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MSM and Modular Option GP

Meridian Mail

System Administration Guide for Multi-Customer Systems

Volume 2 of 2

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MSM and Modular Option GP

Meridian Mail
System Administration Guide for Multi-Customer Systems

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Chapter 19

Routine maintenance

In this chapter

Overview

Introduction

This chapter identifies the routine maintenance tasks recommended for optimum operation of your Meridian Mail system. It then refers you to the chapters or manuals that contain the information and procedures you need to perform these tasks.

Purpose

These tasks are carried out regularly to ensure efficient operation of your system and to anticipate future capacity needs or necessary services available to users.

Monitoring Meridian Mail operation

Introduction

Operational Measurement (OM) reports enable you to monitor your system usage. You can study which features are being used on your system and how heavily they are being used.

OM reports can reveal potential technical problems with your system, such as low disk space (which affects the ability of the Meridian Mail system to store messages and perform its functions).

Operational measurements

The following provides an overview of OM reports.

OM traffic reports

The OM traffic reports show both how the system is being used and how much the system is being used. That is, they identify the number of calls processed, and the number of times a user logs in to Meridian Mail or accesses particular features. If a feature is not being used, this may indicate that users are not aware of it or do not know how to use it. It may also reveal that the feature is not required.

These reports also help you to ensure the security of your system. If certain features are being accessed frequently during off-hours, this may indicate that hackers are attempting to use your system to place unauthorized long distance calls.

OM user usage reports

The OM user usage reports monitor how specific users employ features such as Voice Messaging or networking, if they are installed.

User usage reports display daily summary statistics about each user, including the following:

- the number of times a user has logged on
- the number and total length of times that callers have connected to a user’s mailbox
- the number and total length of messages created and received
- the disk space used by the user’s messages and greetings

Operational Measurements, cont'd

Disk Usage Detail report

This report shows the voice space used on a disk volume. If the voice space is consistently greater than your disk usage warning level, then disk space is getting low, and you should take steps to reduce the voice space used.

Channel Usage Detail report

This report shows the number of calls and voice mail usage per channel. If the number of calls is high or the average message length is exceptionally long, the channels may be too busy to handle all incoming calls. As a result, users may not be able to access the Meridian Mail system.

Frequency

Check the performance of your Meridian Mail system periodically to ensure that efficient use is made of the voice services provided on your system.

Procedure

For information and procedures required for monitoring the operation of your Meridian Mail system, see Chapter 31, "Operational Measurements".

For information and procedures required for helping to ensure the security of your Meridian Mail system, see Chapter 7, "Setting up Meridian Mail security".

Monitoring Meridian Mail hardware

Introduction

The System Status and Maintenance menu provides monitoring and control screens through which you obtain views of the operating state of the system at four (Mod Op GP) or six (MSM) levels:

- system status
- card status
- DSP port status
- disk status
- T1 link status (MSM only)
- T1 channel status (MSM only)
- Node Status (MSM only)
- SMDI Link Status (MSM only)

Description

The System Status and Maintenance functions are used in the course of routine maintenance and enable you to take any component of the system out of service while performing maintenance. A component can be taken out of service by disabling it (forcing it out of its operational state), or by performing a courtesy disable, which progressively disables active DSP ports as they become idle. The Courtesy Disable feature avoids any disruption of calls in progress.

What to check

The System Status and Maintenance menu provides options for viewing the system status, card status, and DSP port and disk status. From this menu, you can also manipulate the Channel Allocation Table, perform Disk Maintenance, and view System Event and Error Reports.

The Hardware Administration screens allow you to view the contents of the hardware database in your Meridian Mail system. The hardware database is a system utility that maintains a current listing and description of all nodes, cards, and ports in your system.

MSM options

The MSM provides additional options (from those available on the Mod Op GP) to check the T1 link and channel status, the SMDI link status, and the node status.

Modifying the hardware database

To modify the hardware database, you must use the "modify hardware" tool. Refer to *Meridian Mail System Administration Tools* (NTP 555-7001-305).

Frequency

Check the operation of Meridian Mail hardware periodically and when a problem is reported by the system.

Procedure

For information and procedures required for checking the operation of your Meridian Mail hardware, see Chapter 28, "Hardware administration" and see Chapter 29, "System status and maintenance".

Backing up the system

Introduction

If a disk drive fails, the system can be restored to a working state by copying the data back from tape onto a replacement disk. Backup copies of the system data are fundamental to restoring the system with as little disruption and data loss as possible.

Backups to tape

All Meridian Mail systems have a tape drive capable of reading and writing industry-standard quarter-inch data cartridges (QIC). Backups to tape can be either full or partial. You can also selectively back up users or services to tape, or both.

Backups to disk

The Disk-to-Disk Backup feature is available for multi-node Modular Option GP systems.

If the Disk-to-Disk Backup feature is installed, you can copy data from one disk to another. This allows you to recover data if a disk fails.

Backups to disk can be done frequently, with relatively little effort, and reduce the need for frequent and time-consuming backups to tape. However, disk-to-disk backups do not completely eliminate the need for tape backups.

Storage impact

Disk-to-disk backup reduces the voice message storage somewhat and sets aside some of the disk space for backup copies.

Scheduling a backup

Schedule backups for a time when your system is relatively quiet or outside the regular business hours for your organization. Do not back up the system if it is operating above 50 percent of the rated capacity or between the hours of 1:00 a.m. and 5:00 a.m., since important system audits take place during these hours. These audits are activated automatically at the same time every day and ensure the continued operation of your system. Do not schedule a backup if more than one tape is required for it unless you are going to be available to switch tapes when you are prompted to do so.

Frequency

Back up your system on a regular schedule. You can set the frequency as daily, weekly, or monthly in the Schedule Backup screen under the General Administration menu. You should also back up your system whenever you make changes to it.

Procedure

For information and procedures required for backing up your Meridian Mail system, see Chapter 16, “Backup and restore Meridian Mail data”.

Cleaning the tape drive

Introduction

As occurs with any high-capacity removable media such as tapes or floppy drives, debris collects on the tape heads each time a tape drive is used. If too much debris collects, the tape drive is unable to write or read data correctly, and the tape head must be cleaned.

Frequency

Most tape drive manufacturers recommend cleaning the tape heads after a brand-new tape has been used for the first time, and after every eight hours of tape drive operation. If media (parity) errors occur when reading or writing tapes, it is an indication of either a faulty tape or dirty tape heads.

Procedure

For information and procedures required for cleaning your tape drive, refer to the *MSM Hardware Replacement and Maintenance Guide* (NTP 557-7001-502) or the *Meridian Mail Installation and Maintenance Guide* (NTP 555-7051-250) for Mod Op GP systems.

Chapter 20

Voice administration

In this chapter

Overview of Voice Administration

Introduction

This chapter describes the use of the Voice Administration menu and the related chapters.

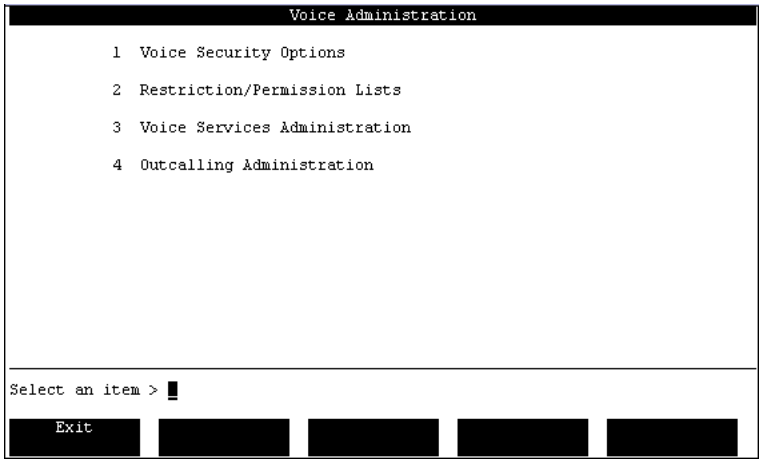
Voice administration comprises all facilities related to processing voice information. These facilities offer a range of functions from the playback of a recorded announcement to the automated attendant service.

Administration level

Some voice administration tasks can only be performed at either the System Administration level or the Customer Administration level. See the chapter that describes the task you want to perform for specific instructions regarding the required administration level.

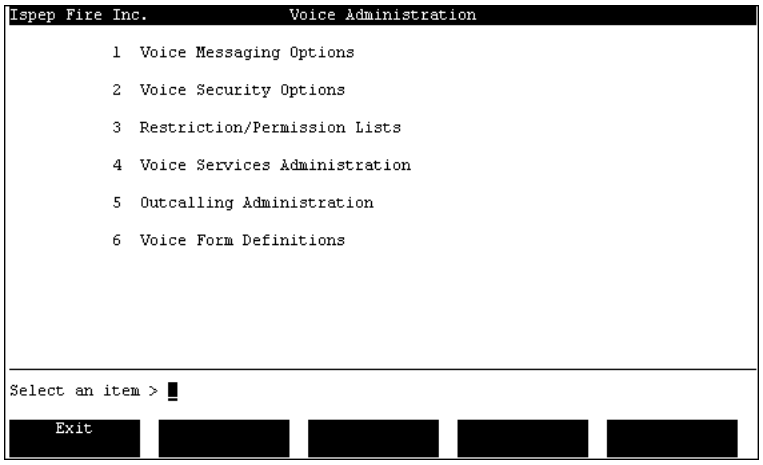
The Voice Administration menu (System Administration level)

The following menu appears when you choose Voice Administration from the System Administration level.



The Voice Administration menu (Customer Administration level)

The following menu appears when you choose Voice Administration from the Customer Administration level.



Voice Messaging Options and Voice Forms Definitions are selectable only from the Customer Administration level.

Voice Messaging Options

Voice Messaging Options determine the general characteristics of the voice messaging service.

Voice Security Options

Voice Security Options allow you to control the level of security and access provided to Meridian Mail users.

Restriction/ Permission Lists

The Restriction/Permission Lists option allow you to set up the restriction/permission codes to be used by your system. These codes are applied to various features and are intended to protect your system by preventing users and callers from placing unauthorized calls while connected to your Meridian Mail system.

Voice Services Administration

The Voice Services Administration option allows you to

- add service DNs to the system and maintain existing DN information
- create a Voice Services profile (Customer Administration level only)
- create and maintain services such as
  - — Announcements
  - — Thru-Dial services
  - — Voice Menus
  - — Time-of-Day controllers
  - — Fax item definitions (if Fax on Demand is installed)

These services offer a range of functions from the simple playback of a recorded announcement to the more sophisticated voice menus which allow callers to make choices by pressing keys on their telephone keypads.

Administration level

Voice services are created at the Customer Administration level. At the System Administration level, you can only view, modify or delete voice services.

Outcalling Administration

The Outcalling Administration option allows you to specify outcalling parameters which affect the Remote Notification and Delivery to Non-user feature.

This option is displayed only if the outcalling feature is installed.

Voice Form Definitions

The Voice Form Definitions option allows you to develop custom applications that ask specific questions of callers and collect their responses. These applications can be thought of as the electronic equivalent of a survey or questionnaire.

This option is displayed only if the voice forms feature is installed and enabled for the customer.

Related chapters

The following table describes which chapter or document you should refer to when using one of the Voice Administration menu options.

For the following option	See
Voice Messaging Options	Chapter 21, "Voice messaging options"
Voice Security Options	Chapter 7, "Setting up Meridian Mail security"
Restriction/Permission Lists	Section B: Restriction/Permission lists in Chapter 7, "Setting up Meridian Mail security"
Voice Services Administration	Chapter 22, "Display options"
Outcalling Administration	*Outcalling Application Guide* (NTP 555-7001-320)
Voice Form Definitions	*Voice Services Application Guide* (NTP 555-7001-325)

Related information

Display options

The [Display Options] softkey is available from Voice Services Administration at the System Administration level. The Display Options screen allows you to customize the Voice Services Administration screens for all customer groups. You cannot change the display options for an individual customer group.

See Chapter 22, “Display options”.

Finding VSDNs and services

Within Voice Administration, you can use the find function to find a specific VSDN or voice or fax service, or a subset of VSDNs or voice and fax services.

See Chapter 23, “Finding and printing VSDNs and service definitions”.

Configuring Meridian Mail services

Configuring Meridian Mail services involves setup on the switch and in Meridian Mail.

For information about how to configure the SL-100/DMS switch to support Meridian Mail services, see Chapter 24, “Configuring Meridian Mail services”.

Chapter 21

Voice messaging options

In this chapter

Section A Introduction

In this section

Overview

Introduction

Voice messaging options are set up for each customer. The following tasks are involved.

Setting up languages

If you have more than one language installed, you must set up certain language parameters. This is described in Section B.

Customizing recordings

You can customize the following recordings:

- the call answering greeting (for MMUI)
- the VMUIF introductory tutorial (for VMUIF)
- the VMUIF login greeting

This is described in Section C.

Enabling features

You can enable/disable certain voice messaging features such as timed delivery, name dialing/name addressing, and external call sender. This is described in Section D.

Setting up the broadcast mailbox

The broadcast mailbox is set up in the Voice Messaging Options screen. This involves assigning a mailbox number and recording a personal verification (the verification is optional). This is described in Section D.

Defining operational characteristics

You can define operational characteristics for voice messaging such as

- the maximum number of days that read messages are kept before being deleted
- whether a warning message is played to users when their mailbox is almost full, and when this message is played
- the billing DN

This is described in Section D.

Accessing the Voice Messaging Options screen

Introduction

All of the procedures in this chapter are carried out in the Voice Messaging Options screen. Use this procedure to access this screen.

Administration level

The Voice Messaging Options screen is accessible at the Customer Administration level only.

Before you begin

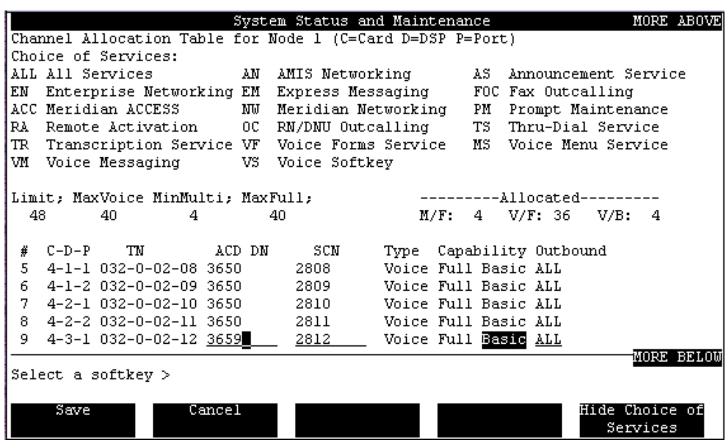
You must first select the customer for which you want to modify voice messaging options. See "Selecting a customer to view or modify" on page 5-17.

Procedure

To access the Voice Messaging Options screen, follow these steps.

Starting Point: The Customer Administration Menu

Step	Action
1	Select Voice Administration. ***Result:*** The Voice Administration menu is displayed.



Step	Action
2	Select Voice Messaging Options. ***Result:*** The Voice Messaging Options screen is displayed.

The Voice Messaging Options screen

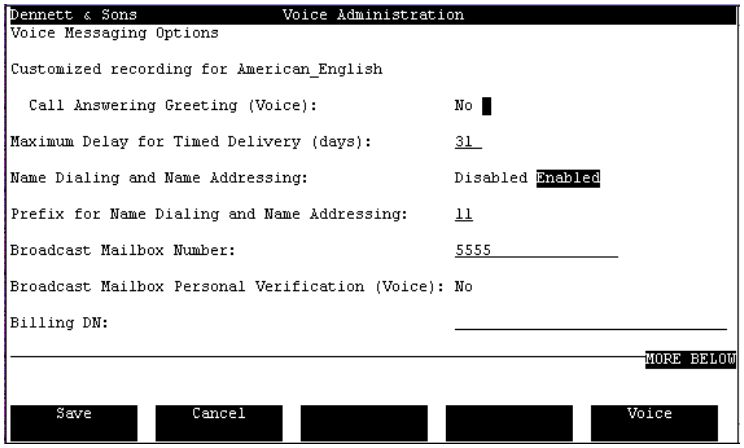
Introduction

The fields in the Voice Messaging Options screen vary somewhat depending on the interface (MMUI or VMUIF).

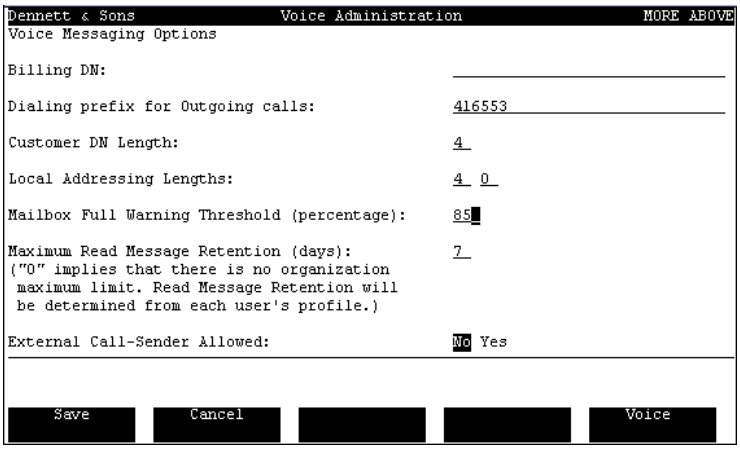
MMUI version

This is the MMUI version of the Voice Messaging Options screen.

Part 1



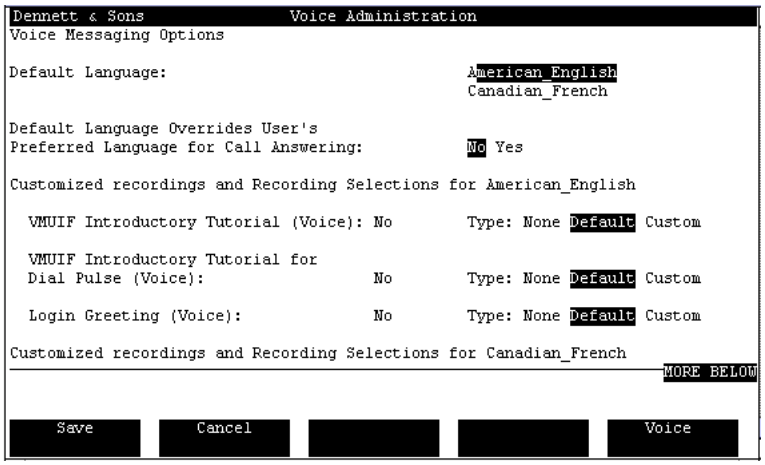
Part 2



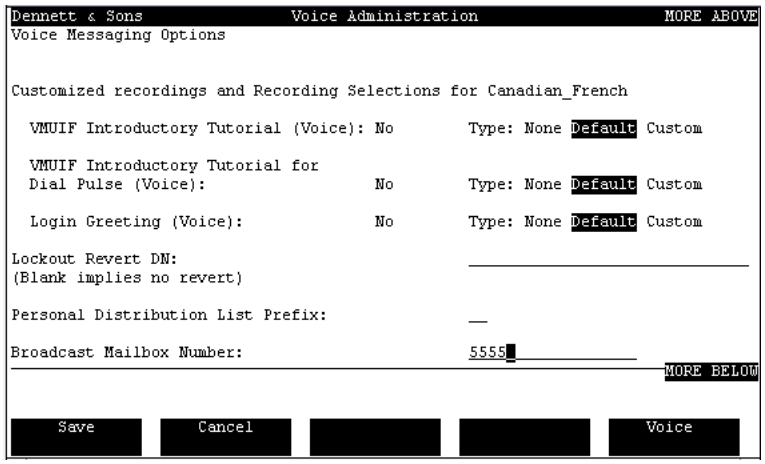
VMUIF version

This is the VMUIF version of the Voice Messaging Options screen.

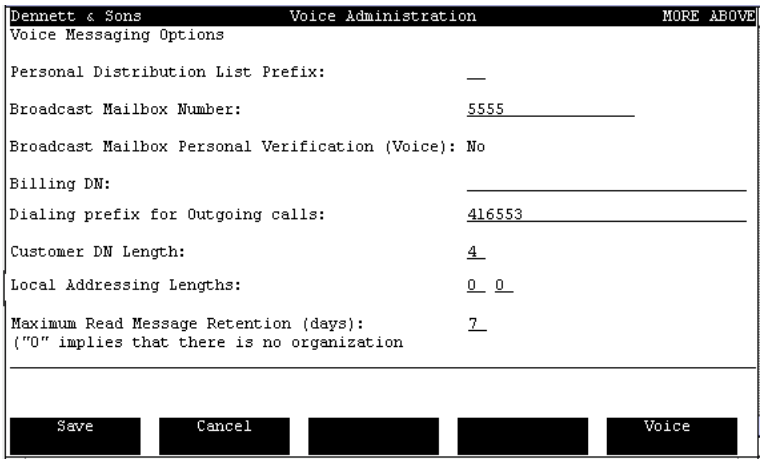
Part 1



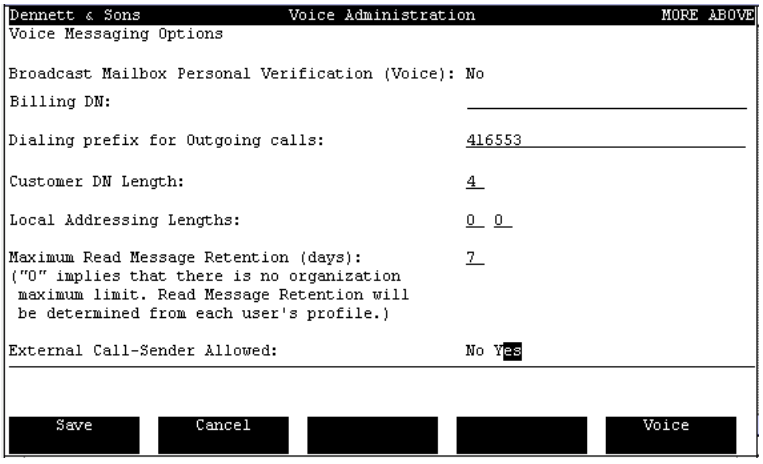
Part 2



Part 3


Dennett & Sons Voice Administration MORE ABOVE
Voice Messaging Options
Personal Distribution List Prefix:
Broadcast Mailbox Number: 5555
Broadcast Mailbox Personal Verification (Voice): No
Billing DN:
Dialing prefix for Outgoing calls: 416553
Customer DN Length: 4
Local Addressing Lengths: 0 0
Maximum Read Message Retention (days): 7
("0" implies that there is no organization
Save
Cancel
Voice

Part 4


Dennett & Sons Voice Administration MORE ABOVE
Voice Messaging Options
Broadcast Mailbox Personal Verification (Voice): No
Billing DN:
Dialing prefix for Outgoing calls: 416553
Customer DN Length: 4
Local Addressing Lengths: 0 0
Maximum Read Message Retention (days): 7
("0" implies that there is no organization
maximum limit. Read Message Retention will
be determined from each user's profile.)
External Call-Sender Allowed: No Yes
Save
Cancel
Voice

Defining voice messaging options

Procedure

This is a high-level procedure for setting up your voice messaging options. Detailed step-by-step procedures are provided in the following sections in this chapter.

Step	Action
1	Do you have more than one language installed on your system? • If yes, see the section "Languages on multilingual systems" on page 21-11. • If no, go to step 2.
2	Do you want to customize or disable any greetings or tutorials? • If yes, see the section "Customizing recordings" on page 21-25. • If no, go to step 3.
3	Set up operational characteristics for voice messaging. See the section “Defining operational characteristics for voice messaging” on page 21-35.

Section B Languages on multilingual systems

In this section

Overview

Introduction

The language parameters you need to define depend on whether the Dual Language Prompting feature is installed.

Choosing the correct procedure

Use this table to identify which procedure to follow to set up languages on your system.

IF Dual Language Prompting	THEN follow the procedure
is not installed	on page 21-15.
is installed	on page 21-18.

The default language and the user's preferred language

The default language

The first language that was installed becomes the default language. You can change the default language in the Voice Messaging Options screen.

The default language is also known as the primary language.

When the default language is used

The default language is the language in which prompts are played to callers

- during call answering and express messaging sessions.
- during initial logon (before the mailbox number is identified) if they are calling from a phone that does not have a mailbox. This could either be an external phone or an internal phone that does not have an associated mailbox.

