS protocol is not supported on this server; Using the VPIM Digital Networking protocol instead
- 613 — The Enterprise Networking protocol is not supported on this server; Using the AMIS Networking protocol instead
- 614 — The Enterprise Networking protocol is not supported on this server; Using the VPIM Digital Networking protocol instead
- 615 — Invalid value obtained for the MM server connection protocol field
- 616 — The Server ID mapping failed
- 617 — The Location ID mapping failed
- 618 — There are currently no server records defined on the system

- 619 — Location code array could not be obtained
- 620 — Location overlap array could not be obtained
- 621 — Location code type array could not be obtained
- 622 — The source and destination Ids in the list are same
- 623 — The existing server record could not be updated
- 624 — Since the protocol is changed, Administrator must review the contents of Server and Connection records
- 625 — The location Overlap code array could not be obtained from MM data files
- 626 — Invalid value obtained for the MM Server Status field
- 627 — Invalid value obtained for the MM location Dialing plan field
- 628 — Invalid value obtained for the MM dialing CLID field
- 629 — The Maximum Server limit reached, skipping further Server updates
- 630 — The Maximum Locations limit reached, skipping further Location updates
- 631 — The Maximum Server limit reached, skipping further Server Connection updates
- 632 — There was error while updating the network cache; the data migration may not work properly

APPBMOD error messages 700-799

- 700 — Error in opening a MISA File Cabinet
- 701 — Error in closing the MISA File Cabinet
- 702 — Error in creation of a MISA File Cabinet
- 703 — Unknown error while opening the File cabinet

- 704 — Could not obtain the Service Type for the Service
- 705 — Could not obtain the Service ID for this Service
- 706 — Error in creation of a MISA File
- 707 — Error in adding the MISA File into file cabinet
- 708 — Unknown error while opening the MISA File
- 709 — Error in closing the MISA File
- 710 — Unknown Service Type
- 711 — Error in removing the MISA File from a cabinet
- 712 — Error in migrating the segments into a MISA file
- 713 — Error in obtaining the Segment Data File name
- 714 — Error in obtaining the The Record Type and ID for the Segment
- 715 — Error in creation of a record in a MISA File
- 716 — Error in record search in a MISA File
- 717 — Error in data loading into the record of a MISA File
- 718 — Error in MISA File data Flush
- 719 — Unknown record type encountered

USRAPI error messages where NMusr_eOFFSET = 55100

- (NMusr_eOFFSET + 01) — Function was unsuccessful
- (NMusr_eOFFSET + 02) — Programming Error, NMobj_ResetHandle needs to be called
- (NMusr_eOFFSET + 04) — The specified record was not found
- (NMusr_eOFFSET + 05) — Input object handle is invalid

- (NMusr_eOFFSET + 06) — Memory Allocation failed
- (NMusr_eOFFSET + 12) — The record modification number has changed, update is disallowed
- (NMusr_eOFFSET + 13) — Exception occurred inside user module
- (NMusr_eOFFSET + 14) — There is already a COS having the specified properties in this customer group
- (NMusr_eOFFSET + 15) — Input COS name is not unique with in the customer group
- (NMusr_eOFFSET + 16) — The COS to be deleted is still referenced by a user. So it cannot be deleted
- (NMusr_eOFFSET + 17) — The mailbox number is invalid, (custid+Location+MboxNum not unique)
- (NMusr_eOFFSET + 18) — The user DN is not unique
- (NMusr_eOFFSET + 19) — Modification number error
- (NMusr_eOFFSET + 22) — Invalid input USER PREFERRED LANG ID
- (NMusr_eOFFSET + 23) — Invalid input COS ID
- (NMusr_eOFFSET + 24) — Invalid input LOCATION ID
- (NMusr_eOFFSET + 25) — Invalid input EXT CALL SENDER RPL
- (NMusr_eOFFSET + 26) — Invalid input EXT DIALING RPL
- (NMusr_eOFFSET + 27) — Invalid input CUSTOM REVERT RPL
- (NMusr_eOFFSET + 28) — Invalid input DNU RPL
- (NMusr_eOFFSET + 29) — Invalid input AMIS RPL
- (NMusr_eOFFSET + 30) — Invalid input RN RPL
- (NMusr_eOFFSET + 31) — Invalid input FAX PRINTING RPL
- (NMusr_eOFFSET + 32) — Invalid input DESKTOP RPL

(NMusr_eOFFSET + 33) — SDL NAME NOT UNIQUE

(NMusr_eOFFSET + 34) — Input consists of consecutive digits only

(NMusr_eOFFSET + 35) — Input consists of identical digit only

(NMusr_eOFFSET + 36) — Invalid input

(NMusr_eOFFSET + 37) — Mailbox is a alarm mailbox

(NMusr_eOFFSET + 38) — Mailbox is a general delivery mailbox

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CallPilot

Meridian Mail to CallPilot Migration Utility Guide

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