The user's preferred language

When multiple languages are installed on the system, local voice users can have a preferred language that is different from the default language. A user's preferred language is specified when you add a mailbox in the Add Local Voice User screen.

Affected prompts

If the user has a preferred language that is different from the primary default language, the following prompts are played in the user's preferred language:

- prompts that are played to the user while the user is logged on to Meridian Mail
- prompts that are played to callers during call answering and express messaging sessions

Overriding the user's preferred language

You may not want internal or external callers, or both, who are transferred to Meridian Mail to hear prompts in the user's preferred language. Instead, you might want them to hear prompts in the (primary) default language.

To ensure that callers who are forwarded to Meridian Mail hear prompts in your system's primary language, the Default Language Overrides User's Preferred Language field in the Voice Messaging Options screen must be set to Yes. Users, however, still hear prompts in their preferred language when they log in to retrieve messages.

Example

Your office is located in Vancouver, British Columbia. Many of your employees speak Mandarin as their first language and, therefore, prefer to hear prompts in Mandarin while using Meridian Mail.

However, most of your customers and external callers are English-speaking and you want them to hear Meridian Mail prompts in English.

You, therefore, set the Default Language Overrides User's Preferred Language field to Yes.

Setting up languages on systems without dual language prompting

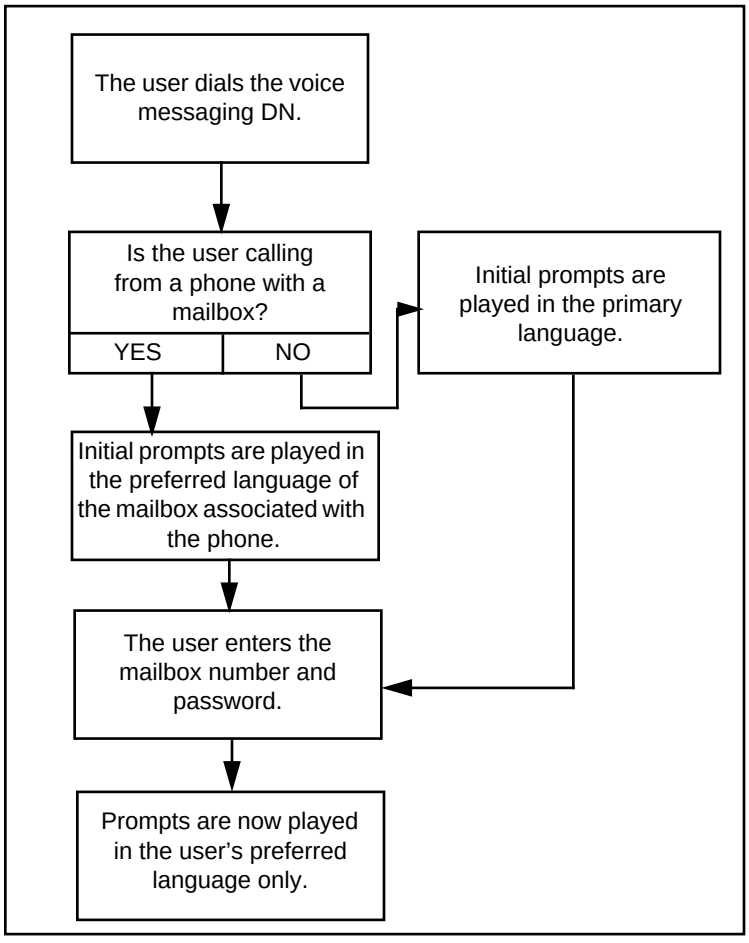
Introduction

To set up languages when Dual Language Prompting is not installed, you must specify

- the default language (also known as the primary language)
- whether the default language overrides the user's preferred language

Mailbox logon

This flowchart shows the language in which prompts are played during mailbox logon.



Express messaging

The language in which prompts are played depends on whether the caller is calling from a phone that has a mailbox.

WHEN the caller calls	THEN prompts are played
from a phone with a mailbox	in the preferred language of the mailbox associated with the phone.
from a phone that does not have a mailbox	in the primary default language.

Call answering

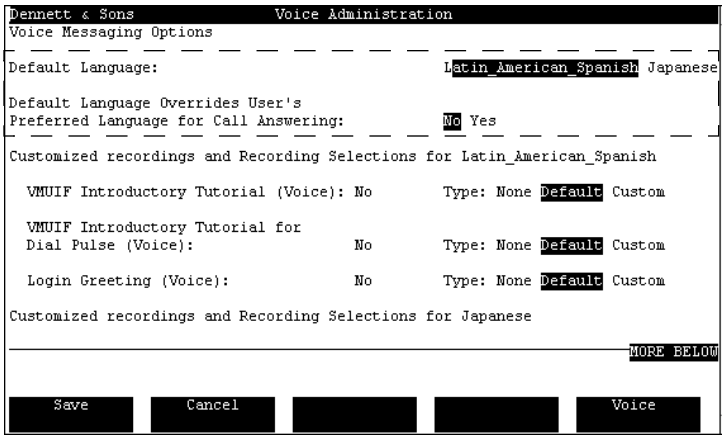
Prompts are played in the user's preferred language unless the system default language overrides the user's preferred language.

Procedure

To set up languages on a multilingual system, follow these steps.

Starting Point: The Customer Administration menu

Step	Action
1	Select Voice Administration.
2	Select Voice Messaging Options. ***Result:*** The Voice Messaging Options screen is displayed.



3	Select the language in which you want Meridian Mail prompts to be played in the Default Language field.

Step	Action
4	Do you want the (primary) default language to override users' preferred languages? • If yes, select Yes in the Default Language Overrides User's Preferred Language field. • If no, select No.
5	Do you want to continue defining voice messaging options?

IF you want to	THEN
customize or disable recordings	see the section "Customizing recordings" on page 21-25.
modify other voice messaging options	see the section "Defining operational characteristics for voice messaging" on page 21-35.
save what you have done and quit	press [Save].
quit without saving	press [Cancel].

Setting up languages on systems with dual language prompting

Description: dual language prompting

Dual Language Prompting is an optional Meridian Mail feature that is intended for bilingual environments. When installed, prompts are played in two languages:

- the primary language followed by the secondary language or
- the primary language followed by the user's preferred language

Configuration requirements

If Dual Language Prompting is installed on your system, you must specify

- the default language (also known as the primary language)
- the secondary language
- whether the default language overrides the user's preferred language

The secondary default language

When Dual Language Prompting is installed, you can choose a secondary default language in which to play prompts for call answering, express messaging, and mailbox login.

How this secondary language is used depends on other factors as described in more detail on the following pages.

Default

By default, the secondary language is set to the first language that was installed. After installation, the secondary default language is, therefore, the same as the (primary) default language.

How it works

Dual language prompting affects how prompts are played during express messaging, logon, and call answering. However, for each of these features, different factors affect how it works as described on the following pages.

Known versus unknown callers

For express messaging, whether the caller to the service is known affects how dual language prompting works. What is really meant by a "known caller" is a caller whose preferred language is known. In the case of an "unknown caller," the caller's preferred language is not known.

Known callers

A caller is known when calling from an internal phone that has a mailbox associated with it. When calling from his or her own phone, the caller's preferred language is known. When the caller is calling from another internal phone that has a mailbox, the caller's preferred language is not known. However, the preferred language for the associated mailbox is known and, therefore, the caller is considered to be known.

Unknown callers

A caller is unknown when calling from a phone that does not have an associated mailbox (and, therefore, no preferred language associated with it).

An unknown caller could be calling from an external phone or an internal phone that does not have an associated mailbox.

How it works for Express Messaging

Stage 1: express messaging DN is dialed

This is how dual language prompting works when a caller has dialed the express messaging DN but has not yet identified the mailbox number.

WHEN the caller	THEN prompts are played
is known	in the caller's preferred language.
is not known	in the primary language followed by the secondary language.

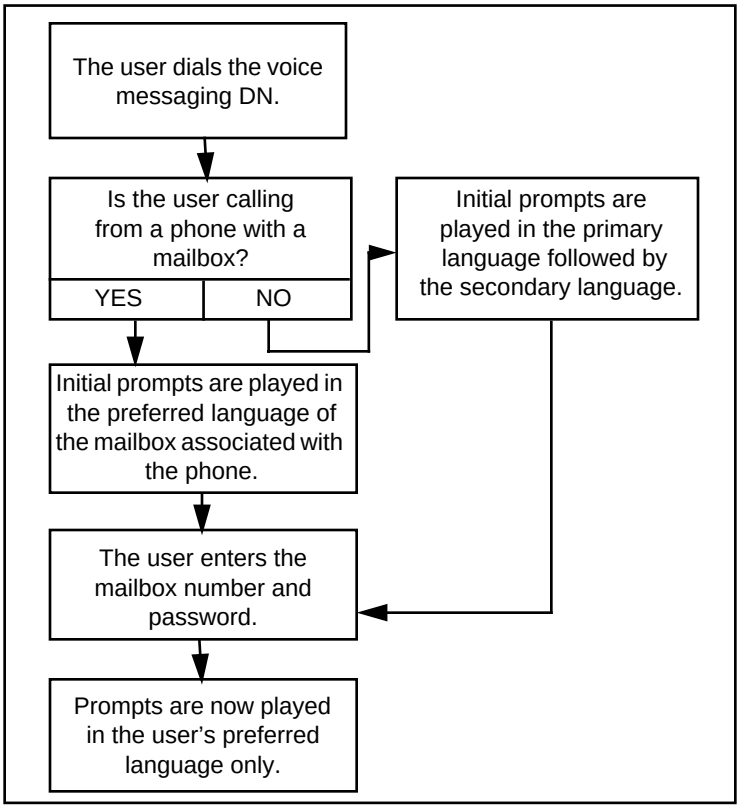
Stage 2: mailbox number is specified

This is how dual language prompting works once the caller has identified the mailbox number.

WHEN the default language	AND the caller	THEN prompts are played in the
does not override the user's preferred language	is known	user's preferred language.
	is not known	primary and then secondary language.
overrides the user's preferred language	is known	primary language only.
	is not known	primary and then secondary language.

How it works for logon

This is how dual language prompting works when a user is logging on to his or her mailbox. The setting in the Default Language Overrides User's Preferred Language field does not affect how dual prompting works in this case.



Configuring dual language prompting for call answering

The following factors affect how dual language prompting works during call answering sessions:

- whether the system default language overrides the user's preferred language
- whether dual language prompting is enabled in the user's class of service

Use this table to help you decide how to configure dual language prompting.

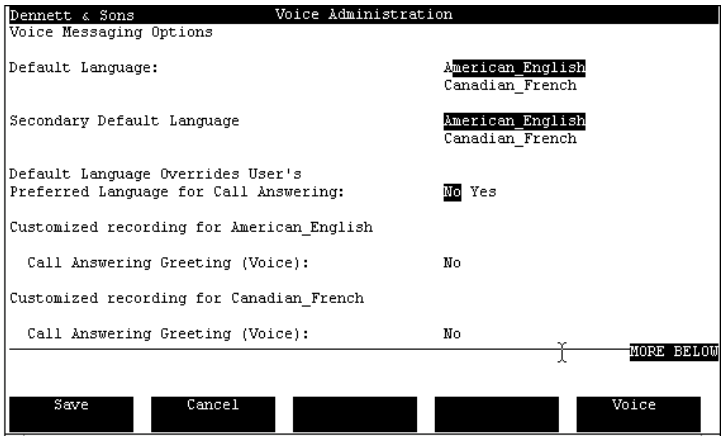
IF you want prompts	THEN set	AND
to be played in the primary language followed by the user's preferred language	the Default Language Overrides User's Preferred Language to No	enable dual language prompting in the user's class of service.
to be played in the user's preferred language only	the Default Language Overrides User's Preferred Language to No	disable dual language prompting in the user's class of service.
to be played in the primary language followed by the secondary language	the Default Language Overrides User's Preferred Language to Yes	enable dual language prompting in the user's class of service.
to be played in the primary language only	the Default Language Overrides User's Preferred Language to Yes	disable dual language prompting in the user's class of service.

Setting up languages for dual language prompting

To set up languages on a system that has dual language prompting, follow these steps.

Starting Point: The Customer Administration menu

Step	Action
1	Select Voice Administration.
2	Select Voice Messaging Options. ***Result:*** The Voice Messaging Options screen is displayed.



3	Select the language in which you want Meridian Mail prompts to be played in the Default Language field.
4	Select the secondary default language.
5	Do you want the (primary) default language to override users' preferred languages? • If yes, select Yes in the Default Language Overrides User's Preferred Language field. • If no, select No.

Step	Action
6	What do you want to do next?

IF you want to	THEN
customize or disable recordings	see the section "Customizing recordings" on page 21-25.
modify other voice messaging options	see the section "Defining operational characteristics for voice messaging" on page 21-35
save what you have done and quit	press [Save].
quit without saving	press [Cancel].

Section C Customizing recordings

In this section

Overview

Introduction

Various recordings can be customized for each customer. The recordings that you can customize differ depending on the interface type (MMUI or VMUIF).

MMUI call answering greeting

If the interface is MMUI, you can record a custom call answering greeting that identifies your organization.

See “Recording a customized call answering greeting” on page 21-27.

VMUIF tutorials and greeting

If the interface is VMUIF, there are three associated recordings:

- an introductory tutorial for touch-tone phone users
- an introductory tutorial for dial pulse phone users
- a greeting that is played to users when they log in to Meridian Mail

There are prerecorded (“canned”) recordings of these tutorials and the login greeting that are enabled by default.

You can either use these default recordings, customize them, or disable them altogether.

See “VMUIF introductory tutorials and the VMUIF login greeting” on page 21-30.

Recording a customized call answering greeting

Description

The call answering greeting is an optional greeting for the MMUI interface. It typically consists of the spoken name of an organization and is used to identify an organization to callers and users.

Default

By default, there is no call answering greeting. There is no generic call answering greeting. A custom greeting must be recorded if you want to use this greeting.

When the greeting is played

The call answering greeting is played when

- an external caller is transferred to Meridian Mail to leave a message (call answering)
- a user answers a remote notification call

Multilingual systems

If more than one language is installed on your Meridian Mail system and you want to record a call answering greeting, you need to record one greeting for each language.

Before you begin

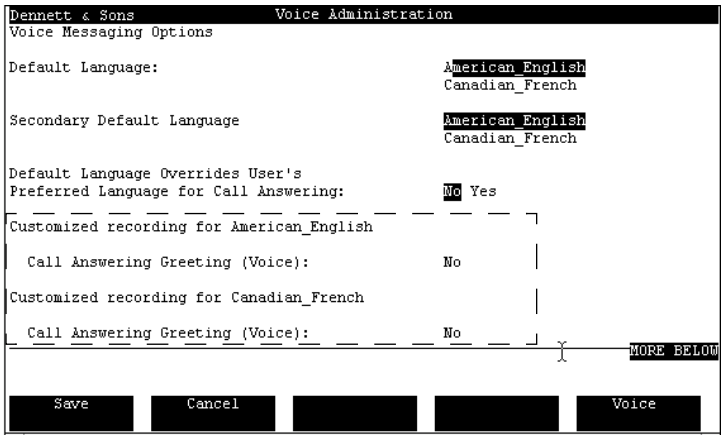
You must access the Voice Messaging Options screen before beginning the following procedure. The procedure for accessing this screen is on page 21-5.

Procedure

To record a call answering greeting, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Move the cursor to the (first) Call Answering Greeting (Voice) field.



2 Press the [Voice] softkey.

Result: The recording softkeys are displayed, and you are prompted for an extension number.

3 Enter the extension of the phone you will use to make the recording.

Result: The phone rings.

4 Pick up the handset.

5 Press the [Record] softkey.

Result: The [Stop] softkey is displayed.

6 Speak the call answering greeting and press [Stop] when you are done.

Note: Recording stops automatically if the greeting exceeds the Maximum Prompt Size or the Record Timeout set in the Voice Services Profile.

7 Do you want to verify the recording?

- If yes, press the [Play] softkey.
- If no, go to step 9.

Step	Action
8	Do you want to rerecord the greeting? • If yes, repeat steps 5 to 7 until you are satisfied with the greeting. ***Note:*** The old recording will be recorded over. • If no, go to step 9.
9	Do you have more than one language installed? • If yes, press the [Return] softkey to return to the Voice Messaging Options screen and go to step 10. ***Note:*** Do not hang up the phone. • If no, go to step 11.
10	Move your cursor to the next Call Answering Greeting field (for the next language), and repeat steps 2 to 7 until a greeting has been recorded for each language.
11	Press the [Disconnect] softkey and hang up the phone.
12	Do you want to change any other voice messaging options? • If yes, see the section "Defining operational characteristics for voice messaging" on page 21-35. • If no, press the [Save] softkey.

VMUIF introductory tutorials and the VMUIF login greeting

Introduction

There are three recordings for the VMUIF interface:

- the introductory tutorial (for touch-tone users)
- the introductory tutorial (for dial-pulse users)
- the login greeting

Prerecorded ("canned") versions of these recordings are provided. These default recordings are enabled by default.

You can either use these default canned recordings, customize them, or disable them altogether.

The VMUIF introductory tutorials

When the tutorial is played

This introductory tutorial is played to users when they log on for the first time to familiarize them with the service.

The default (touch-tone) tutorial

This is the prerecorded tutorial (for touch-tone users) that is enabled by default:

"You are about to hear an introduction to call answering. This service will allow your callers to leave you recorded messages. You can play back your messages from your home phone or, if you create a password, from any touch-tone phone outside your home. You can also record a personalized greeting that will be played to your callers, and you can erase your messages right away or store them temporarily in your mailbox. Step-by-step instructions will guide you through your sessions. And remember, for help at any time, just press zero."

The VMUIF introductory tutorials, cont'd

The default dial-pulse tutorial

This is the prerecorded tutorial for dial pulse users that is enabled by default:

"*You are about to hear an introduction to call answering. This service will allow your callers to leave you recorded messages. You can listen to your messages from your home phone at any time. You can also play your messages from any touch-tone phone. And by calling the Greeting Change Service, you can record a personalized greeting that will be played to your callers. Step-by-step instructions will guide you through your sessions. Consult the brochure for more information.*"

The login greeting

When the greeting is played

The login greeting is played to users when they log in to Meridian Mail.

The default login greeting

This is the prerecorded login greeting that is enabled by default:

"Welcome to call answering."

Multilingual systems

If more than one language is installed on your Meridian Mail system, you need to record a separate version of the tutorials and login greeting for each installed language.

Recording or disabling VMUIF tutorials and login greeting

When to use

Follow this procedure if you want to customize or disable one or more of the following:

- the VMUIF introductory tutorial
- the VMUIF introductory tutorial (dial-pulse version)
- the login greeting

Before you begin

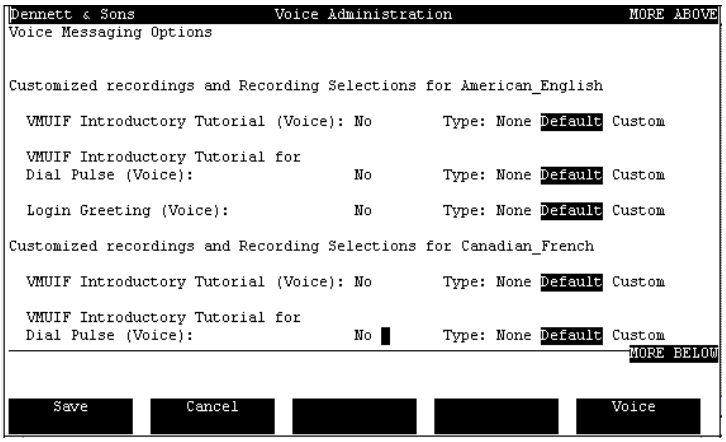
You must access the Voice Messaging Options screen before beginning the following procedure. The procedure for accessing this screen is on page 21-5.

Procedure

To record or disable a tutorial or greeting, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Select what you want to record or disable by moving your cursor to the “Type” field associated with one of the following fields. • VMUIF Introductory Tutorial • VMUIF Introductory Tutorial for Dial Pulse • Login Greeting



Step	Action
2	Do you want to disable the tutorial or greeting? • If yes, select None. Do this for each tutorial or greeting you want to disable. • If no, go to step 3.
3	Do you want to record a custom tutorial or greeting? • If yes, go to step 4. • If no, go to step 14.
4	Press the [Voice] softkey. ***Result:*** You are prompted for the extension of the phone you want to use to make the recording.
5	Enter the extension and press <Return>. ***Result:*** The phone rings.
6	Pick up the receiver. ***Result:*** The recording softkeys are displayed.
7	Press the [Record] softkey.
8	At the sound of the beep, speak the greeting or tutorial.
9	Press the [Stop] softkey to stop recording.
10	Do you want to verify the recording? • If yes, press the [Play] softkey, listen to the recording, and then go to step 11. • If no, go to step 12.
11	Do you want to rerecord? • If yes, press the [Record] softkey to rerecord the current recording until you are satisfied with the recording. • If no, go to step 12.
12	Select Custom to enable the tutorial or greeting you recorded.
13	Do you want to record another tutorial or greeting? • If yes, move the cursor to the appropriate tutorial or greeting field, and repeat steps 7 to 12 for each additional recording. • If no, go to step 14.
14	Do you want to modify any other voice messaging options? • If yes, see the section "Defining operational characteristics for voice messaging" on page 21-35. • If no, press [Save].

Section D Defining operational characteristics for voice messaging

In this section

Overview

Introduction

This section describes

- how to enable or disable voice messaging features such as timed delivery, name dialing/addressing, and external call sender
- how to set up a broadcast mailbox
- how to define voice messaging characteristics such as
  - how long to store read messages
  - whether or not to play a warning message to users when their mailbox is full
  - when network messages should be delivered
  - local addressing lengths (if you have enabled address expansion)

Defining MMUI voice messaging options

This is a high-level procedure that describes the tasks you can perform if the interface is MMUI. Detailed step-by-step procedures are provided in the rest of this section.

Step	Action	See page
1	Enable or disable timed delivery and name dialing/ name addressing.	21-38
2	Set up the broadcast mailbox.	21-45
3	Define the billing DN.	21-48
4	Define the dialing prefix for outgoing calls and the customer DN length.	21-50
5	If address expansion is enabled (the System Addressing Length in General Options is a non-zero value), define the local addressing lengths.	21-55
6	If Meridian Networking is installed, define the message delivery priority.	21-57
7	Specify the mailbox full warning threshold.	21-59
8	Specify the maximum read message retention.	21-61
9	Enable or disable external call sender.	21-64

Defining VMUIF voice messaging options

This is a high-level procedure that describes the tasks you can perform if the interface is VMUIF. Detailed step-by-step procedures are provided in the rest of this section.

Step	Action	Page
1	Define the lockout revert DN and personal distribution list prefix.	21-43
2	Set up the broadcast mailbox.	21-45
3	Define the billing DN.	21-48
4	Define the dialing prefix for outgoing calls and the customer DN length.	21-50
5	If address expansion is enabled (the System Addressing Length in General Options is a non-zero value), define the local addressing lengths.	21-55
6	Specify the maximum read message retention.	21-61
7	Enable or disable external call sender.	21-64

Enabling/disabling timed delivery and name dialing/name addressing

Introduction

Timed delivery, name dialing, and name addressing are applicable to the MMUI interface only.

Timed delivery

The timed delivery feature allows users to record a voice message now, but tag it for delivery at a later date.

The maximum timed delivery delay

In Voice Messaging Options, you can define the maximum number of days that a message can be delayed before being delivered. The default is 31 days.

Example

You have defined the maximum delay as 62 days. A user tries to tag his or her message for a delivery date of 75 days from today. The user hears the following message:

"*The date you have entered is too far into the future. Please reenter the date.*"

Name dialing and name addressing

Name dialing and name addressing allow users and callers to dial or address users when the extension or mailbox number is not known. As long as the caller knows the user's name, the user can be reached.

Name dialing

Name dialing allows users and callers who have accessed a thru-dial service to enter a user's name instead of their extension. The digits that the caller enters are interpreted as letters instead of numbers.

Name addressing

Name addressing allows users to enter another user's name instead of a mailbox number when composing a voice message, composing personal distribution lists, or when using express messaging.

The name dialing/ addressing prefix

If name dialing and name addressing are enabled, you must define a prefix. This prefix must be entered by users or callers before they begin entering the user's name. This prefix signals Meridian Mail that the digits that are about to be entered should be interpreted as letters instead of numbers.

Thru-dial services

When defining a thru-dial service, you have the option of specifying the dialing method as Dial by Number, Dial by Name, or Both.

To select Dial by Name or Both, Name Dialing and Name Addressing must be enabled in the Voice Messaging Options screen.

If Both is selected, meaning that the caller has the choice of how he or she dials the user, the caller must enter the prefix.

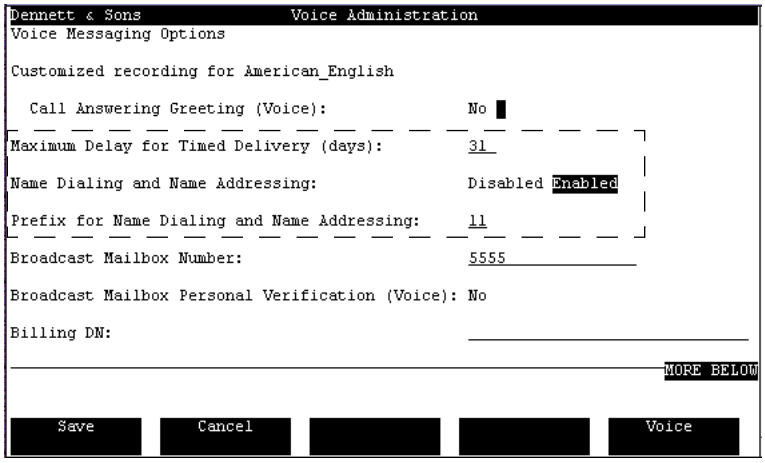
If you want to give callers this choice, but do not want them to have to enter a prefix, you can use a voice menu as a front end to two thru-dialers (one that is set up for Dial by Name and one that is set up for Dial by Number). This is described in detail in the *Voice Services Application Guide*.

When to disable name dialing/addressing

This feature should be disabled in countries where the telephone keypads do not map to an alphabetical sequence recognizable to Meridian Mail.

The Voice Messaging Options screen

These are the fields you use to enable/disable timed delivery and name dialing/name addressing.



Field descriptions

This table describes the fields that are used to enable/disable timed delivery and name dialing/name addressing.

Maximum Delay for Timed Delivery (days)	
Description	The maximum number of days that a message can be delayed before being delivered.
Default	31
Valid range	0 to 365 A setting of 0 disables the Timed Delivery feature.

Name Dialing and Name Addressing	
Description	Enables/disables the name dialing and name addressing feature.
Default	Enabled
Valid options	Enabled, Disabled
Attention	If you disable this feature and then reenable it, the prefix is reset to null and must be redefined.

Prefix for Name Dialing and Name Addressing	
Description	Users must dial this prefix in order to name dial (using thru-dial) or name address (during message or personal distribution list composition, or express messaging).
Default	11
Valid range	1 to 99
Potential conflicts	Make sure this prefix does not conflict with (duplicate) or underlap (begin with the same digits) any of the following: • mailbox numbers • telephone extensions • distribution list numbers • the DNU prefix • the AMIS compose prefix

Procedure

To enable/disable timed delivery or name dialing/name addressing, or both, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Do you want to disable timed delivery? • If yes, enter 0 in the Maximum Delay for Timed Delivery field. • If no, enter the maximum number of days you want users to be able to delay delivery of voice messages.
2	Do you want to disable name dialing and name addressing? • If yes, select Disabled in the Name Dialing and Name Addressing field. • If no, select Enabled.
3	Are name dialing and name addressing enabled? • If yes, change the prefix if necessary. • If no, go to step 4.
4	Do you want to continue defining voice messaging options?

IF you want to	THEN
continue	see page 21-45.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

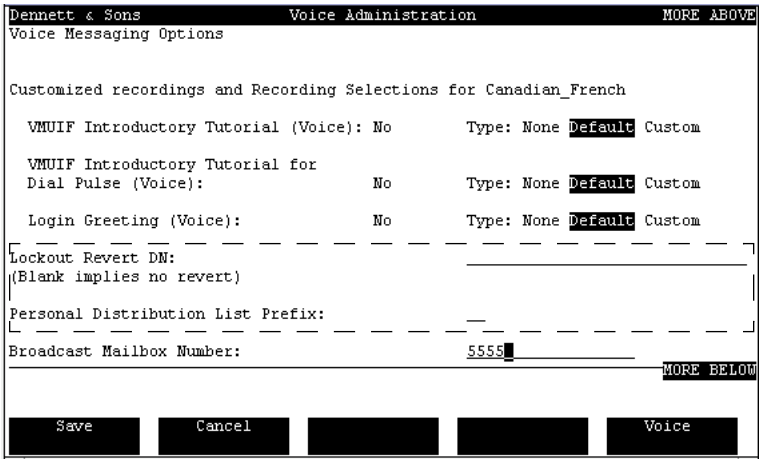
Defining the lockout revert DN and personal distribution list prefix

Introduction

The lockout revert DN and personal distribution list prefix are applicable to the VMUIF interface only.

The Voice Messaging Options screen

These are the relevant fields in the Voice Messaging Options screen.



Field descriptions

This table describes the fields in which you define the lockout revert DN and personal distribution list prefix.

Lockout Revert DN	
Description	This is the DN to which users are transferred if the mailbox that they are trying to log in to is disabled.
Default	Blank (no DN) If this field is left blank, a prompt is played to callers asking them to try again at a later time.

Personal Distribution List Prefix	
Description	Users must enter this prefix when composing a message to a distribution list. This prefix informs Meridian Mail that the number about to be entered is a distribution list rather than a mailbox.
Default	Blank If left blank, users cannot create personal distribution lists.
Valid range	1 to 99

Procedure

To define the lockout revert DN and personal distribution list prefix, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Do you want users to be reverted to a particular DN if their mailbox is disabled when they try to log in? • If yes, enter this number in the Lockout Revert DN field. • If no, leave this field blank.
2	Do you want users to be able to create personal distribution lists? • If yes, enter a prefix in the Personal Distribution Prefix field (or use the default prefix). • If no, make this field blank.
3	Do you want to continue defining voice messaging options?

IF you want to	THEN
continue	see page 21-45.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

Setting up the broadcast mailbox

Introduction

Broadcast mailboxes can be set up for both the MMUI and VMUIF interface.

Description

When you compose a message to the broadcast mailbox, the message is sent to all users for that customer.

To set up a broadcast mailbox, all you have to do is assign a mailbox number to the broadcast mailbox in the Voice Messaging Options screen. You do not need to set up an actual mailbox through User Administration.

The broadcast mailbox personal verification

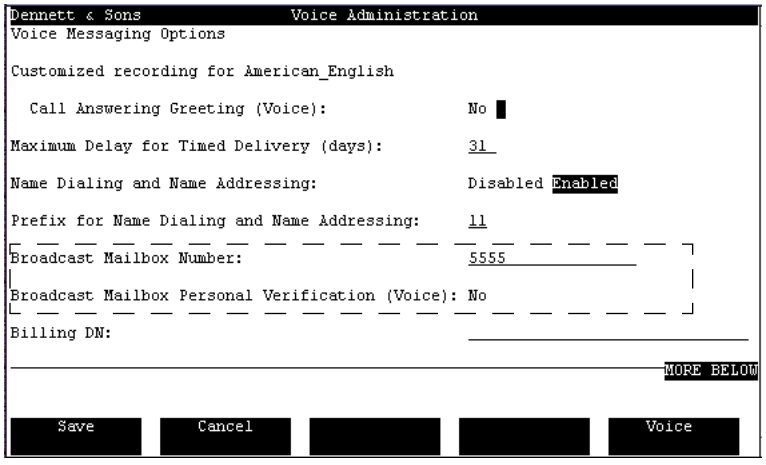
You can also record a personal verification for the broadcast mailbox so that when you enter the mailbox number during message composition, you get a verification that you have entered the correct number.

The personal verification for a broadcast mailbox can say something like this:

“Broadcast mailbox 5555.”

The Voice Messaging Options screen

These are the fields in the Voice Messaging Options screen in which you set up the broadcast mailbox.



Field descriptions

This table describes the fields that you use to set up the broadcast mailbox.

Broadcast Mailbox Number	
Description	This is the number of the mailbox that is used to send broadcast messages. This number is specified when you are prompted for a mailbox number while composing the message.
Default	5555
Potential Conflicts	Make sure this number does not conflict with any other numbers in Meridian Mail.

Broadcast Mailbox Personal Verification (Voice)	
Description	This is a read-only field that indicates whether a personal verification has been recorded for the broadcast mailbox.

Procedure

To set up a broadcast mailbox, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Change the broadcast mailbox number if necessary.
2	Do you want to record a personal verification for the broadcast mailbox? • If yes, go to step 3. • If no, go to step 12.
3	Put the cursor on the Broadcast Mailbox Personal Verification (Voice) field.
4	Press the [Voice] softkey.
5	Enter the extension of the phone you will use to record the verification, and press <Return>. ***Result:*** The phone rings.
6	Pick up the receiver. ***Result:*** The recording softkeys are displayed.
7	Press the [Record] softkey.

Step	Action
8	At the sound of the beep, speak the verification. ***Example:*** *"Broadcast mailbox 5555."*
9	Press the [Stop] softkey to stop recording.
10	Do you want to verify the recording? • If yes, press the [Play] softkey, listen to the recording, and go to step 11. • If no, press [Disconnect] and hang up the phone. Go to step 12.
11	Do you want to rerecord the verification? • If yes, repeat steps 7 to 10. • If no, press [Disconnect] and hang up the phone. Go to step 12.
12	Do you want to continue defining voice messaging options?

IF you want to	THEN
continue	see page 21-48.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

Defining the billing DN

Introduction

A billing DN can be defined for both the MMUI and VMUIF interface.

How the billing DN is used

This DN may be used for billing purposes when an outbound call is made. There are other numbers that are also used for billing.

This table shows which numbers Meridian Mail will try to use for a particular outbound service.

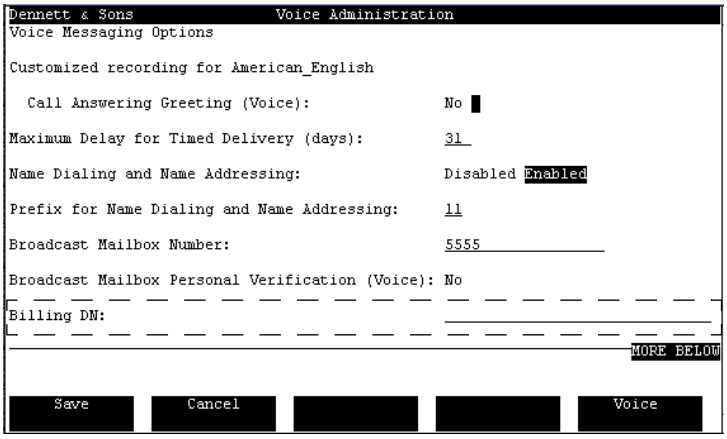
Service	A Used if defined	B Used if A not defined	C Used if A and B not defined
Remote Notification and Delivery to Non-User	Billing DN in Voice Messaging Options	Mailbox Number	Nil. Call is still made.
Thru-Dial service	Billing DN in Voice Messaging Options	VSDN of dialed service	Nil. Call is still made.
Extension dialing (mailbox thru-dial)	Billing DN in Voice Messaging Options	Mailbox Number	Nil. Call is still made.
Fax Item and Fax Item Maintenance (callback delivery)	Billing DN in Session Profile	Billing DN in Voice Messaging Options	VSDN of dialed service
AMIS Networking	Billing DN in Voice Messaging Options	Sender’s DN	Nil. Call is still made.

Procedure

To define the billing DN, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Go to the Billing DN field.



Step	Action
2	Enter a DN that is up to 30 digits long.
3	Do you want to continue defining voice messaging options?

IF you want to	THEN
continue when you have an MSM system	see page 21-50.
continue when you have a Modular Option GP system	see page 21-55.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

Defining the dialing prefix for outgoing calls and the customer DN length

Introduction

The Customer DN Length and Dialing Prefix for Outgoing Calls fields work together to ensure that features that place outcalls (such as thru-dial, DNU, RN, call sender) properly originate calls to users in the same customer.

MSM only

These fields are applicable to Meridian Mail MSM systems only.

When to use

You must define these fields under the following conditions.

Single-switch configuration

Meridian Mail is connected to a single SL-100. Each customer in Meridian Mail corresponds to a customer on the switch. Some or all of your channels are shared by all customers.

Multiple-switch configuration

Meridian Mail is connected to several SL-100s. Each customer in Meridian Mail is connected to one particular SL-100. Some or all of your channels are shared by all customers.

Arbitrary channel usage

When Meridian Mail presents a DN to the switch, it arbitrarily picks a channel. This means that

- in a single-switch configuration, a channel in any of the customer groups on the switch might be used.
- in a multiple-switch configuration, a channel in any of the SL-100s might be used.

Implication

This means that even if a call is being placed from one user to another user in the same customer, the channel that is used to place the call can be external to the customer. In this case, the supplied DN would not be sufficient since it does not contain the dialing codes necessary to place the call from an external channel or switch.

The customer DN length

The Customer DN Length is the length of DNs that are dialed to access users in the same customer.

Example
In a centrex customer, the customer DN length is often four. In residential customers, it is often seven.

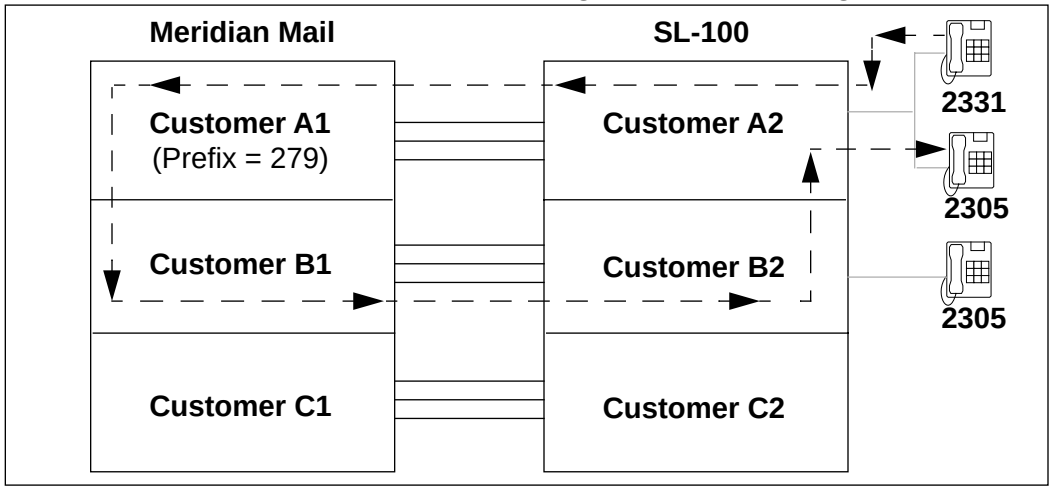
The dialing prefix

When the length of a supplied DN is equal to or shorter than the customer DN length, the Dialing Prefix for Outgoing Calls is prepended to the supplied DN.

This is an indication that the call is to a user in the same customer and will, therefore, need the prefix to generate a dialable number if an external channel is used to place the call.

Example 1: single-switch setup

This diagram shows how an external channel is used to place a call within the same customer in a single-switch configuration. The Customer DN Length is 4 and the Dialing Prefix is 279.



What happens

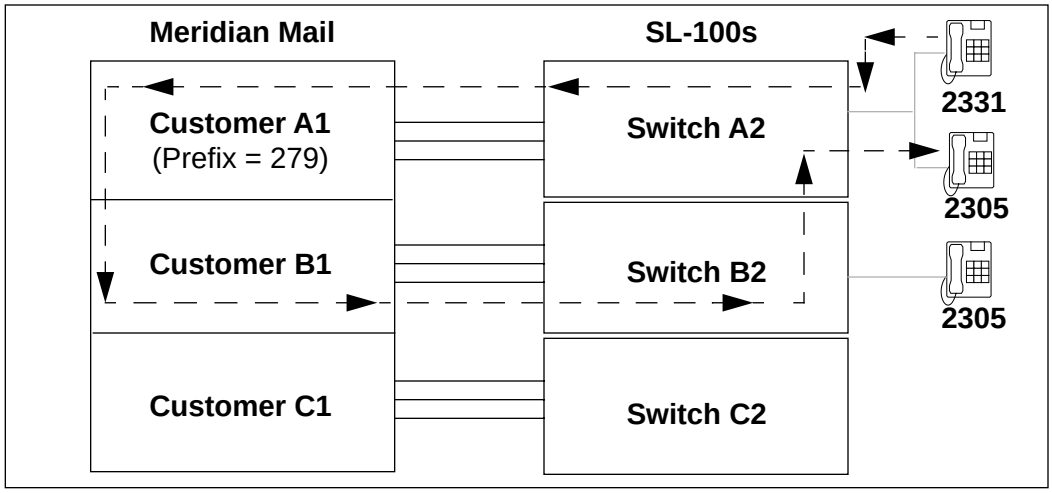
This table describes what happens in more detail.

Stage	Description
1	The caller at extension 2331 requests a thru-dial to extension 2305 in the same customer (A2).
2	Meridian Mail compares the length of the supplied DN to the Customer DN Length.
3	Since the supplied DN is equal to the customer DN length, the dialing prefix is added to the supplied DN to generate the dialable DN 279-2305.
4	Meridian Mail takes a channel associated with switch Customer B2, and therefore, external to Customer A2.
5	Meridian Mail dials 279-2305 to dial the user that is in the same customer group. Since this number is dialable from Customer B2, the call is successfully placed.

If the prefix was not added to the DN, Meridian Mail could not place the call using the supplied DN 2305. Or, in this example, since there is also an extension 2305 in Customer B2, the thru-dial would have been placed to the wrong user.

Example 2: multiple switches

This diagram shows how a channel on an external switch is used to place a call within the same customer in a multiple-switch configuration.

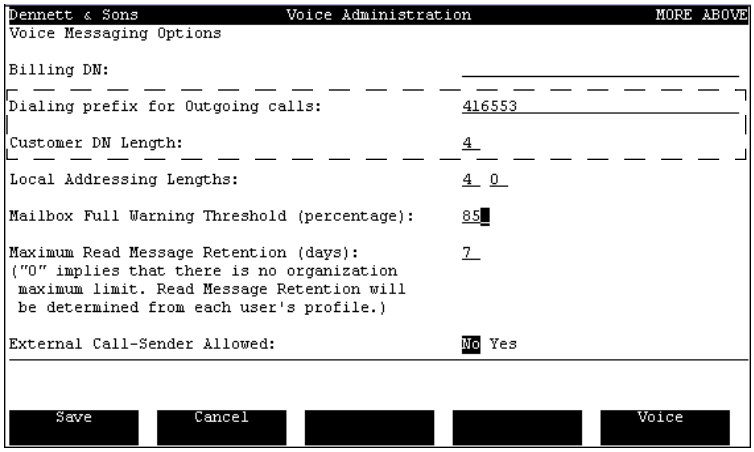


What happens

The explanation of what happens is the same as for Example 1, except that the channel that is used is on a different (and, therefore, external) switch instead of in a different customer on the same switch.

The Voice Messaging Options screen

These are the fields in the Voice Messaging Options screen in which you define the dialing prefix for outgoing calls and the customer DN length.



Field descriptions

This table describes the fields that you use to define the dialing prefix and customer DN length.

Dialing prefix for Outgoing calls	
Description	This prefix is added to DNs when an outcall is placed to ensure that the DN is dialable should an external channel be used.
Usage	This prefix is used by Meridian Mail features that place outcalls such as thru-dial and call sender.
Default	Blank

Customer DN Length	
Description	This is the length of DNs in the switch customer group corresponding to the Meridian Mail customer.
Default	0
Typical settings	For centrex customers, this field is typically set to 4. For residential/small business customers, this field is typically set to 7.

Procedure

To define the dialing prefix for outgoing calls and the customer DN length, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Go to the Dialing Prefix for Outgoing Calls field.
2	Enter the prefix that needs to be prepended to DNs when outgoing calls are placed to users in the same customer.
3	Enter the length of DNs in the current customer in the Customer DN Length field.
4	Do you want to continue defining voice message options?

IF you want to	THEN
continue	see page 21-55.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

Defining the local addressing lengths for address expansion

When to use

You must define one or two local addressing lengths if the address expansion feature is enabled.

Address expansion is enabled when the System Addressing Length field in the General Options screen (at the System Administration level) is set to a non-zero value.

Description: local addressing lengths

The local addressing length fields determine the acceptable length of mailbox numbers that users can enter during message addressing and express messaging.

Rather than entering full (system-length) mailbox numbers, users can enter shorter mailbox numbers (the length of which is determined by the local addressing length setting).

Default
0 (for both fields)

Valid settings
You must enter a value that is less than the system addressing length, or you can set one or both of these fields to 0.

If both fields are set to 0, users must enter mailbox numbers equal in length to the system addressing length.

If one field is set to 0 and the other to a non-zero value, users can enter mailbox numbers in their long form (equal in length to the system addressing length) or their short form.

See also

There are a number of steps you must go through to enable address expansion. For more information about the address expansion feature, see “Enabling address expansion” on page 14-8.

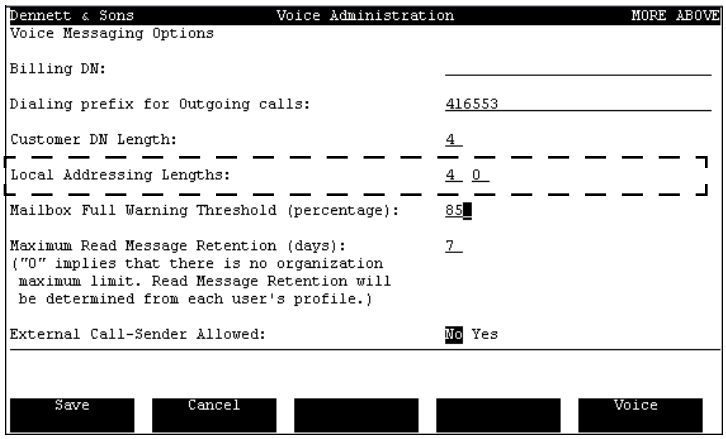
Procedure

To define the local addressing lengths, follow these steps.

Starting Point: The Voice Messaging Options screen

Step Action

1 Go to the Local Addressing Lengths field.



2 Enter the length(s) of mailbox numbers in the current customer.

3 Do you want to continue defining voice message options?

IF you want to	THEN
continue (if Networking is enabled)	see page 21-57.
continue (if the interface is MMUI)	see page 21-59.
continue (if the interface is VMUIF)	see page 21-64.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

Specifying the message delivery priority for networked systems

When to use

This procedure applies only if Meridian Networking is

- installed on the system
  and
- enabled for the current customer

Message delivery priority

The Default Message Delivery Priority field determines when network messages are delivered. You can choose between Standard and Economy delivery. The default is Standard.

Standard delivery
Messages are retained for a certain period of time before they are sent to remote sites.

This time period is defined in the Standard Holding Time field in the Network Scheduling Parameters screen.

Economy delivery
Messages are sent at a specific time each day, usually during off-hours, when rates are cheaper.

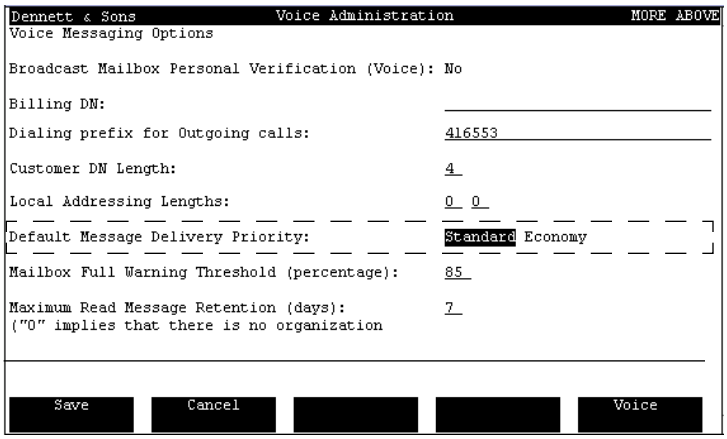
This delivery time is defined in the Economy Initiation Time field in the Network Scheduling Parameters screen.

Procedure

To set the message delivery priority, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Go to the Default Message Delivery Priority field.



2 Choose when you want network messages to be delivered.

IF you want messages	THEN
to be delivered after a specified holding time	select Standard.
to be delivered at the same time each day (during off-hours)	select Economy.

3 Do you want to continue defining voice message options?

IF you want to	THEN
continue (if the interface is MMUI)	see page 21-59.
continue (if the interface is VMUIF)	see page 21-61.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

Specifying the mailbox full warning threshold

Introduction

This warning threshold is applicable to the MMUI interface only.

Description

When an MMUI user's mailbox starts to get full, a warning message can be played to remind the user that his or her mailbox is almost full and to start deleting messages. This message can be disabled.

The warning threshold

This threshold determines when this message is played. The threshold is based on how full the user's mailbox is.

Default
The default setting is 85 percent (%).

Valid range
You can enter a value between 0 and 100 percent (%).

Example

The warning threshold is set to 85%. The user's voice storage limit (as defined in the user's class of service) is five minutes.

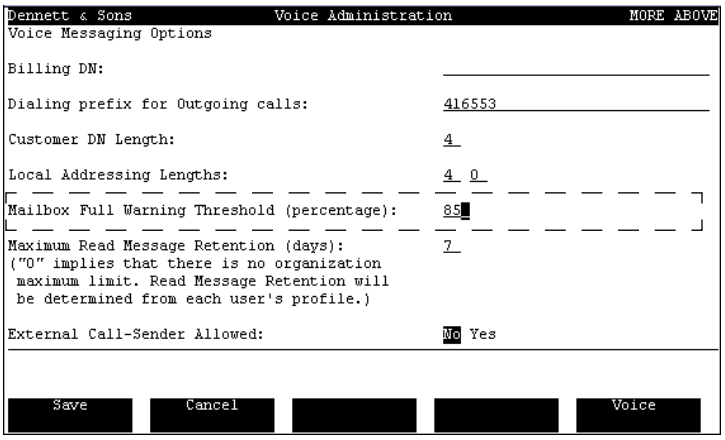
A caller leaves a message that increases the user's voice storage to 4 minutes 30 seconds. Since this is slightly more than 85% of the total voice storage for the user, the next time the user logs on, the mailbox full warning threshold message is played.

Procedure

To set the mailbox full warning threshold, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Go to the Mailbox Full Warning Threshold field.



2 Do you want to disable the warning threshold message?

- If yes, set the field to 0.
- If no, set the field to a non-zero value that represents how full the mailbox must be before the warning message is played.

3 Do you want to continue defining voice message options?

IF you want to	THEN
continue	see page 21-61.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

Specifying the maximum read message retention

Introduction

The maximum read message retention applies to both the MMUI and VMUIF interfaces.

Description

Once a user listens to a message, that message is still stored on the system. A message that has been listened to is known as a read message.

The system will begin to fill up with read messages over time. You can either have Meridian Mail delete any read messages every certain number of days, or you can leave it up to users to delete read messages on their own.

Maximum read message retention

The Maximum Read Message Retention (days) field determines how long read messages are stored before being deleted.

WHEN this field	THEN read messages are
is set to 0	not automatically deleted. They are retained until deleted by the user.
is set to 1 or more	deleted every X days as specified in this field.

Default

The default maximum read message retention is seven days.

Valid range

You can enter a value between 0 and 31 (days).

ATTENTION

It is recommended that you set the read message retention to a non-zero value to avoid filling the disk up with read messages.

Class of service setting

This field also exists in the Add and View/Modify Class of Service screens. This table describes which setting is used under different conditions.

WHEN the Voice Messaging Options setting is	AND the Class of Service setting is	THEN read messages are kept
0 (zero)	0 (zero)	until the user deletes them.
0 (zero)	1 or more	for the time specified in the Class of Service screen.
1 or more	0 (zero)	for the time specified in the Voice Messaging Options screen.
1 or more	1 or more	for the lesser of the two values.

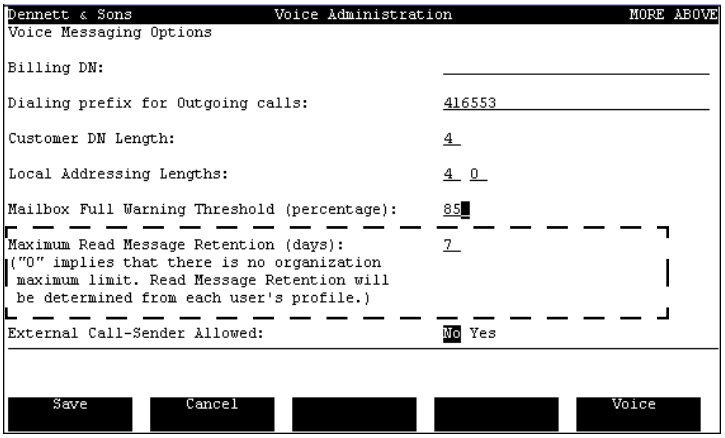
Procedure

To define the maximum read message retention, follow these steps.

Starting Point: The Voice Messaging Options screen

Step Action

1 Go to the Maximum Read Message Retention field.



Step	Action
2	Do you want read messages to be stored until deleted by users? • If yes, set the field to 0. • If no, set the field to a non-zero value that represents how often you want read messages to be automatically deleted.
3	Do you want to continue defining voice message options?

IF you want to	THEN
continue	see page 21-64.
save your changes and quit	press [Save].
quit without saving your changes	press [Cancel].

Enabling/disabling external call sender

Introduction

External Call Sender is available in both the MMUI and VMUIF interfaces.

The Voice Messaging Options screen

This is the field in which External Call Sender is enabled/ disabled.

Description

When a user is listening to a voice message left by another Meridian Mail user, the user can press 9 on the keypad to immediately call back the originator of the message. This is the call sender feature.

The External Call Sender feature allows users to press 9 to call back external callers who leave voice messages.

Default

This feature is enabled by default.

VMUIF interface

For the VMUIF interface, this field interacts with the Call Sender field in the user's class of service. Both fields must be set to "Yes" for External Call Sender to work.

Restricting External Call Sender

If you enable External Call Sender, apply the appropriate restrictions to the numbers that users are allowed to call back.

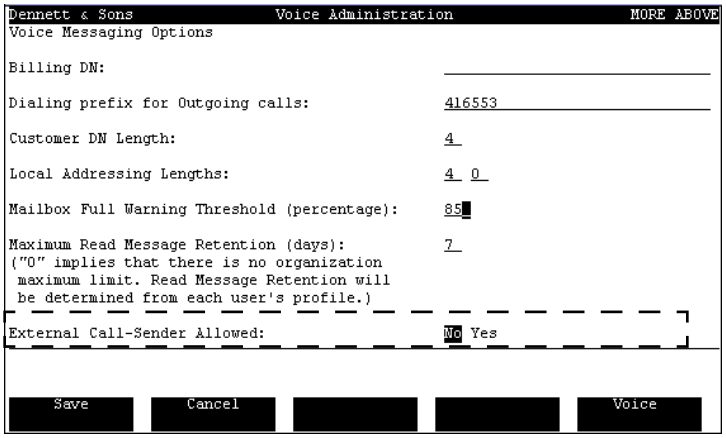
Restrictions are applied to external call sender in classes of service. See "The Add Class of Service screen (MMUI)" on page 27-11.

Procedure

To enable or disable external call sender, follow these steps.

Starting Point: The Voice Messaging Options screen

Step	Action
1	Go to the External Call-Sender Allowed field.



2	Do you want to allow users to use the call sender feature to call back external callers? • If yes, set the field to Yes. • If no, set the field to No.
3	Do you want to save the Voice Messaging Options screen with the current information? • If yes, press [Save]. • If no, press [Cancel], or make any necessary changes and then press [Save].

Chapter 22

Display options

In this chapter

Overview

Introduction

This chapter describes the different ways information can be displayed on the Voice Services Administration screens. You can control two basic options:

- how information is sorted (for example, sort VSDN table by DN or by Comment)
- whether or not the Choice of Services and Menu Actions lists are displayed

This chapter presents screen examples that show the different ways the Voice Services Administration screens appear according to the options you select. The section “Changing the display options” on page 22-9 explains how to change the display options.

Administration level

Display options are defined at the System Administration level and affect all customer groups. You cannot change the display options for an individual customer group.

The screen examples shown in this chapter show the view from the System Administration level.

Different ways of sorting the VSDN table

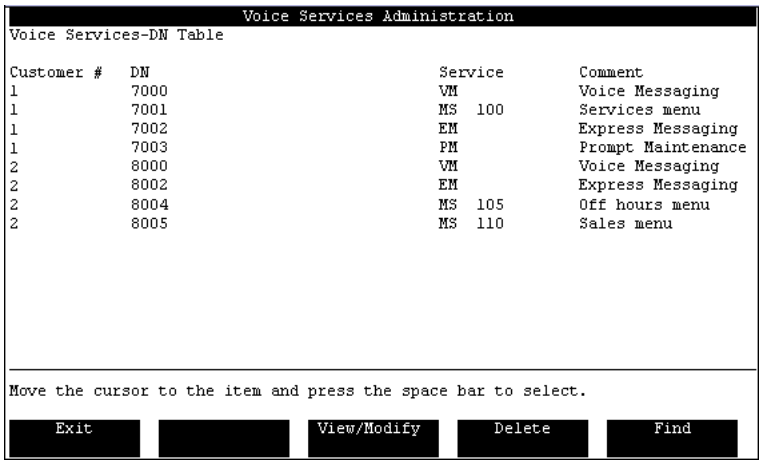
Introduction

This section provides screen examples that show how the VSDN table looks when it is

- sorted by DN (see “Example 1”)
- sorted by Comment (see “Example 2”)

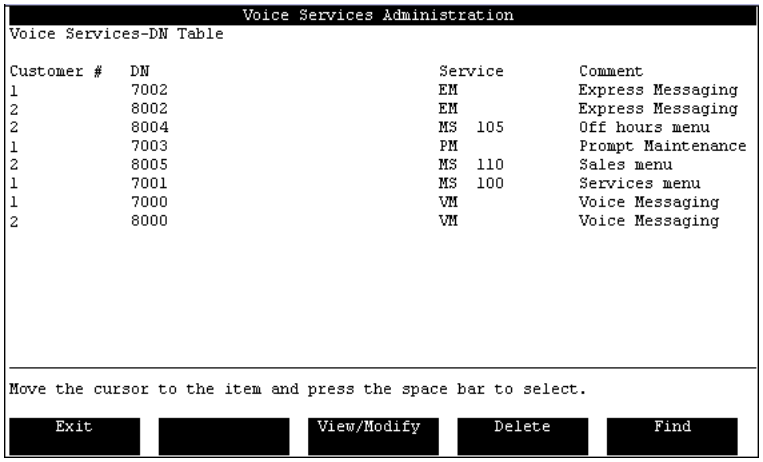
Example 1

The following example shows how the VSDN table looks when you choose to have the information sorted by the DNs.



Example 2

The following example shows how the VSDN table looks when you choose to have the information sorted by the Comment.



Different ways of sorting the service definitions tables

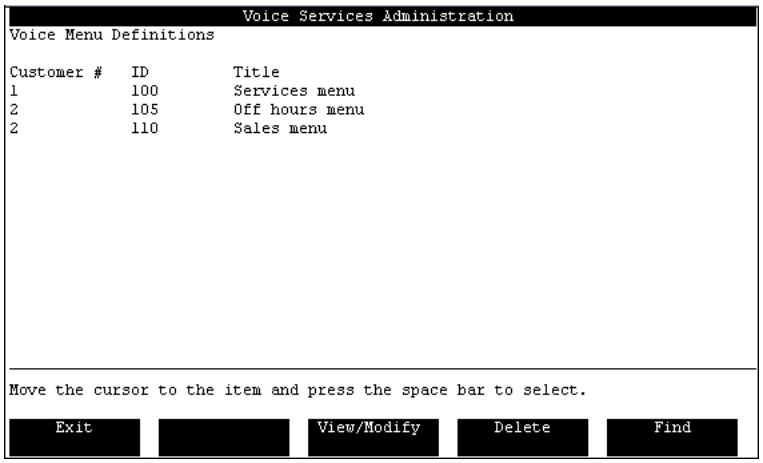
Introduction

This section provides screen examples that show how the service definition tables (for example, the Voice Menu Definitions table) look when they are

- sorted by ID (see “Example 1”)
- sorted by Title (see “Example 2”)

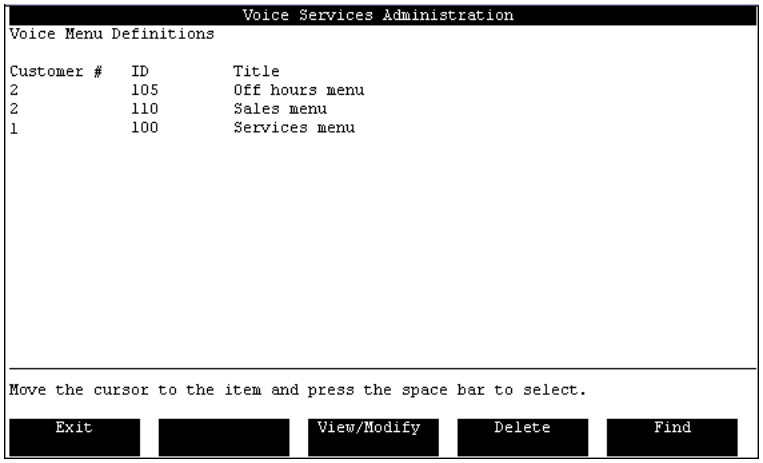
Example 1

The following example shows how the Voice Menu Definitions table looks when you choose to have the information sorted by ID.



Example 2

The following example shows how the Voice Menu Definitions table looks when you choose to have the information sorted by Title.



Different ways of sorting the Choice of Services and Menu Actions list

Introduction

This section provides screen examples that show how the Choice of Services list looks when it is

- sorted by acronym (see "Example 1")
- sorted by description (see "Example 2")

The effect on how the Menu Actions list appears would be the same.

Definition: Menu Actions

"Menu Actions" refers to the default menu actions that you can choose from when you define a voice menu. Refer to the *Voice Services Application Guide* for more details.

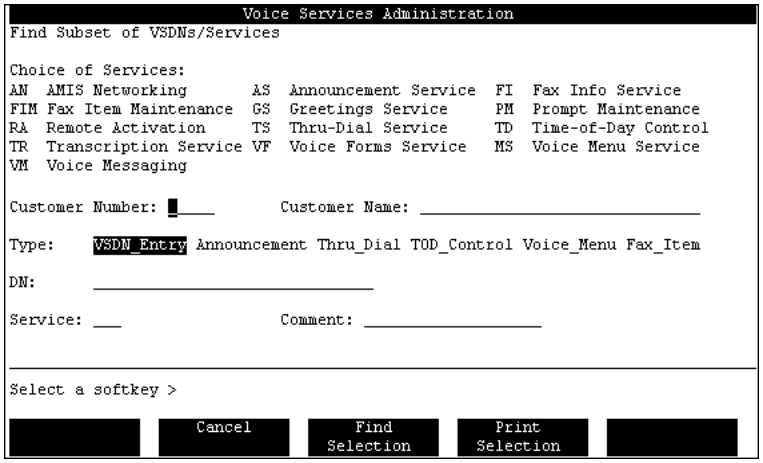
Example 1

The following example shows how the choice of services are listed in the Find Subset of VSDNs/Services screen when you choose to have the choice of services sorted by the acronym.

```
                         Voice Services Administration
Find Subset of VSDNs/Services

Choice of Services:
AN  AMIS Networking       AS  Announcement Service  FI  Fax Info Service
FIM Fax Item Maintenance  GS  Greetings Service     MS  Voice Menu Service
PM  Prompt Maintenance    RA  Remote Activation     TD  Time-of-Day Control
TR  Transcription Service TS  Thru-Dial Service     VF  Voice Forms Service
VM  Voice Messaging

Customer Number: _____       Customer Name: ______________________________

Type:     VSDN_Entry Announcement Thru_Dial TOD_Control Voice_Menu Fax_Item

DN:       ______________________________

Service: ___                 Comment: ___________________

--------------------------------------------------------------------------------
Select a softkey >

              Cancel          Find           Print
                            Selection      Selection
```

Example 2

The following example shows how the choice of services are listed in the Find Subset of VSDNs/Services screen when you choose to have the choice of services sorted by the description.



Changing the display options

Introduction

The display options are controlled by the Set Display Options screen.

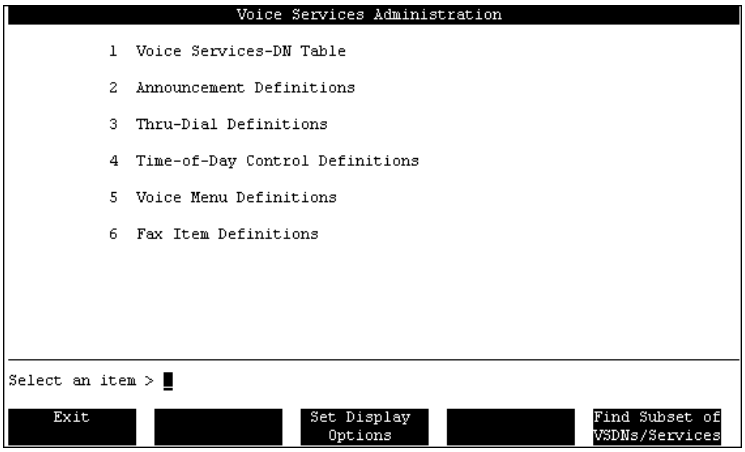
The Set Display Options screen allows you to specify how information is sorted on the Voice Services Administration screens. For example, you can decide if the Choice of Services list is sorted in alphabetical order according to service acronym (“ms”, for example) or service description (“voice menu service”, for example), or whether the Choice of Services list is displayed at all.

Procedure

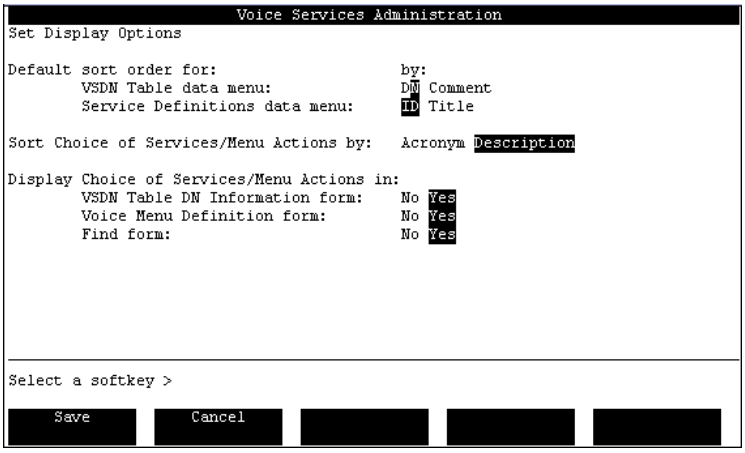
To change the display options, follow these steps.

Starting Point: Main Menu

Step	Action
1	Select Voice Administration. ***Result:*** The Voice Administration menu is displayed.
2	Select Voice Services Administration. ***Result:*** The Voice Services Administration menu is displayed and the [Set Display Options] softkey also appears.



Step	Action
3	Press the [Set Display Options] softkey. ***Result:*** The Set Display Options screen appears.



4	Make your selections according to how you want information to be sorted or displayed in the Voice Services Administration screens.
5	If you are satisfied with the changes, press [Save]. Otherwise, press [Cancel] to discard the changes. ***Result:*** Whether you save or cancel, you are returned to the Voice Services Administration menu.

Field descriptions

The following fields and options appear on the Set Display Options screen:

Default sort order for VSDN Table data menus	
Description	The selection you make affects how information is sorted in the VSDN table.
Default	DN
Valid options	DN, Comment • ***DN*** sorts entries numerically by DN. • ***Comment*** sorts entries alphabetically by comment.

Default sort order for Service Definition data menus	
Description	The selection you make affects how information is sorted in the service definitions tables (for example, in the Voice Menu Definitions screen).
Default	ID
Valid options	ID, Title • ***ID*** sorts entries numerically by service IDs. • ***Title*** sorts entries alphabetically by title.

Sort Choice of Services/Menu Actions by	
Description	The selection you make affects how the Choice of Services list and the Menu Actions list are sorted. The Choice of Services list appears on many screens including the Find subset of VSDNs/ Services screen. The Menu Actions list is displayed in the Add, View/Modify, and Delete a Voice Menu Definition screens.
Default	Description
Valid options	Description, Acronym • ***Description*** sorts entries alphabetically by description. • ***Title*** sorts entries alphabetically by title.

Display Choice of Services/Menu Actions in	
Description	You can turn the display of the Choice of Services or Menu Actions list on or off for the following: • VSDN Table DN Information screens (Add, View/Modify, Delete DN Information) • Voice Menu Definition screens (Add, View/ Modify, Delete a Voice Menu Definition) • Find Subset of VSDNs/Services screen
Default	Yes
Valid options	Yes, No • ***Yes*** shows the choice of services/menu actions. • ***No*** hides the choice of services/menu actions.

Chapter 23

Finding and printing VSDNs and service definitions

In this chapter

Overview

Introduction

Use the find feature if you want to modify, delete, print, or simply view any of the following.

- a specific VSDN
- a range of VSDNs
- all VSDNs for a certain kind of service (such as announcements, voice menus, or fax items)
- a specific service definition
- a range of service definitions that have similar titles

Administration level

The find feature is accessible from both the System Administration level and the Customer Administration level. The screen examples shown in this chapter show the view from the System Administration level.

Location of Find softkeys

Find softkeys are located on the following screens.

- the VSDN table
- service definition selection menus (such as the Announcement Definitions screen)
- the Voice Services Administration menu

Tip: Use Find as a shortcut

When you are adding a voice or fax service to Meridian Mail, you must go back and forth between the VSDN table and the Add a service definition screen (to add a VSDN for the service and to create a definition for the service). You can use the Find softkey to quickly move back and forth between the VSDN table screen and the service definition screen, as follows.

Starting Point: Any voice services administration screen that has a [Find] or [Find Subset of VSDNs/Services] softkey.

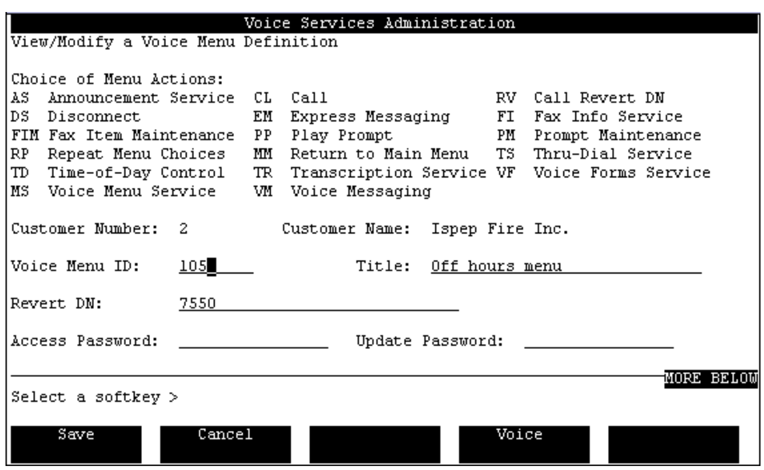
Step	Action
1	Press the [Find] softkey.
2	Select the service type that you want to add in the “Type” field and press <Tab>.
3	Press the [Find Selection] softkey. ***Result:*** The service definition screen is displayed.
4	To return to the VSDN table, press the [Find] softkey, select VSDN_Entry in the Type field and press <Tab>. Then press the [Find Selection] softkey.

Service definitions

Service definitions exist for announcements, thru-dial services, time-of-day controllers, and voice menus, and fax items (if Fax on Demand is installed on your system).

Example: service definition

Here is an example of a voice menu definition accessed while at the System Administration level.



```
                         Voice Services Administration
View/Modify a Voice Menu Definition

Choice of Menu Actions:
AS  Announcement Service  CL  Call                  RV  Call Revert DN
DS  Disconnect            EM  Express Messaging     FI  Fax Info Service
FIM Fax Item Maintenance  PP  Play Prompt           PM  Prompt Maintenance
RP  Repeat Menu Choices   MM  Return to Main Menu   TS  Thru-Dial Service
TD  Time-of-Day Control   TR  Transcription Service VF  Voice Forms Service
MS  Voice Menu Service    VM  Voice Messaging

Customer Number:  2         Customer Name:  Ispep Fire Inc.

Voice Menu ID:    105              Title:  Off hours menu

Revert DN:        7550

Access Password:                 Update Password:

                                                                 MORE BELOW
Select a softkey >

   Save         Cancel                          Voice
```

Wildcards

You do not have to remember exact DNs or service titles. You can use wildcards to fill in the parts you can’t remember.

Wildcards

Definition: wildcard

A wildcard is a character that is used in a search string to represent an unknown or variable character or string of characters.

Purpose

Wildcards have two main purposes. They allow you to find

- a particular VSDN or service definition without having to remember and enter the exact voice service DN or Comment, or service definition ID or title
- a range of VSDNs or service definitions

Types of wildcards

There are three wildcards that you can use.

Wildcard	Description
_	The underscore (_) replaces a single character.
+	The plus sign (+) replaces a string of characters.
?	The question mark (?) means “sounds like.” Meridian Mail will find words that are spelled differently but sound like the word that is entered.

Where wildcards are used

You can enter wildcards in the DN, Comment, and Title fields in the Find Subset of VSDNs/Services screen.

Examples

The following examples show how wildcards can be used when searching for a particular VSDN or service definition, or a range of VSDNs or service definitions.

You enter	Result
“210_” in the DN field	All VSDNs in the range 2100 to 2109 are retrieved.
“7_99” in the DN field	The following VSDNs are retrieved: 7099, 7199, 7299, 7399, 7499, 7599, 7699, 7799, 7899, and 7999.
“3+” in the DN field	All DNs beginning with 3 are retrieved.
“+ holiday” in the Title field (Type is Announcement)	All of the announcements whose titles end with the word “holiday” are retrieved.
“Braymore?” in the Comment field	Meridian Mail retrieves service definitions with Braymore, Braemer, and Breymore in the Comment field.

The Find Subset of VSDNs/Services screen

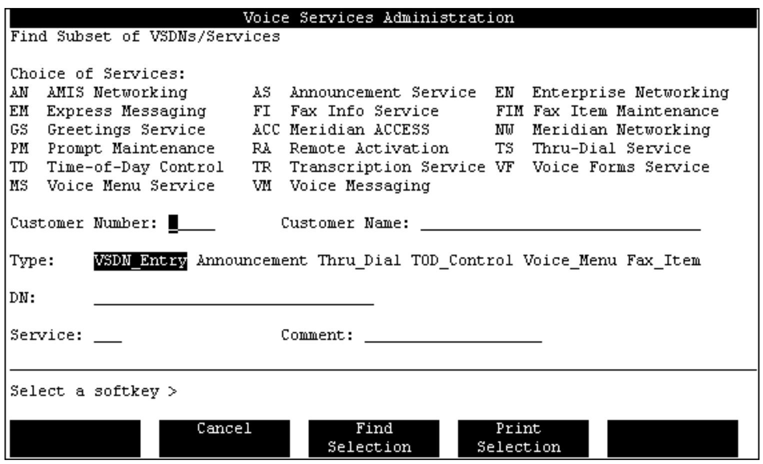
Accessing the screen

This screen can be accessed from

- the Voice Services Administration menu using the [Find Subset of VSDNs/Services] softkey
- the VSDN table using the [Find] softkey
- any service definition (such as an announcement, thru-dial, time-of-day control, voice menu, or fax item definition) using the [Find] softkey

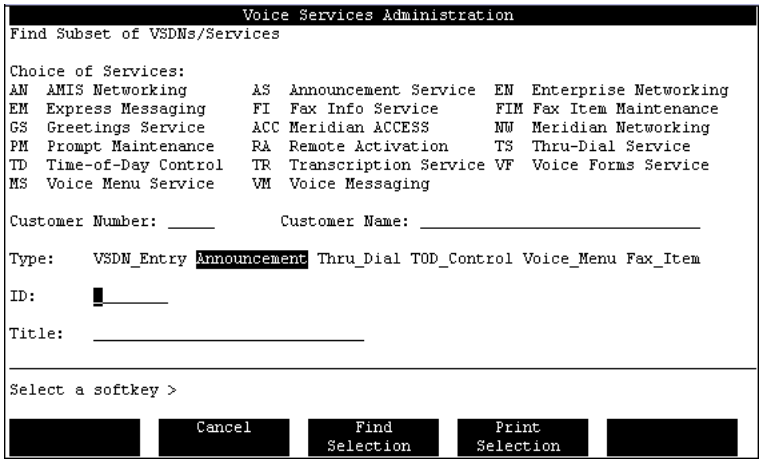
The screen: Type is VSDN

This is the Find Subset of VSDNs/Services screen when the selected Type is VSDN_Entry.



The screen: Type is service

This is the Find Subset of VSDNs/Services screen when the selected Type is a service definition (Announcement, Thru-Dial, TOD Control, Voice Menu, or Fax Item).



Note: If you select TOD Control, the Title field will not be displayed in the Find Subset of VSDNs/Services screen.

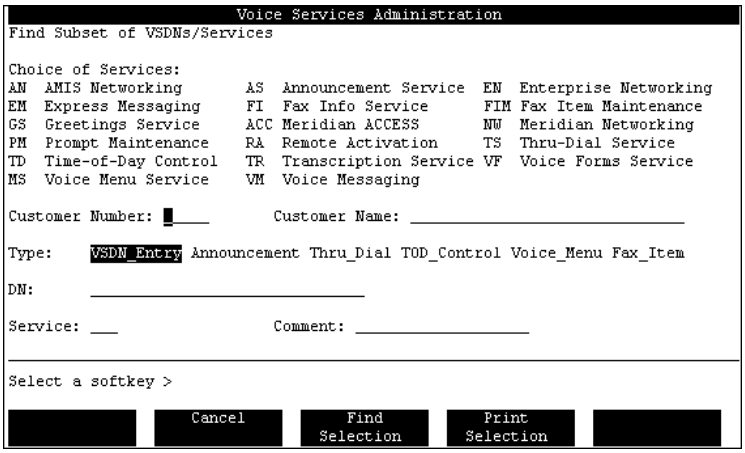
Finding and printing VSDNs

Procedure

Follow these steps to find or print a particular VSDN or a subset of VSDNs.

Starting Point: The Main Menu

Step	Action
1	Select Voice Administration.
2	Select Voice Services Administration.
3	Press the [Find Subset of VSDNs/Services] softkey. ***Result:*** The Find Subset of VSDNs/Services screen is displayed.



4	Identify the Customer Number and/or Name if you want to limit the search to a particular customer group. If you are at the Customer Administration level, the Customer Number and Name fields do not appear on this screen and the search is automatically limited to the current customer group.
5	Select “VSDN_Entry” in the Type field (this is the default).

Step	Action

6 Specify the DN or range of DNs you want to find in the DN field.

IF you want to find	THEN
a particular VSDN and you know the exact DN	enter the exact DN and go to step 9.
a range of VSDNs	use wildcards to specify a search pattern.
all VSDNs for a particular service type (such as voice menus)	leave the DN field blank and specify the type in the Service field.

7 If you want to retrieve VSDNs of a certain service type only, specify one of the following types.

IF you want to find	THEN enter
announcements only	AS
thru-dial services only	TS
time-of-day controllers only	TD
voice menus only	MS
fax items only	FI

8 Enter a comment if this will help narrow the search.

Note: The comment must be exactly as entered in the service definition. If you do not know the exact comment, enter as much as you can and use wildcards for the rest.

Note: If the service is TD Time-of-Day Controller, then go to step 9.

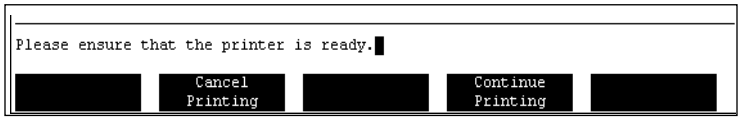
9 Do you want to print the results of the search?

If yes, go to step 10.

If no, go to step 12

10 Press the [Print Selection] softkey.

Result: The following softkeys are displayed.



Step	Action
11	Do you want to go ahead with printing? If yes, press the [Continue Printing] softkey. If no, press the [Cancel Printing] softkey and go to step 12.
12	Press the [Find Selection] softkey to view the found VSDNs, or press [Cancel] to cancel the search and exit the screen. ***Result:*** If you pressed the [Find Selection] softkey, the VSDN table is displayed, listing only those VSDNs that met your search criteria. You can use any of the softkeys the same as if you accessed the VSDN table directly from the Voice Services Administration menu.

Finding and printing service definitions

Procedure

Follow these steps to find or print a particular service definition or a subset of service definitions.

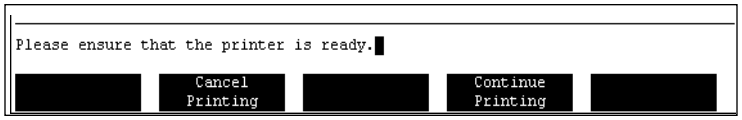
Starting Point: The Main Menu

Step	Action
1	Select Voice Administration.
2	Select Voice Services Administration.
3	Press the [Find Subset of VSDNs/Services] softkey. ***Result:*** The Find Subset of VSDNs/Services screen is displayed.
4	Identify the Customer Number and/or Name if you want to limit the search to a particular customer group. If you are at the Customer Administration level, the Customer Number and Name fields do not appear on this screen and the search is automatically limited to the current customer group.
5	Select a service type in the Type field.
6	Specify the ID of the service definition you want to find.

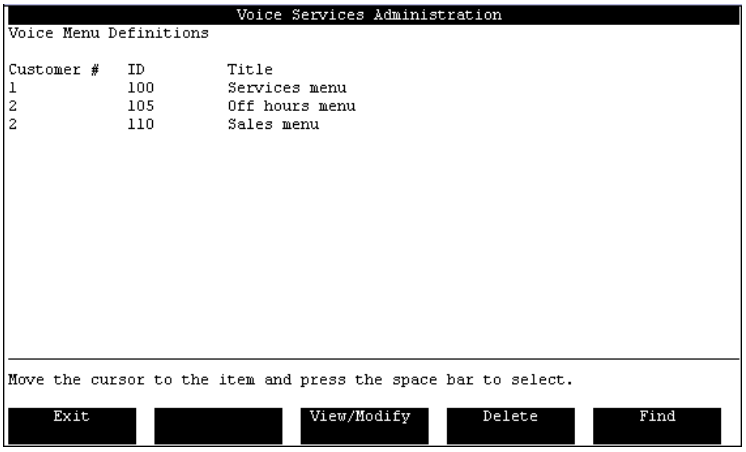
IF you want to	THEN
find a service and you know the exact ID	enter the exact ID and go to step 8.
find a service but you do not know the ID	leave the ID field blank and go to step 7 to fill in the Title field.
retrieve all service definitions of the specified type	leave the ID field and the Title field blank, and go to step 8.

7	Enter the exact service title, or part of the title and use wildcards for the rest.
8	Do you want to print the results of the search? If yes, go to step 9. If no, go to step 11.

Step	Action
9	Press the [Print Selection] softkey. ***Result:*** The following softkeys are displayed.



10	Do you want to go ahead with printing? If yes, press the [Continue Printing] softkey. If no, press the [Cancel Printing] softkey and go to step 11.
11	Press the [Find Selection] softkey to view the list of found service definitions, or press [Cancel] to cancel the search and exit the screen. ***Result:*** If you pressed the [Find Selection] softkey, the list of service definitions that match your selection criteria is displayed. ***Example:*** If you selected “Voice_Menu” in the Type field, the Voice Menu Definitions screen is displayed with only the voice menu definitions that match your selection criteria listed. The screen would appear similar to the following example.



Note: You can use any of the softkeys the same as if you accessed this screen directly from the Voice Services Administration menu.

Chapter 24

Configuring Meridian Mail services

In this chapter

Overview

Configuring Meridian Mail services

Each dialable Meridian Mail service needs a line DN and a VSDN.

Setting up a Meridian Mail service, therefore, requires configuration on the SL-100/DMS switch and in Meridian Mail.

SL-100/DMS switch setup

Configuration of Meridian Mail services begins on the switch where you must

- Set up one or more UCD groups for call handling.
- Set up a line DN for each Meridian Mail service that requires an access number.

Meridian Mail setup

In Meridian Mail, you must add the line DNs to the VSDN Table. This is where you indicate which service a particular DN should start up.

Switch setup

This chapter describes how to set up the SL-100/DMS switch to support Meridian Mail services.

Section	Description
Section A	This is an introductory section that explains concepts that are necessary to understand how the SL-100/DMS switch must be set up to support Meridian Mail.
Section B	This section discusses the different kinds of Meridian Mail channels, channel requirements for services, and planning the switch configuration.
Section C	This section contains step-by-step procedures for configuring SL-100/DMS switch. This includes procedures for setting up UCD groups and line DNs.

Meridian Mail setup

Chapter 25, “The VSDN table”, describes how to configure the VSDN Table once you have added the necessary UCD groups and line DNs on the switch.

Section A Introduction

In this section

Uniform Call Distribution (UCD)

Definition: UCD

Uniform Call Distribution (UCD) is a feature on the SL-100/ DMS switch that allows a number of telephones connected to the switch, known as agents, to share equally in answering incoming calls.

Definition: UCD agent

Agents are programmed on the switch to serve a particular UCD group. Agents are programmed as phones on the switch.

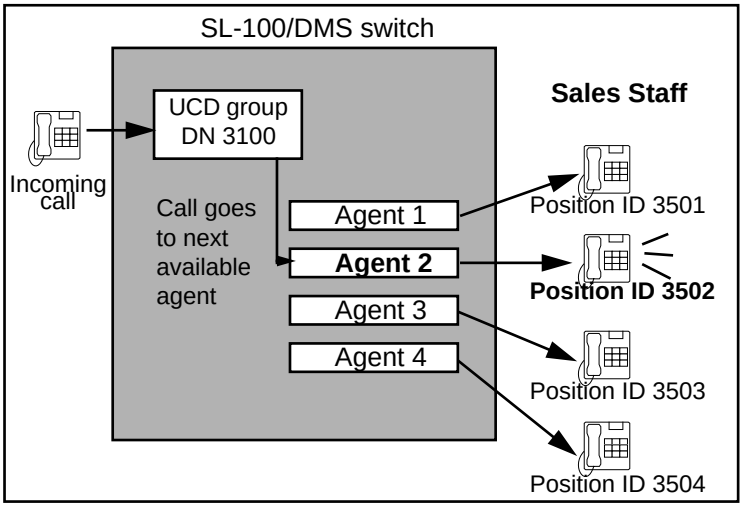
How it works

UCD provides call handling capabilities to the switch. This table describes how UCD handles an incoming call.

Stage	Description
1	A call comes into the switch.
2	The call is placed in a queue (the UCD group) where it waits to be connected to an agent.
3	The call is passed to the agent that has been idle the longest, or if all agents are busy, the first available agent.
4	The agent answers the call.

Example

When a call comes into the switch, the DN (directory number) that was dialed determines which UCD group the call goes to.



SL-100/DMS switch – Meridian Mail connections

How agents connect to Meridian Mail

Connections between the switch and Meridian Mail are different for MSM and Modular Option GP.

MSM systems

Each agent in a UCD group on the SL-100 is associated with a specific T1 channel in Meridian Mail.

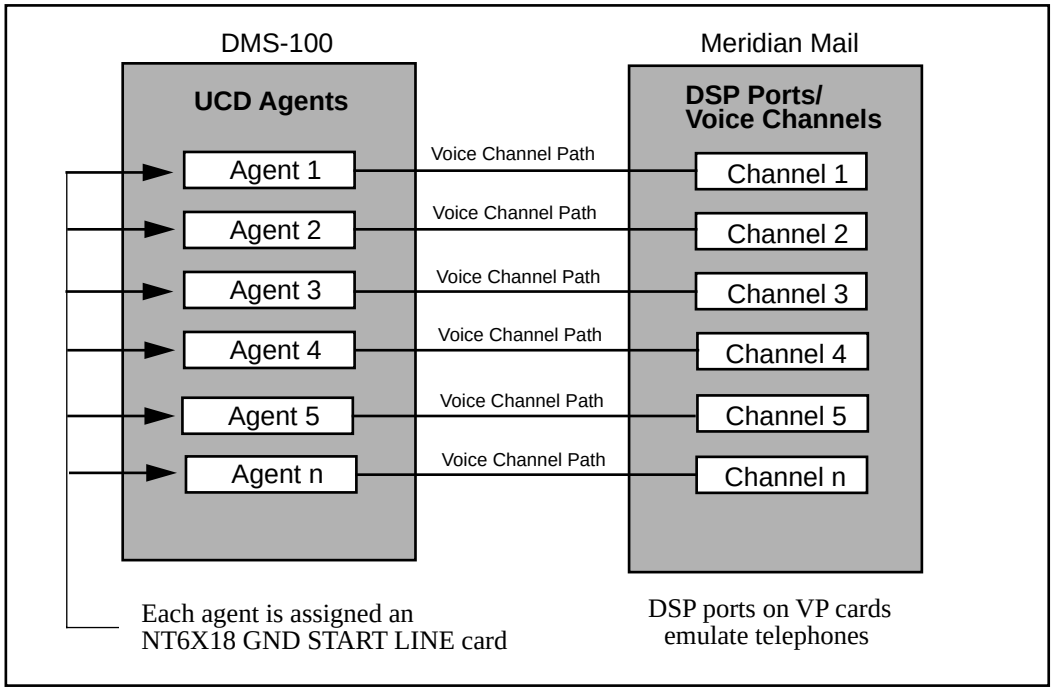
Modular Option GP systems

Each agent in a UCD group is associated with a specific DSP port in Meridian Mail.

The terms channel and port are often used interchangeably. They mean the same thing.

Example

This simplified diagram shows how agents on the switch connect to channels in a Meridian Mail Modular Option GP.



How Meridian Mail uses UCD

Virtual agents

In Meridian Mail, there are no “physical” agents or telephones. Instead, “virtual agents” are used. Virtual agents are the DSP ports (on Modular Option GP systems) or T1 channels (on MSM systems) that are configured in the Meridian Mail software. These channels emulate telephone sets.

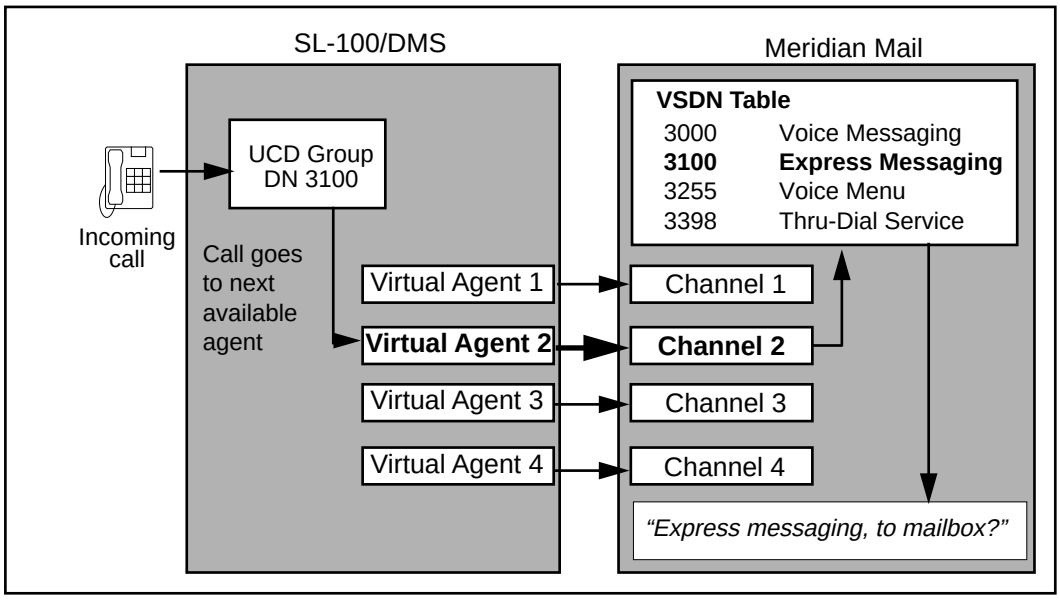
Directing calls to services

Meridian Mail uses UCD to perform its call handling functions. However, instead of being directed to agents or telephones, incoming calls are directed to Meridian Mail services such as Voice Messaging, Express Messaging, or a Voice Menu via the virtual agents.

Example

An incoming call to DN 3100 goes to UCD group 3100. It gets directed to the first available agent. It is then connected to a Meridian Mail channel (port) and routed to the VSDN Table.

In the VSDN Table, Meridian Mail looks up the DN that was dialed to see which service is associated with it. Meridian Mail then starts the service and plays the appropriate prompts.



UCD groups and line DNs

Introduction

Meridian Mail makes use of UCD groups and line DNs on the switch to ensure that calls are routed to the appropriate Meridian Mail service.

UCD groups

UCD groups are queues that contain agents and are serviced by Meridian Mail DSP ports/T1 channels. They conduct the actual call handling.

The UCD DNs, also known as Primary DNs, of UCD groups are listed in the Meridian Mail Channel Allocation Table (CAT). The CAT indicates which UCD group a particular agent is assigned to.

Line DNs

Line DNs can also accept calls. However, they do not directly route calls to services. Instead they forward calls to a UCD group for call handling.

A CFF (Call Forward Fixed) DN or a CFU (Call Forward Universal) DN must be defined for all line DNs. The CFF DN or CFU DN is set to the Primary DN of the UCD group to which the line DN forwards calls for call handling.

Why use line DNs?

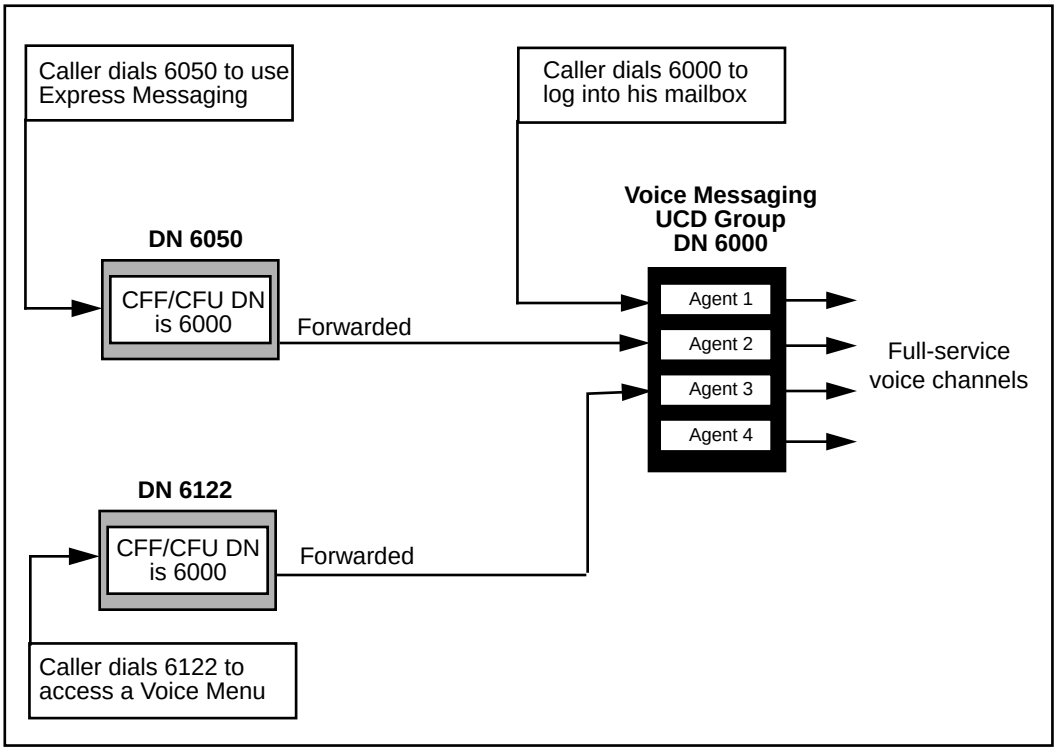
Many of the Meridian Mail services that you configure need to be directly accessible. That is, you want callers to be able to dial a number in order to access the service.

Each directly dialable service needs a unique number, or DN, so that when the DN is dialed the correct service is started and the appropriate prompts are played.

Creating a UCD group for each service would be very inefficient, even if you had all the necessary channels. Instead, you create a small number of UCD groups for call handling, and a line DN for each directly dialable service. Since each line has a DN associated with it, this DN becomes the access number for the service.

Example

Two line DNs have been set up. One (DN 6050) is for expressing messaging. The other (DN 6122) is for a Voice Menu. They both forward to UCD DN 6000.



Assigning DNs to services in the VSDN table

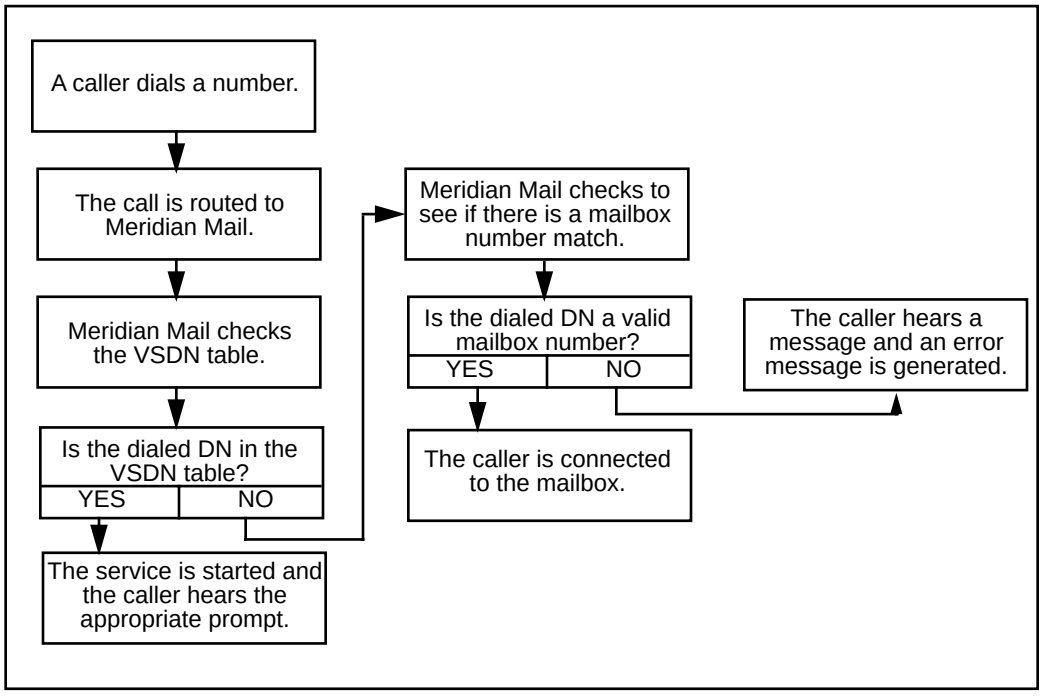
Mapping DNs to services: the VSDN table

When you create a line DN on the switch you cannot specify the associated Meridian Mail service. So how does Meridian Mail know which service to start when a particular DN is dialed?

The answer is the VSDN Table. All of the Primary UCD DNs and line DNs that are configured on the switch for Meridian Mail services are entered in the VSDN Table. When you add a VSDN, you define the access DN (this is the UCD DN or line DN) and the service. This provides a mapping between DNs on the switch and Meridian Mail services.

How DNs are looked up

When a call comes into the system, Meridian Mail looks up the dialed DN in the VSDN Table.



Meridian connections to other switches

Introduction

The Meridian Connections features allows you to connect Meridian Mail, through a VoiceBridge unit, to one of the following third-party PBXs:

- AT&T
- ROLM

Call handling

You will have to make use of existing call queueing or call distribution functions on the PBX.

AT&T and ROLM PBXs

The Voice Messaging DN

Meridian Mail DSP ports connect to individual analog lines in the PBX. The VoiceBridge DN becomes the Meridian Mail Voice Messaging DN.

Service DNs

For each Meridian Mail service that requires an access number, you must create a hunt group or line DN that has no members. This hunt group or line DN must be forwarded to the VoiceBridge DN. The pilot number of the hunt group or the line DN is used as the Meridian Mail voice service DN.

Section B Planning your configuration

In this section

Overview

Introduction

Before you begin configuring the SL-100/DMS switch for Meridian Mail services, you need to do some analysis and planning. You will need to determine

- the types of Meridian Mail channels that are installed on your system
- the number of Meridian Mail services that require DNs
- whether or not you want to dedicate channels to any services
- whether or not you want to dedicate channels to any customers
- how many UCD groups you need
- how many line DNs you need

Types of Meridian Mail channels

Three port/channel types

On the Modular Option GP, there are three types of Meridian Mail DSP ports. On the MSM, there are three types of T1 channels.

- basic service
- full-service voice
- full-service multimedia

Note: The term channel will primarily be used throughout the rest of this chapter to indicate either T1 channels (MSM) or DSP ports (Modular Option GP).

Grade of service

These different channel types represent different grades of service. Some services can use any of these channels. Others require a certain level of service and can use only one or two kinds of channel.

How channel are used for outcalls

Meridian Mail begins by seeking the lowest-grade channel required. If those are busy, Meridian Mail searches the next higher grade of channel.

Example
Remote Notification requires full voice channels. When there is an attempt to place an outcall, Meridian Mail searches for an idle full voice channel. If all voice channels are disabled, Meridian Mail will seek an idle multimedia channel and will use it as long as it is not dedicated.

Basic channels

Basic service channels can be used by services that require a very basic grade of service; in other words, services that do not require full service voice or fax capability.

Supported services

Basic service channels can be used to run the following services.

- Meridian ACCESS applications
- Announcement services
- Thru-dial service
- Voice Prompt Maintenance
- Remote Activation
- Voice Menus and Time-of-Day Controllers that do not invoke services requiring full-service voice full-service multimedia channels

Full-service voice channels

Full-service voice channels provide a higher grade of service because they are capable of supporting all voice-related activities such as compression, recording, playback, and tone detection.

Supported services

Full-service voice channels can be used to run the following services in addition to services that need only basic service channels.

- Voice Messaging
- Express Messaging
- Fax Items with callback fax delivery mode
- Outcalling (Remote Notification and Delivery to Non-User)
- Voice Forms
- Transcription Service (a voice forms feature)
- Meridian Networking
- AMIS Networking
- Enterprise Networking
- Voice Menus and Time-of-Day Controllers that invoke any of the above services or services that can use basic service voice channels

Full-service multimedia channels

A full-service multimedia channel is not a different kind of channel. It is the equivalent to approximately two full-service voice channels. A larger number of multimedia channels means a smaller number of total channels on your system.

Supported services

Multimedia channels are required by the following Fax on Demand services. They can also be used by any other service.

- Fax Items with same call or caller choice fax delivery mode
- Fax Item Maintenance
- Voice Menus and Time-of-Day Controllers that invoke any of the above services

Channel requirements for Meridian Mail services

Requirements

This table summarizes minimum channel requirements.

Meridian Mail service		Type
ACC	Meridian ACCESS	Basic
AN	AMIS Networking	Voice
AS	Announcement Service	Basic
EM	Express Messaging	Voice
EN	Enterprise Networking	Voice
FI	Fax Information Service • callback fax delivery • same call or caller choice fax delivery	 • Voice • Multimedia
FIM	Fax Item Maintenance	Multimedia
MS	Voice Menu that invokes • only services requiring basic channels • any services requiring voice channels • any services requiring multimedia channels	 • Basic • Voice • Multimedia
NW	Meridian Networking	Voice
OC	Outcalling	Voice
PM	Voice Prompt Maintenance	Basic
RA	Remote Activation	Basic
TD	Time-of-Day Controller that invokes • only services requiring basic channels • any services requiring voice channels • any services requiring multimedia channels	 • Basic • Voice • Multimedia
TR	Transcription Service	Voice
TS	Thru-Dial Service	Basic
VF	Voice Forms Service	Voice
VM	Voice Messaging	Voice

Identifying the channels that are installed on your system

Introduction

You designate channels as one of the three types during Meridian Mail software installation or expansion.

You can check the types of channels that are installed on your system by viewing the Channel Allocation Table. This table is accessible from the System Status and Maintenance menu.

Multimedia channels

A multimedia channel is actually made up of two voice channels. Each multimedia channel, therefore, has two routing addresses associated with it.

Identifying channels on a Modular Option GP

To check the installed channels, follow these steps.

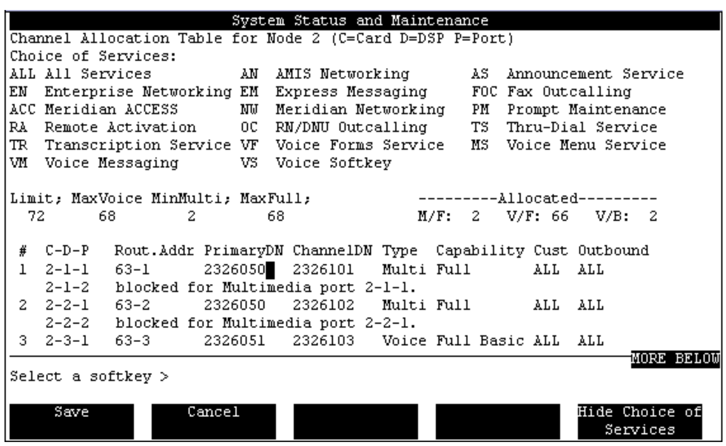
Starting Point: The Main Menu

Step **Action**

1 Select System Status and Maintenance.

2 Select Channel Allocation Table.

Result: The Channel Allocation Table is displayed.



3 Review the Channel Allocation Table.

- The Rout. Addr. (routing address) column lists the hardware addresses of the agents.
- The Type and Capability columns indicate the channel type of each agent.

Identifying channels on an MSM system

To check the installed channels, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance.
2	Select Channel Allocation Table. ***Result:*** A list of T1 links is displayed.
3	Move the cursor to the T1 link that contains the T1 channel you want to check and press the space bar to select it. ***Result:*** The T1 link you selected is highlighted.
4	While the T1 link is highlighted, press Return. ***Result:*** The Channel Allocation Table is displayed.

```
                        System Status and Maintenance
Channel Allocation Table: Primary Conn. 13-1-1     Secondary Conn. 14-3-1
Choice of Services:
ALL All Services          AN  AMIS Networking       AS  Announcement Service
EN  Enterprise Networking EM  Express Messaging     GS  Greetings Service
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     OC  RN/DNU Outcalling     TS  Thru-Dial Service
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging       VS  Voice Softkey

Limit; MaxVoice MinMulti; MaxFull;            ---------Allocated---------
 192     192        0       192               M/F:  0   V/F:192   V/B:  0

Chan# Rout.Addr PrimaryDN ChannelDN       Type  Capability Cust Outbound
  1   63-1      2326050   2326101   Voice Multi Full Basic ALL  ALL
  2   63-2      2326050   2326102   Voice Multi Full Basic ALL  ALL
  3   63-3      2326050   2326103   Voice Multi Full Basic ALL  ALL
  4   63-4      2326050   2326104   Voice Multi Full Basic ALL  ALL
  5   63-5      2326050   2326105   Voice Multi Full Basic ALL  ALL
                                                                  MORE BELOW
Select a softkey >

    Save          Cancel                                     Hide Choice of
                                                                Services
```

Step	Action
5	Review the Channel Allocation Table. • The Rout. Addr. (routing address) column lists the hardware addresses of the agents. • The Type and Capability columns indicate the channel type of each agent.

Should you dedicate channels?

Introduction

There are some conditions under which you must dedicate channels, and others that are good reasons for dedicating channels.

Reasons for dedicating channels

There are three reasons for dedicating channels.

- If there is more than one channel type on your system (two or more of basic, voice, and multimedia channels), you must create multiple UCD groups. A separate UCD group is required for each channel type.

  See “Dedicating channels because of mixed channel types” on page 24-20.
- You want to dedicate channels to a particular service.

  See “Dedicating channels to services” on page 24-21.
- You want to dedicate channels to a particular customer.

  See “Dedicating channels to Meridian Mail customers” on page 24-23.

Dedicating channels because of mixed channel types

Restriction

A UCD group can be serviced by only one type of DSP port/T1 channel. For example, the same UCD group cannot be serviced by both basic service DSP ports/T1 channels and full-service voice DSP ports/T1 channels.

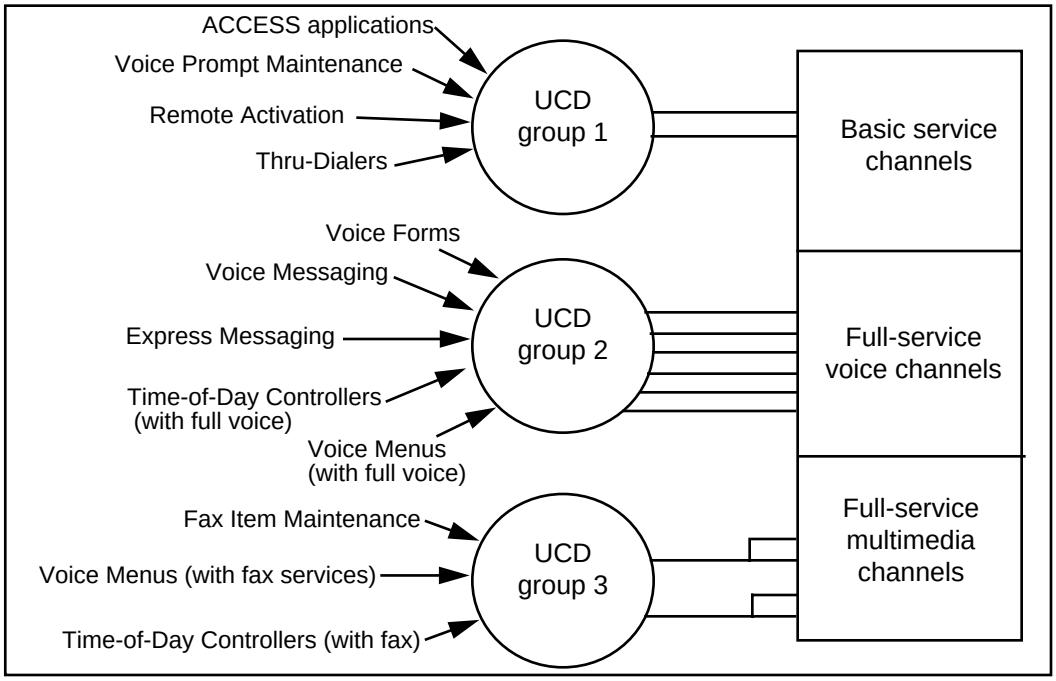
Implication

This means that you must create a UCD group for each type of channel. All agents that are added to it must correspond to Meridian Mail channels of the same type. This ensures that services access channels with an appropriate grade of service.

Example

You have all three channel types on your system: basic service, full-service voice, and full-service multimedia.

You, therefore, set up three UCD groups; one for each type. When configuring line DNs for each Meridian Mail service, you make sure it forwards to the correct UCD group. The UCD group to which you forward the line DN depends on the channel requirements for the Meridian Mail service.



Dedicating channels to services

Third-party PBXs

If your Meridian Mail system is connected to a third-party PBX (AT&T, or ROLM), and you want to dedicate lines to a particular service, you need another VoiceBridge unit.

Reasons for dedicating channels

You may decide to dedicate channels to a particular Meridian Mail service for the following reasons.

- Traffic studies have indicated that a particular inbound service is used heavily and that calls are being lost because the service is competing for channels with other services.
- It is crucial that a particular outbound service (such as Remote Notification or an ACCESS application) always have access to channels.

Reasons not to dedicate channels

Share DSP ports/T1 channels as much as possible because they are used more efficiently when shared.

When channels are dedicated to services, the overall efficiency of the system is reduced for the following reasons.

- A channel that is fully dedicated to a particular service cannot be used by any other service, even if idle.
- When channels are dedicated to a particular service, that service can use those channels only. It cannot use other channels if the dedicated channels are in use.

Partially vs. fully dedicated channels

When you dedicate channels to services, you are blocking other services from using them. You can either partially or fully dedicate channels, although it is recommended that you fully dedicate them.

Blocking inbound calls

To block other services from using a channel when inbound calls are made, you must create a UCD group for the service and assign agents to it.

Blocking outbound calls

To block other services from using a channel for placing outbound calls only, you do not need to create a special UCD group. All you have to do is dedicate the channel to the service in the Channel Allocation Table.

Choosing a procedure

Use this table to determine what you need to do, and where to find instructions, based on whether you want to partially or fully dedicate channels to a service.

IF you want to block	THEN	AND follow the
only inbound calls from using the channel (partially dedicated)	create a UCD group for the service	procedure on page 24-42.
only outbound calls from using the channel (partially dedicated)	dedicate the channel to the service in the CAT	procedure on page 24-45.
both inbound and outbound calls from using the channel (fully dedicated)	• create a UCD group for the service, and • dedicate the channel in the CAT	procedure on page 24-50.

Dedicating channels to Meridian Mail customers

Introduction

Prior to Release 11 of Meridian Mail, you had no way of determining which channel would be used for a particular outcall.

Enhancement

You can now dedicate channels to particular customers for all outcalls. You can, therefore, manage a customer's use of outgoing channels for the following features:

- Outcalling (Remote Notification and Delivery to Non-User)
- Networking (Meridian Networking, AMIS Networking, and Enterprise Networking)
- Fax on Demand callback delivery
- ACCESS outcalls and acquires

Reasons to dedicate

If any of the following items apply to you, consider dedicating channels to customers.

- Your Meridian Mail system is connected to multiple switches that have toll trunks between them.

  When channels are not dedicated to customers, outcalls can be placed on channels connected to the wrong switch, resulting in a toll charge.
- Your Meridian Mail system is connected to multiple switches that have different numbering plans.

  An outcall attempted on a channel connected to the wrong switch could fail.
- You want to ensure a particular grade of service for certain customers.

Example

You have multimedia ports on your system. You dedicate these ports to customers who subscribe to Fax on Demand services only. This prevents other customers (who do not subscribe to Fax on Demand) from using those ports.

> **ATTENTION**
>
> Once channels are dedicated to a customer, no other channels can be used for outcalls by that customer. Therefore, if you dedicate one or more multimedia channels to a customer, you will also have to dedicate voice channels to the customer.

Reasons not to dedicate

When channels are dedicated to customers, the overall efficiency of the system is reduced because the pool of shared channels for outcalls is reduced for each dedication that is made. This happens for the following reasons:

- A channel that is dedicated to a particular customer cannot be used by any other customer, even if idle.
- When channels are dedicated to a particular customer, that customer can use those channels only for making outcalls. The customer cannot use other (shared) channels even if they are not in use.

Example

You have 48 channels. You dedicate six channels for outcalls to Customer 1. Whenever an outcall request is made for any customer other than Customer 1, only 42 channels are available for allocation. Customer 1 only has 6 channels available for allocation. If they are all busy, the outcall cannot be made.

Partially vs. fully dedicated channels

When you dedicate channels to customers, you are blocking other customers from using them. You can either partially dedicate channels by blocking other customers from using those channels for outbound calls only. Or, you can fully dedicate channels, so that they cannot be used by other customers for outbound or inbound calls.

Dedicating channels to customers

The procedure for dedicating channels to customers is on page 24-53.

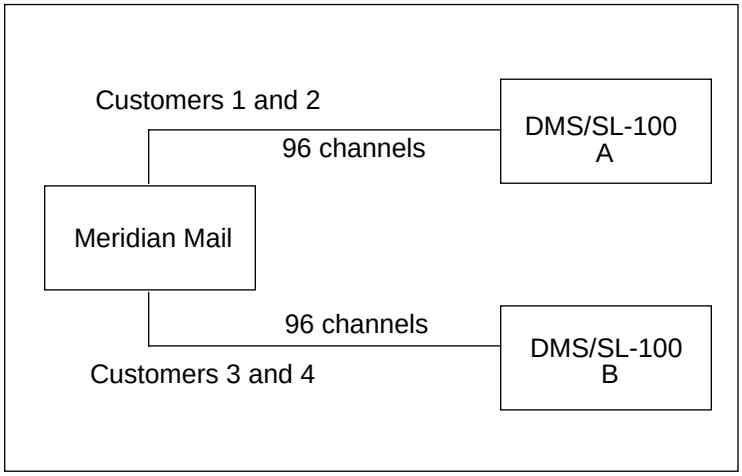
Scenarios – dedicating channels to customers

Introduction

Following are some examples of different situations in which you would dedicate channels to customers.

Scenario 1

You have one Meridian Mail system that is servicing four customers on two different switches.



Explanation

There is no way to indicate that Customers 1 and 2 should use only the 96 channels associated with Switch A and that Customers 3 and 4 should use only the channels associated with Switch B.

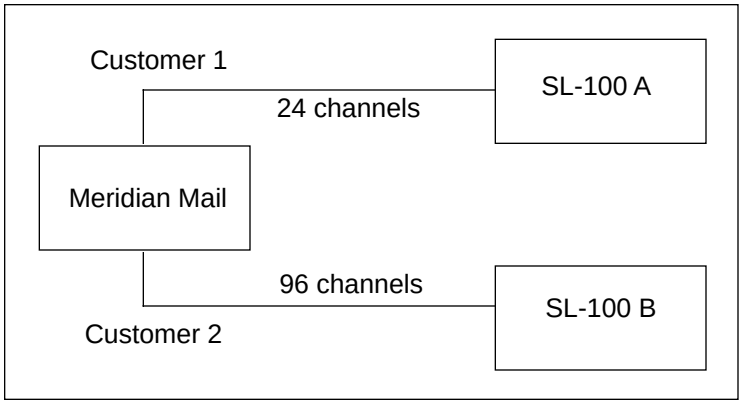
Solution

In this scenario, you would partition the 96 channels available on Switch A among Customers 1 and 2. This shrinks the available channels for each customer from 96 to 48. You would do the same for the customers on Switch B.

Also, you can dedicate 48 channels to customer 1 connected to A and 48 channels to customer 2 connected to A. The remaining 96 channels will be shared by customers 3 and 4 connected to B.

Scenario 2

Meridian Mail is connected to two SL-100 switches. There are 24 channels from Meridian Mail to Switch A, and 96 channels from Meridian Mail to Switch B.



Explanation

With the default configuration, Customers 1 and 2 can use any of the 120 (96 + 24) channels. Switches A and B have different numbering plans. If Customer 2 (connected to Switch B) places a call using one of the 24 channels connected to Switch A, the call could fail.

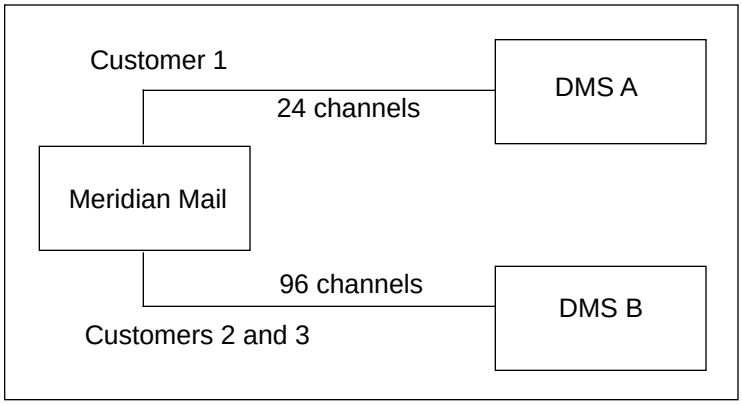
You, therefore, want Customer 1 to use only the 24 channels connecting to Switch A, and you want Customer 2 to use only the 96 channels on Switch B.

Solution

You, therefore, dedicate the 24 channels (for outcalls only) to Customer 1 and leave 96 channels undedicated.

Scenario 3

Meridian Mail is connected to two DMS switches. There are 24 channels from Meridian Mail to Switch A, and 96 channels from Meridian Mail to Switch B.



Explanation

Customers 1 and 2 pay a monthly fee for Fax on Demand. You have a total of four multimedia channels. You do not want Customer 3 to access these channels for outcalls since this customer is not paying for fax services.

Solution

You dedicate two multimedia channels to Customer 1 and two multimedia channels to Customer 2.

Note: Once you dedicate multimedia channels to customers, you must also dedicated voice channels to the customers. Otherwise, only the dedicated multimedia channels will be available for outcalls.

Determining how many UCD groups you need

Introduction

For more information about factors that influence how many UCD groups you need, see the following.

- "Should you dedicate channels?" on page 24-19
- "Dedicating channels because of mixed channel types" on page 24-20
- "Dedicating channels to services" on page 24-21
- "Dedicating channels to Meridian Mail customers" on page 24-23.

Procedure

To determine how many UCD groups you need, follow these steps.

Step	Action
1	Do you know what kinds of channels you have installed on your system? • If yes, go to step 2. • If no, see "Identifying the channels that are installed on your system" on page 24-17 and then return to this procedure.
2	Do you have more than one channel type on your system? • If yes, you require one UCD group per channel type. • If no, you require only one UCD group (for voice channels).

Step	Action
3	Do you want to fully dedicate channels to any services? • If yes, you require one UCD group for each service to which you want to dedicate channels for inbound and outbound calls. • If no (you do not want to dedicate channels at all, or you only want to dedicate channels for outcalls), you do not need additional UCD groups.
4	Do you want to fully dedicate channels to any customers? • If yes, you require one UCD group for each customer to which you want to dedicate channels for inbound and outbound calls. • If no (you do not want to dedicate channels at all, or you only want to dedicate channels for outcalls), you do not need additional UCD groups.
5	Total the numbers that resulted from steps 2 to 4 to determine the total number of UCD groups that you need.

Determining how many line DNs you need

Procedure: newly installed system

To determine how many line DNs you need for a newly installed system, follow these steps.

Step	Action
1	Identify how many directly dialable Meridian Mail services you will initially be configuring.
2	If you are likely to add services in the future, identify how many line DNs you would need to support them. ***Note:*** You do not have to add extra line DNs at this point. However, it is convenient to have additional line DNs already configured if the need for a new service arises.
3	Add the numbers from steps 1 and 2 to get the total number of line DNs you need to configure.

Procedure: operational system

To determine how many line DNs you need to add to an operational system, follow these steps.

Step	Action
1	Identify how many services you need to add to your system.
2	Check to see if you have enough line DNs to support these services.
3	Do you have enough line DNs? • If yes, gather the available DNs and configure them in the VSDN Table in Meridian Mail. • If no, create enough line DNs to support the new services and configure the VSDN table.

Section C Configuring DMS-family and SL-100 switches for Meridian Mail services

In this section

Overview

Introduction

This section contains step-by-step procedures for setting up UCD groups and line DNs on DMS-family and SL-100 switches.

Begin by reviewing the high-level procedure for the configuration you require.

IF	THEN go to
you need only one UCD group	page 24-35.
you need multiple UCD groups (because you have mixed channel types or need to dedicate channels to services and /or customers)	page 24-37.

SL-100/DMS prompts

The procedures tell you which prompts need to be responded to in a certain way for Meridian Mail. For all other prompts, you can simply press Return to accept the default values as they do not affect Meridian Mail.

For descriptions of other fields, refer to your DMS/SL-100 documentation.

Third-party PBXs

If your Meridian Mail system is connected to a third-party PBX using a VoiceBridge unit and the Meridian Connections feature, consult your PBX documentation and the appropriate VoiceBridge document.

- *AT&T VoiceBridge Installation Procedures* (NTP 555-7001-216)
- *ROLM VoiceBridge Installation Procedures* (NTP 555-7001-217)

Creating UCD groups and line DNs for a totally shared configuration

Introduction

All agents can be shared by all Meridian Mail services if

- you have only one type of Meridian Mail channel (full-service voice channels only) and if
- you do not need to dedicate agents (channels) to any Meridian Mail services or customers (in order to block inbound calls)

If both of these conditions are not met, see "Creating UCD groups for a combination (shared and dedicated) configuration" on page 24-37.

The primary Voice Messaging UCD group

You can make the UCD group containing the agents the primary Voice Messaging group. This means that you can publish its primary UCD DN as the Voice Messaging DN.

Alternatively, you can create a line DN for Voice Messaging that forwards to the UCD group. In this case, the DN of the UCD group is not published to users and is never directly dialed.

Procedure

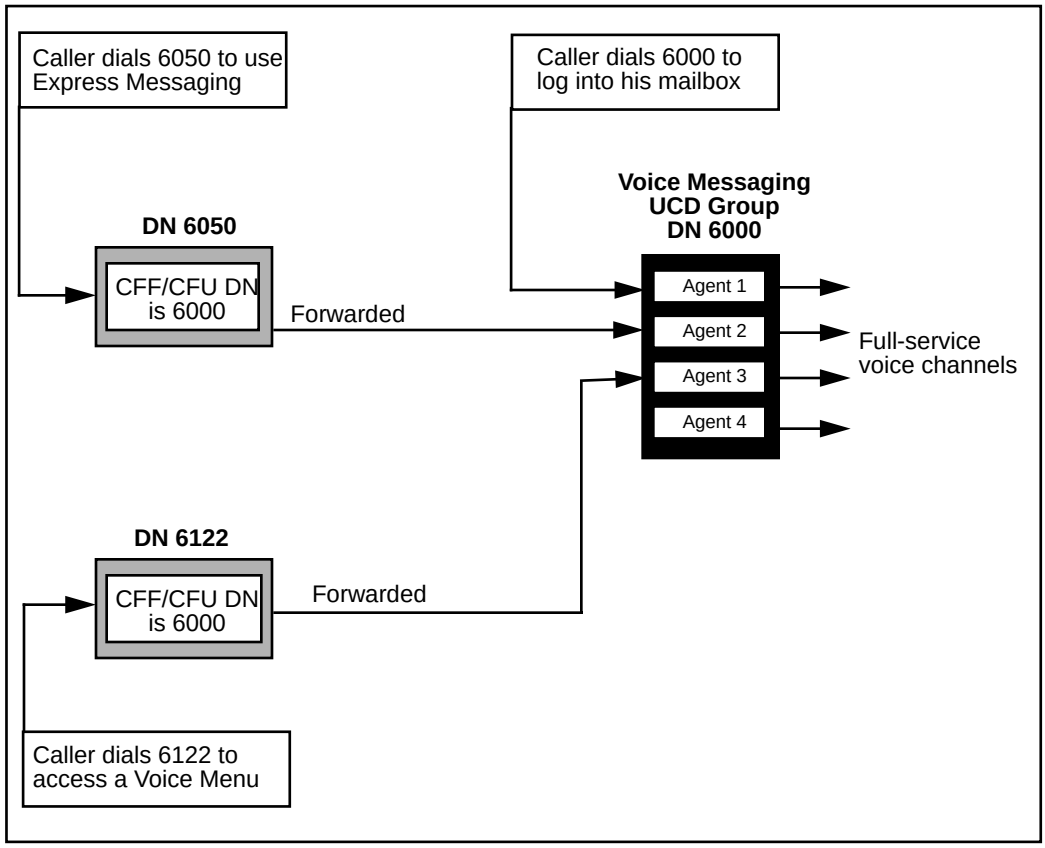
This is a high-level procedure for configuring the DMS/SL-100 switch and Meridian Mail for services. Detailed step-by-step procedures are on the corresponding pages.

Step	Action	See
	DMS/SL-100 switch configuration	
1	Configure a UCD group and a Primary DN.	page 24-57
2	Add all agents to the UCD group.	page 24-61

Step	Action	See
3	Create a line DN for each Meridian Mail service that needs to be directly dialable. ***Note:*** Forward all line DNs to the UCD group you created in step 1.	page 24-64
	Meridian Mail configuration	
4	Add the Primary UCD DN of the UCD group and line DNs to the VSDN table.	Chapter 25

Example

This is an example of a shared configuration in which there is only one UCD group, which is also the Voice Messaging queue. All other services are handled by line DNs that forward to this single UCD group for call handling.



Creating UCD groups for a combination (shared and dedicated) configuration

Introduction

You need a combination shared and dedicated configuration if one or more of these conditions are met.

- There are mixed channel types on your system (more than one of basic service, full-service voice, and full-service multimedia channels).

  For more information, see “Dedicating channels because of mixed channel types” on page 24-20.
- You need to dedicate channels to one or more Meridian Mail services.

  This is true only if you want to block all other services from making inbound calls on those channels. If you only want to block outbound calls, you do not need a UCD group.

  For more information, see “Dedicating channels to services” on page 24-21.
- You need to fully dedicate channels to one or more Meridian Mail customers.

  This means that you want to block other customers from using those channels for inbound calls.

  If you only want to block outcalls by other customers, you do not need additional UCD groups.

  See “Dedicating channels to Meridian Mail customers” on page 24-23.

The primary Voice Messaging group

You can make the UCD group that contains the full-service voice channels the primary Voice Messaging queue. This means that you can publish the Primary DN of this UCD group as the Voice Messaging DN.

Alternatively, you can create a line DN for Voice Messaging that forwards to this UCD group. In this instance, the DN of the UCD group (containing full service voice channels) is not published to users and is never directly dialed.

Do not mix channel types

When adding agents to a UCD group, make sure they are all of the same type. A UCD group cannot be serviced by Meridian Mail channels of different types (such as basic service and full-service voice channels).

Forwarding line DNs

When you specify the CFF (Call Forward Fixed) DN or the CFU (Call Forward Universal) DN for a line DN, make sure you enter the DN of the appropriate UCD group. Ensure that the line DN terminates on a UCD group that is serviced by channels of the appropriate type.

Channel requirements

To identify the minimum channel requirements for a Meridian Mail service, see "Channel requirements for Meridian Mail services" on page 24-16.

Creating UCD groups

This is a high-level procedure for configuring UCD groups in a combination shared and dedicated configuration. Detailed step-by-step procedures are on the corresponding pages.

Step	Action	See page
1	Create a UCD group for full-service voice channels.	24-57
2	Add the necessary agents (that correspond to full-service voice channels in Meridian Mail) to this UCD group.	24-61
3	Do you have basic service channels on your system? • If yes, go to step 4. • If no, go to step 6.	
4	Create a UCD group for basic service channels.	24-57
5	Add the necessary agents (that correspond to basic service channels in Meridian Mail) to this UCD group.	24-61
6	Do you have full-service multimedia channels on your system? • If yes, go to step 7. • If no, go to step 9.	

Step	Action	See page
7	Create a UCD group for full-service multimedia channels.	24-57
8	Add the necessary agents (that correspond to full-service multimedia channels in Meridian Mail) to this UCD group.	24-61
9	Do you need to dedicate channels to any Meridian Mail services? • If yes, go to step 10. • If no, go to step 11.	
10	Do you want to partially or fully dedicate channels?.	

IF you want to	THEN go to
partially dedicate channels by blocking only other inbound calls from using them	page 24-42.
partially dedicate channels by blocking only other outbound calls from using them	page 24-45.
fully dedicate the channels by blocking all other inbound and outbound calls from using them (recommended method) ***Note:*** When you are done, return to this procedure.	page 24-50.

11	Do you need to dedicate channels to any Meridian Mail customers? • If yes, go to page 24-53. • If no, go to step 12. ***Note:*** When you are done, return to this procedure.	
12	When you have added all necessary UCD groups, go to the next procedure for creating line DNs.	

Creating line DNs

This is a high-level procedure for configuring line DNs. Detailed step-by-step procedures are on the corresponding pages.

Step	Action	See page
1	Identify the Meridian Mail services that require access numbers but that do not require dedicated channels.	
2	Identify the channel requirements of each Meridian Mail service.	24-16
3	For each service, identify the Primary UCD DN to which its line DN will forward.	
4	Create a line DN for each Meridian Mail service. ***Note:*** Make sure you forward each line DN to the correct UCD group.	24-64
5	Go to the next procedure for configuring Meridian Mail.	24-40

Configuring Meridian Mail

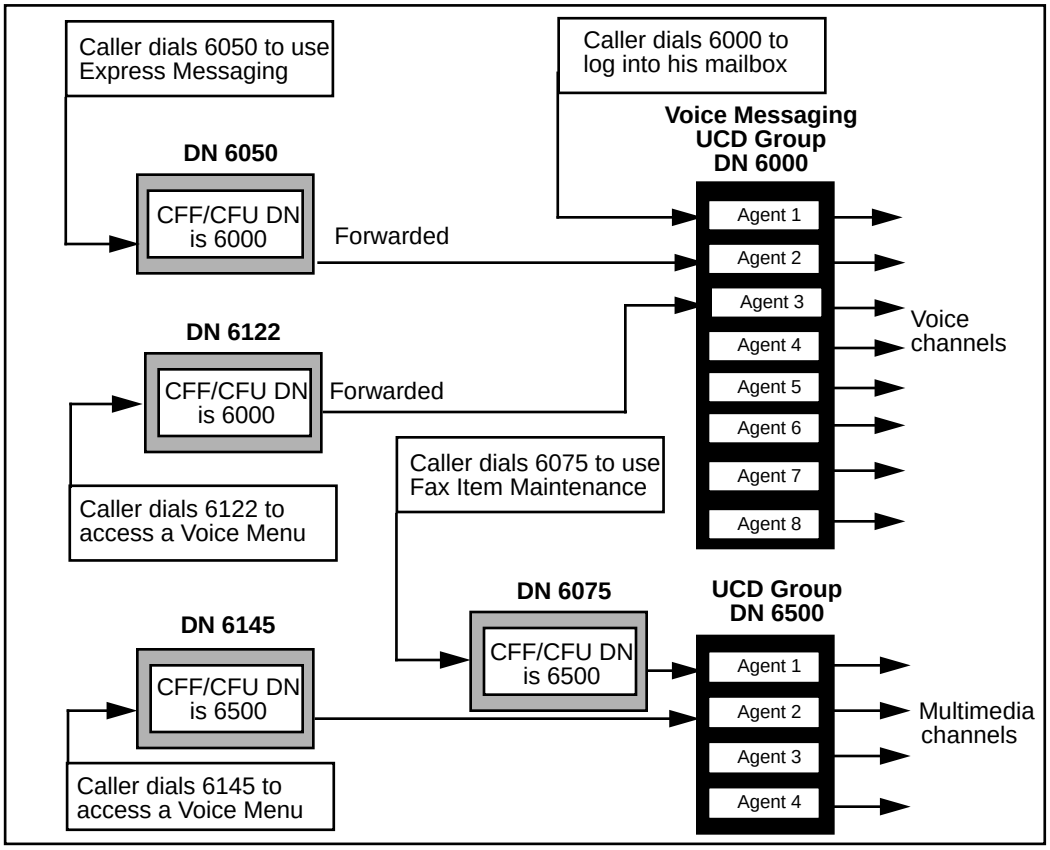
This is a high-level procedure for configuring VSDNs.

Step	Action	See
1	If you moved agents from one group to another, modify the Primary DN of each moved agent in the Channel Allocation Table.	page 24-70
2	Add UCD DNs and line DNs to the VSDN Table.	Chapter 25

Example

In this example, two UCD groups have been created. Agents in UCD group 6000 are connected to Meridian Mail full-service voice channels. Agents in UCD group 6500 are connected to multimedia channels.

Voice menu 6122 does not contain fax services, whereas menu 6145 contains fax items with same call delivery.



Partially dedicating channels to services – blocking inbound calls only

Inbound calls

These are calls made to Meridian Mail such as when

- Users log into their mailboxes.
- Users dial into Express Messaging.
- Callers dial into a Voice Menu.
- Callers are transferred to Meridian Mail to leave a message (call answering).

When to use

Use this procedure if you want to partially dedicate channels to a service by blocking all other inbound calls, but not outbound calls.

To do this you must create a separate UCD group for the service.

Procedure

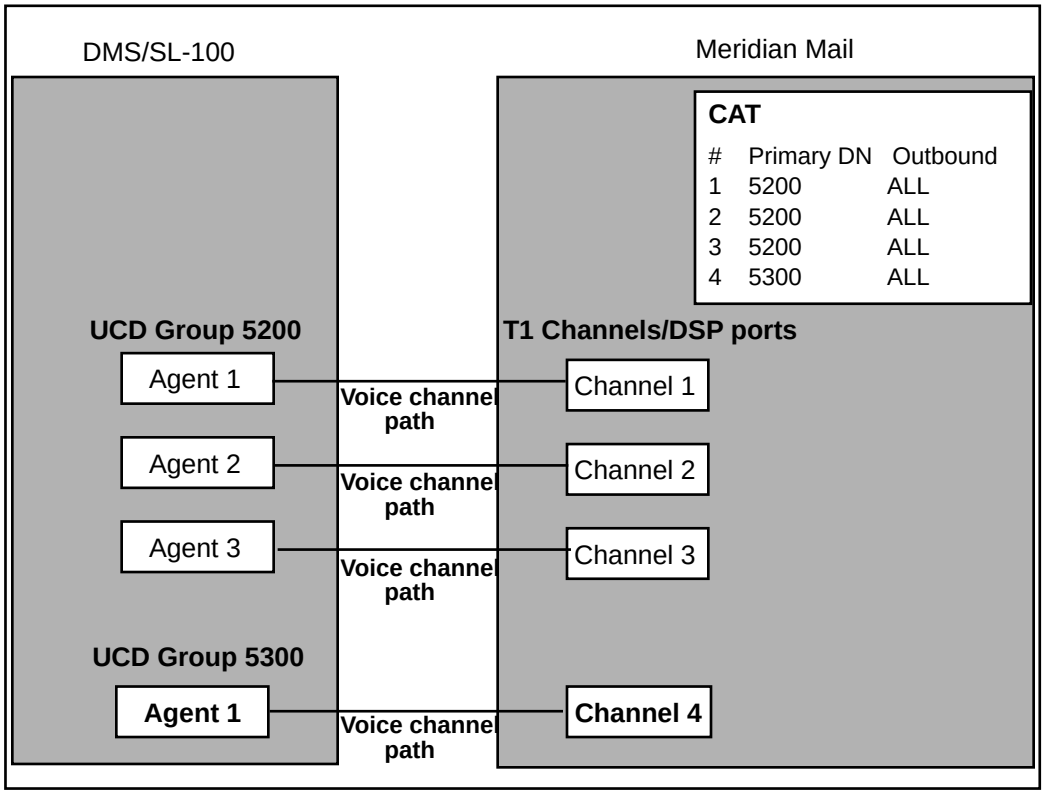
To block inbound calls on a channel, follow these steps.

Step	Action	See Page
	DMS/SL-100 switch configuration	
1	Identify the channels you want to dedicate to the service. ***Note:*** Note, if you have mixed channel types on your system, make sure the channels you dedicate are of the correct type, and all of the same type.	24-17
2	Create a UCD group for the service.	24-57
3	Add or move agents to the group.	24-61 (add) 24-67 (move)
	Meridian Mail configuration	
4	Enter the Primary UCD DN in the VSDN Table.	Chapter 25

Example

In this example, an agent (channel) is dedicated to a particular Voice Menu. UCD group 5300 has been set up for this Voice Menu and it contains one agent.

The channel, however, is not dedicated in the Channel Allocation Table. Outbound calls from any Meridian Mail service are, therefore, allowed on this channel.



Scenario A

In this scenario, an inbound call is placed to Voice Messaging (DN 5200).

Stage	Description
1	A caller dials 5200 to log in to her mailbox.
2	The call is routed to UCD group 5200. • All of the agents in UCD group 5200 are busy. • The agent in UCD group 5300 is idle but cannot be used by this call.
3	The call waits for an agent in UCD group 5200 to become idle.

Scenario B

In this scenario, Meridian Mail makes a remote notification attempt (an outbound call).

Stage	Description
1	A message is left for a user that has remote notification capability.
2	Meridian Mail attempts to place an outbound call to deliver the notification.
3	Meridian Mail looks for an idle channel. • Channels 1, 2, and 3 (that belong to UCD group 5200) are busy. • Channel 4 (in UCD group 5300) is idle.
4	Since the Outbound column in the CAT table is set to ALL for this channel, the call is placed on channel 4.

Partially dedicating channels to services – blocking outbound calls only

Outbound calls

These are calls made by Meridian Mail. The following Meridian Mail features make outbound calls.

- all networking features
- Outcalling (Remote Notification and Delivery to Non-User)
- Fax on Demand (call back fax delivery)

When to use

Use this procedure if you want to partially dedicate channels to a service by blocking all other outbound calls but not inbound calls.

To do this you must

- disable the T1 channels/DSP ports you want to dedicate
- modify the Outbound column in the Channel Allocation Table
- reenable the channels/ports

Disabling T1 channels on the MSM

Before you can modify the Channel Allocation Table, you must disable the T1 channels you want to dedicate.

See the section “T1 links, T1 channels, SMDI links, and MSM cross reference (MSM)” on page 29-87.

Disabling DSP ports on the ModOp GP

Before you can modify the Channel Allocation Table, you must disable the DSP ports you want to dedicate.

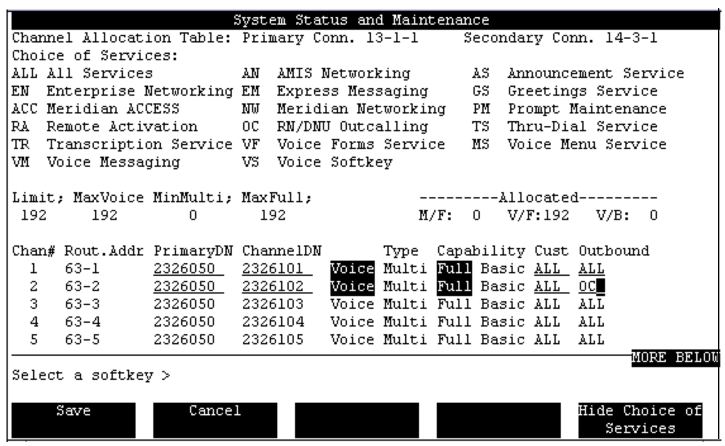
For instructions, see “Disabling/enabling DSP ports in single mode” on page 29-53.

Modifying the CAT on the MSM

To dedicate a channel by blocking all other outbound calls, follow these steps.

Starting Point: The System Status and Maintenance menu

Step	Action
1	Select Channel Allocation Table. ***Result:*** A list of T1 links is displayed.
2	Move the cursor to the T1 link that contains the T1 channel you want to dedicate and press the space bar to select it. ***Result:*** The T1 link you selected is highlighted.
3	While the T1 link is highlighted, press Return. ***Result:*** The Channel Allocation Table is displayed.
4	Move the cursor to the channel you want to dedicate.
5	Go to the Outbound column and enter the service (acronym) to which you want to dedicate the channel.



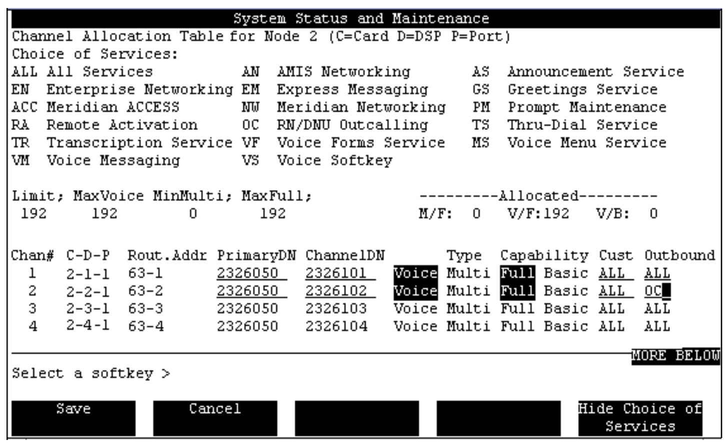
Step	Action
6	Do you want to dedicate another channel? • If yes, repeat steps 4 to 5. • If no, go to step 7.
7	Press the [Save] softkey.
8	Reenable any T1 channels that you have put out of service. See the section “T1 links, T1 channels, SMDI links, and MSM cross reference (MSM)” on page 29-87.

Modifying the CAT on the ModOp GP

To dedicate a port by blocking all other outbound calls, follow these steps.

Starting Point: The System Status and Maintenance menu

Step	Action
1	Select Channel Allocation Table. ***Result:*** If you have a multinode system, you are prompted for the node number on which the port resides. If you have a single node system, the Channel Allocation Table is displayed.
2	If you have a multinode system, enter the node number and press Return. ***Result:*** The Channel Allocation Table is displayed.
3	Move the cursor to the port you want to dedicate.
4	Go to the Outbound column and enter the service (acronym) to which you want to dedicate the port.

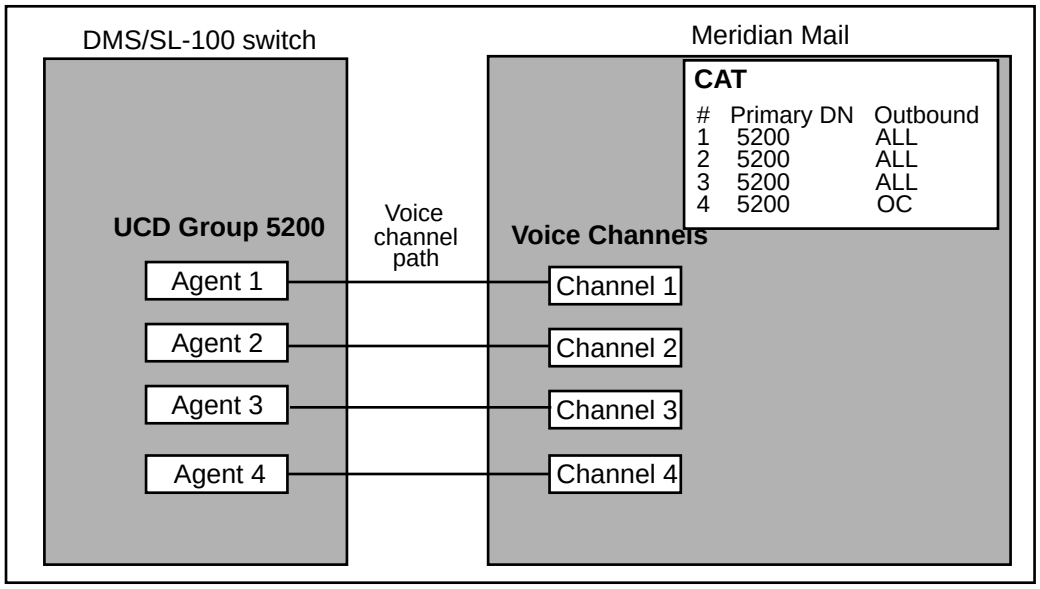


Step	Action
5	Do you want to dedicate another port? • If yes, repeat steps 3 to 4. • If no, go to step 6.
6	Press the [Save] softkey.
7	Reenable any DSP ports that you have put out of service.

Example

In this example, a separate UCD group has not been set up on the DMS/SL-100 switch. All inbound calls can, therefore, use all agents (channels).

In Meridian Mail, however, Channel 4 is dedicated to Outcalling (OC) in the Channel Allocation Table.



Scenario A

In this scenario an inbound call is placed to Voice Messaging (DN 5200).

Stage	Description
1	A caller dials 5200 to log in to her mailbox.
2	The call is routed to UCD group 5200. • The first three agents in UCD group 5200 are busy. • Agent 4 is idle.
3	The call is completed using agent 4.

Scenario B

In this scenario, Meridian Mail attempts to make an outbound networking call.

Stage	Description
1	A network message is ready to be delivered.
2	Meridian Mail attempts to place an outbound call to deliver the network message.
3	Meridian Mail looks for an idle channel. • Channels 1, 2, and 3 are busy. • Channel 4 is idle.
4	Since the Outbound column in the CAT table is set to OC for Channel 4 (it is dedicated to Outcalling), the call waits until another agent (Channel) becomes available.

Fully dedicating channels to services – blocking inbound and outbound calls

Introduction

If you are considering dedicating channels to a service, it is recommended that you fully dedicate them so that no other services can use the channels.

To do this you must create a UCD group on the DMS/SL-100 switch *and* dedicate the channel in the Channel Allocation Table in Meridian Mail.

Procedure

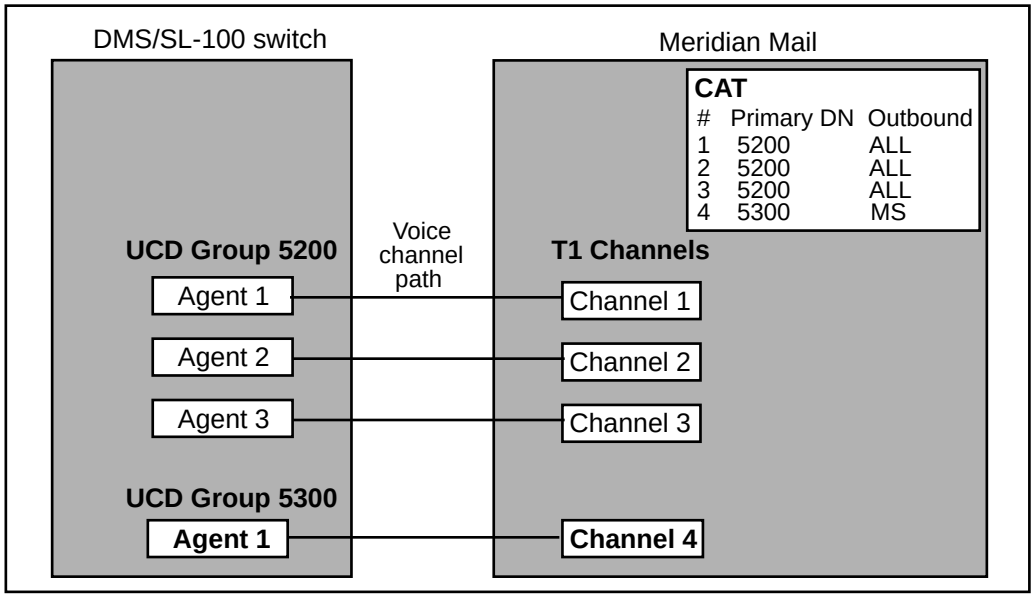
To completely dedicate channels to a service, follow these steps.

Step	Action	See page
	DMS/SL-100 switch configuration	
1	Identify the channels you want to dedicate to the service. ***Note:*** If you have mixed channel types on your system, make sure the channels you dedicate are of the correct type, and all of the same type.	24-17
2	Create a UCD group for the service.	24-57
3	Add or move channels to the group.	24-61 (add) 24-67 (move)
	Meridian Mail configuration	
4	Disable the T1 channels/DSP ports you want to dedicate.	29-99
5	Modify the Outbound column in the CAT.	24-46
6	Reenable the channels/ports.	29-99
7	Enter the Primary UCD DN in the VSDN Table	Chapter 25

Example

UCD group 5300, containing one agent, has been set up for a Voice Menu.

The channel is also dedicated to the Voice Menu Service in the Channel Allocation Table. Only calls to the Voice Menu can use Agent (Channel) 4.



Scenario A

In this scenario, an inbound call is placed to Voice Messaging (DN 5200).

Stage	Description
1	A caller dials 5200 to log in to her mailbox.
2	The call is routed to UCD group 5200. • All of the agents in UCD group 5200 are busy. • The agent in UCD group 5300 is idle but cannot be used by this call.
3	The call waits until an agent in UCD group 5200 becomes idle.

Scenario B

In this scenario, Meridian Mail attempts to make an outbound networking call.

Stage	Description
1	A network message is ready to be delivered.
2	Meridian Mail attempts to place an outbound call to deliver the network message.
3	Meridian Mail looks for an idle channel. • Channels 1, 2, and 3 are busy. • Channel 4 is idle.
4	Since the Outbound column in the CAT table is set to MS for this channel (it is dedicated to the Voice Menu Service), the call waits until another channel (agent) becomes available.

Dedicating channels to Meridian Mail customers

Introduction

You can either

- partially dedicate channels to customers so that other customers cannot use those channels for outbound calls only

  In this case you only need to modify the Channel Allocation Table in Meridian Mail.
- fully dedicate channels to customers so that other customers cannot use those channels at all (for either inbound or outbound calls)

  In this case you need to create a separate UCD group and modify the Channel Allocation Table.

Dedicating channels to customers

To dedicate channels to a customer, follow these steps.

Step	Action	See page
	DMS/SL-100 switch configuration	
1	Do you want to fully dedicate channels to the customer (to block both inbound and outbound calls by other customers)? • If yes, create a UCD group for the customer or add more agents to an existing UCD group and then go to step 2. • If you want to block only outbound calls by other customers, go to step 2.	24-57
	Meridian Mail configuration	
2	Disable the T1 channels/DSP ports you want to dedicate.	29-99
3	Modify the Cust column in the CAT.	24-54
4	Reenable the channels/ports.	29-99

Modifying the CAT on the MSM

To modify the Customer column in the Channel Allocation table, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Channel Allocation Table. ***Result:*** A list of T1 links is displayed.
3	Move the cursor to the T1 link that contains the T1 channel you want to dedicate and press the space bar to select it. ***Result:*** The T1 link you selected is highlighted.
4	While the T1 link is highlighted, press Return. ***Result:*** The Channel Allocation Table is displayed.
5	Move the cursor to the channel you want to dedicate.
6	Go to the Cust column and enter the number of the customer to which you want to dedicate the channel.

```
                        System Status and Maintenance
Channel Allocation Table: Primary Conn. 13-1-1     Secondary Conn. 14-3-1
Choice of Services:
ALL All Services          AN  AMIS Networking       AS  Announcement Service
EN  Enterprise Networking EM  Express Messaging     GS  Greetings Service
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     OC  RN/DNU Outcalling     TS  Thru-Dial Service
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging       VS  Voice Softkey

Limit; MaxVoice MinMulti; MaxFull;            ---------Allocated---------
 192     192        0       192               M/F:  0   V/F:192   V/B:  0

Chan# Rout.Addr PrimaryDN ChannelDN       Type  Capability Cust Outbound
  1   63-1      2326050   2326101   Voice Multi Full Basic ALL  ALL
  2   63-2      2326050   2326102   Voice Multi Full Basic 2    ALL
  3   63-3      2326050   2326103   Voice Multi Full Basic ALL  ALL
  4   63-4      2326050   2326104   Voice Multi Full Basic ALL  ALL
  5   63-5      2326050   2326105   Voice Multi Full Basic ALL  ALL
                                                                MORE BELOW
Select a softkey >

  Save      Cancel                                  Hide Choice of
                                                      Services
```

7 Do you want to dedicate another channel?

- If yes, repeat steps 5 to 6 until you have finished dedicating channels to customers.
- If no, go to step 8.

Step	Action
8	Press the [Save] softkey.
9	Reenable any T1 channels that you have put out of service. See “Disabling/enabling T1 channels in single mode” on page 29-99.

Modifying the CAT on the ModOp GP

To modify the Customer column in the Channel Allocation table, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select Channel Allocation Table. ***Result:*** If you have a multinode system, you are prompted for the node number on which the port resides. If you have a single node system, the Channel Allocation Table is displayed.
2	If you have a multinode system, enter the node number and press Return. ***Result:*** The Channel Allocation Table is displayed.
3	Move the cursor to the port you want to dedicate.
4	Go to the Cust column and enter the number of the customer to which you want to dedicate the port.

```
                         System Status and Maintenance
Channel Allocation Table for Node 2 (C=Card D=DSP P=Port)
Choice of Services:
ALL All Services          AN  AMIS Networking       AS  Announcement Service
EN  Enterprise Networking EM  Express Messaging     GS  Greetings Service
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     OC  RN/DNU Outcalling     TS  Thru-Dial Service
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging       VS  Voice Softkey

Limit; MaxVoice MinMulti; MaxFull;             ---------Allocated---------
 192     192        0       192                M/F:  0   V/F:192   V/B:  0

Chan# C-D-P  Rout.Addr PrimaryDN ChannelDN       Type  Capability Cust Outbound
  1   2-1-1  63-1      2326050   2326101   Voice Multi Full Basic ALL  ALL
  2   2-2-1  63-2      2326050   2326102   Voice Multi Full Basic 3    ALL
  3   2-3-1  63-3      2326050   2326103   Voice Multi Full Basic ALL  ALL
  4   2-4-1  63-4      2326050   2326104   Voice Multi Full Basic ALL  ALL
                                                                     MORE BELOW
Select a softkey >

   Save        Cancel                                         Hide Choice of
                                                                 Services
```

Step	Action
5	Do you want to dedicate another port? • If yes, repeat steps 6 to 4. • If no, go to step 6.

Step	Action
6	Press the [Save] softkey.
7	Reenable any DSP ports that you have put out of service.

Creating a UCD group and assigning a primary DN

Introduction

You must set up at least one UCD group on the DMS/SL-100 switch to serve as the primary Voice Messaging queue. This UCD group is usually set up by the install technician.

You may or may not need other UCD groups depending on how many channel types you have on your system and whether or not you want to dedicate channels to any services.

When to use

Create a UCD group

- as the primary Voice Messaging queue (containing full-service voice channels)
- for each additional channel type that is installed on your system (basic and/or full multimedia)
- for each service to which you want to dedicate channels

If you are not sure of how many UCD groups you require, see “Determining how many UCD groups you need” on page 24-29.

DMS/SL-100 switch tables

You must datafill the following tables in order to configure UCD groups.

- UCDGRP table

  This table is used to create UCD groups.
- DNROUTE (BCS 32 or up)

  Once the UCD group has been created, you use the DNROUTE table to assign a primary DN to it. This is the DN that is entered in the Meridian Mail VSDN table.
- WRDN table (BCS 31 and earlier)

  Once the UCD group has been created, you use the WRDN table to assign a primary DN to it. This is the DN that is entered in the Meridian Mail VSDN table.

Creating a UCD group To create a UCD group, follow these steps.

Step	Action
1	Log in.
2	Enter **table ucdgrp**.
3	Respond to prompts as shown in the following table.

Prompt	Response	Description
UCDNAME		This is the name of the UCD group. It can be up to 16 digits in length. The first eight must be unique.
ACD	N	Automatic call distribution is not supported.
CUSTGRP		Name of the customer group to which the UCD group belongs.
UCDRNGTH	30	Ringing threshold, in one-second intervals, after which an unanswered call to a UCD agent is forwarded to the route specified in the THROUT field. Range is 0-63.
TABNAME	OFRT	Table to which translations are routed.
INDEX		Number assigned to the route list in table OFRT (1-1023).
PRIOPRO		Maximum time, in seconds, a call can wait in a UCD group (0-255).
MAXPOS		Maximum number of UCD agent positions that can be active at one time. This number corresponds to the number of channels allocated to the group on the Meridian Mail system (0-192).

Step Action

Field	Response	Description
DBG		Delayed billing. Set to “Y” if billing starts when the call is answered by a UCD agent. Set to “N” if billing starts when the caller receives a recorded announcement.
DEFPRIO	0	Default priority number applicable to local calls terminating on the primary UCD DN (0-3).
RLSCNT	0	Maximum number of calls that terminate on a UCD station but are not answered (0-31).
MAXWAIT		Maximum time, in seconds, that a call waits in the incoming call queue before being answered (0-1800).
MAXCQSIX		Maximum number of calls that can be in the incoming queue waiting for an idle channel (0-511).
OPTION	UCD_SMDI	
SMDI_LINK		The terminal designation defined in tables TERMDEV and SLLNKDEV.
SMDI_DESK_NO		Message desk number (1-63). the first UCD group on a data link must be set to 63. The second is set to 62, and descending through 61, 60, ...2, 1.
Note: If CRR (Call Request Retrieval) is used, all requests will be made to the UCD group with SMDI_DSK_NO = 63. For multicustomer systems, set up a UCD group “UCD D”.		

Assigning a Primary DN to a group

To assign a primary DN to a UCD group, follow these steps.

1 Log in.

2 Enter **table dnroute**.

3 Respond to prompts as shown in the following table.

Prompt	Response	Description
DNNM		AREACODE, OFCCODE, and STNCODE values This is the DN for the UCD group specified as the UCDGRP. This is the DN that is entered in the VSDN Table.
DN_SEL	FEAT	DN selector FEAT
FEATURE	UCD	
UCDGRP		The UCDNAME that is defined in table UCDGROUP.
DNTYPE	PRIM	PRIM indicates the DN is the Primary UCD DN for the UCD group.
TOLLPRIO	0	Priority of toll calls terminating on the Primary UCD DN. 0 is the highest priority.

Adding agents to a UCD group

Introduction

Once you have created a UCD group, you can add agents to it.

Before you begin

Gather together a list of the Agent IDs of the agents you want to add to the UCD group. You can get these IDs by accessing Modify Hardware from the Meridian Mail Tools level.

If you have multiple UCD groups, identify the UCD group that each agent will service.

If you have a mixture of channel types on your system (two or more of basic, full voice, and full multimedia channels), make sure you know the corresponding channel type for each agent. You can add agents of one type only to a single UCD group.

See “Dedicating channels because of mixed channel types” on page 24-20.

Modifying the MAXPOS value

If you are adding additional agents to an existing UCD group, you may have to modify the MAXPOS value for the UCD group to which you are adding agents. The MAXPOS value determines the maximum number of agents that can be active at one time. If by adding new agents, you exceed this value, you will not be able to add the additional agents unless you change the MAXPOS value.

The MAXPOS value is defined in table UCDGRP.

Adding agents

To add an agent to a UCD group, follow these steps.

Step	Action
1	Log in.
2	Enter **servord** and press Return.
3	Respond to prompts as shown in this table.

Prompt	Input	Description
SO:	NEW	
DN:		Directory Number of the line.
LCC:	IBN	Line class code of service.
GROUP:		Name of the IBN customer group to which the line belongs. For example, covm.
SUBGRP:		Subgroup number. For example, 0.
NCOS:		Network class of service. For example, 1.
SNPA:		Serving NPA (area code) of the DN.
LATANAME:		Local Area Transport Access Name.
LEN_OR_LTID:		Line equipment number of the line. For example, 4 0 1 0 (separated by spaces)
OPTION:	COD	Cut-off on Disconnect
OPTION:	UCD	Uniform Call Distribution
OPTION:	DGT	Digitone
OPTION:	CNF	Conferencing option
OPTION:	C06	6-party conferencing
OPTION:	SMDI	Simplified Message Desk Interface

Step Action

Prompt	Input	Description
LINENO:		Line number position in the UCD SMDI group. This number must match the Agent ID (AI) on the MSM.
UCDGRP:		The UCDNAME from the UCDGRP table. This is the UCD group to which you are adding the agent.
AUTO_LOG:	Y	Autologon capability required.
OPTION:	$	The data you have entered is displayed. Enter Y to confirm.

Creating a line DN

Introduction

A line DN does not have agents. Instead, it forwards to a UCD group.

When to use

Add a line DN for each Meridian Mail service that you want to make directly dialable by users and callers.

Examples

You want to provide users with Express Messaging capability. You, therefore, create a line DN for Express Messaging so that it has a unique DN that can be dialed.

You want to create six Voice Menus that you need to make available to callers. You, therefore, create six line DNs so that each Voice Menu has a unique number that can be dialed.

Systems with mixed channel types

If you have more than one channel type on your system, be sure to forward the line DN to the right UCD group. The UCD group to which you forward the line DN must be serviced by channels of the appropriate type.

To determine the channel requirements, see “Channel requirements for Meridian Mail services” on page 24-16.

Example

All three channel types are installed on your system. You have, therefore, created three UCD groups as follows.

Primary DN	Contains
7400	Full-service voice channels
7440	Basic service channels
7480	Full-service multimedia channels

You need to create a line DN for the Fax Item Maintenance service, which requires full-service multimedia channels. You, therefore, enter 7480 as the CFF or CFU DN. This forwards the line DN to the UCD group that contains full-service multimedia channels.

CFF versus CFU

In the following procedure, choose one of CFU or CFF as the forwarding option. Note that CFU requires extra configuration.

Procedure

To create a line DN, follow these steps.

Step	Action
1	Log in.
2	Enter **servord** and press Return.
3	Respond to prompts as shown in the following table.

Prompt	Input	Description
SO:	NEW	
SONUMBER:	_____$	The current date and time.
DN:		The directory number of the line. This is the DN you enter in the VSDN table.
LCC:	IBN	Line class code of service.
GROUP:		The name of the IBN customer group to which the line belongs.
SUBGRP:		The subgroup number.
NCOS:		Network class of service.
SNPA:		Serving NPA (area code) of the DN.
LEN		Line equipment number of the line. For example, 4 0 1 0.
OPTION:	cfb	Call Forward Busy
CFBCNTL:	N	(Normal assignment for CFB)
CFBDN:	xxxxxxx	The Primary UCD DN
OPTION:	CFF	Call Forward Fixed
CFFDN:	xxxxxxx	The Primary UCD DN.
OPTION:	CFU	Call Forward Universal
OPTION:	$	The data you entered is displayed. Enter Y to confirm.

Configuring CFU

If you selected the CFU option in the previous procedure, follow these steps to finish configuring CFU.

Step Action

At the MAP terminal

1 Log in.

2 Enter **table cfx**.

3 Respond to the prompts as shown in the following table.

Prompt	Input	Description
TABLE:CFX	pos x x x x 0	xxxx is the Line Equipment Number (LEN) you defined for the Line DN. Enter a 0 at the end of the LEN
	cha	Indicates you want to change the CFU DN
CFUIFDN	xxxxxxx	Enter the primary DN of the UCD group to which you want to forward the line DN.

At a telephone set

4 Connect a phone butt to the line.

5 Go off hook.

6 Dial the call forward activation code followed by the UCD DN.

Example: *80 2326050

Note: If you do not know this code, look it up in Table IBNXLA. It is the CFWP entry.

7 Listen for the confirmation tone for an indication that the line has been forwarded.

Note: If the switch is rebooted, you must repeat steps 4 to 7 for each line DN that CFUs to the UCD group.

Meridian Mail configuration

Once you have added all the necessary UCD groups and line DNs, you are ready to add the DNs to the VSDN table. For instructions, see Chapter 25, “The VSDN table”.

Moving agents from one UCD group to another

When to use

Use this procedure if you want to move existing agents from one UCD group to another UCD group.

Examples

You might need to do this if you have dedicated channels to a particular service and you find through analyzing traffic studies that you need more channels.

Or, you might find that the efficiency of the system has gone down, and you want to reduce the number of channels that are dedicated to a service and move them to a UCD group where they can be shared among more services.

Procedure

This is a high-level procedure for moving agents. Step-by-step procedures are on the corresponding pages.

Step	Action	See page
	DMS/SL-100 switch configuration	
1	Will moving agents to a new UCD group cause the MAXPOS value of that UCD group to be exceeded?	
	• If yes, modify the MAXPOS value for the UCD group to which you are moving agents. This is done in table UCDGRP.	24-58
	• If no, go to step 2.	
2	Reassign the agent to another UCD group.	24-68
3	Do you have any extra agents after moving multimedia channels?	24-61
	• If yes, go to “Deleting agents from a UCD group.”	24-69
	• If no, go to step 4.	
	Meridian Mail configuration	
4	Modify the Channel Allocation Table.	24-70

Moving an agent

To move an agent to another UCD group, follow these steps.

Step	Action
1	Log in.
2	Enter **servord** and press Return.
3	Respond to prompts as shown in the following table.

Prompt	Input	Description
SO:	ADO	
DN_OR_LEN:		DN or Line Equipment Number of the UCD agent.
OPTION:	SMDI	Simplified Message Desk Interface
LINE_NO:		Line Number position in the UCD SMDI group. Corresponds to the Agent ID (AI) that is configured in using the Modify Hardware tool at the Tools level.
UCDGRP:		The name of the new UCD group to which you want to move the agent (UCDNAME from UCDGRP).
AUTOLOG	Y	Autologon capability required.
OPTION:	$	The data you have entered is displayed. Enter Y to confirm.

Deleting agents from a UCD group

When to use

Use this procedure if you moved multimedia agents from one UCD group to another and, therefore, created extra agents. If not removed, these agents can cause endless ringing on your system.

Procedure

To remove an agent from a UCD group, follow these steps.

Step	Action
1	Log in.
2	Enter **servord** and press Return.
3	Respond to prompts as shown in the following table.

Prompt	Input	Description
SO:	DEO	
DN_OR_LEN:		DN or Line Equipment Number of the UCD agent you want to delete.
OPTION:	SMDI	Simplified Message Desk Interface
OPTION:	$	The data you have entered is displayed. Enter Y to confirm.

Modifying the Channel Allocation Table after moving agents

When to use

You need to modify the Channel Allocation Table if you have moved agents from one UCD group to another.

When you move an agent from one UCD group to another, the primary DN of the agent changes. This change must be reflected in the Channel Allocation Table (CAT).

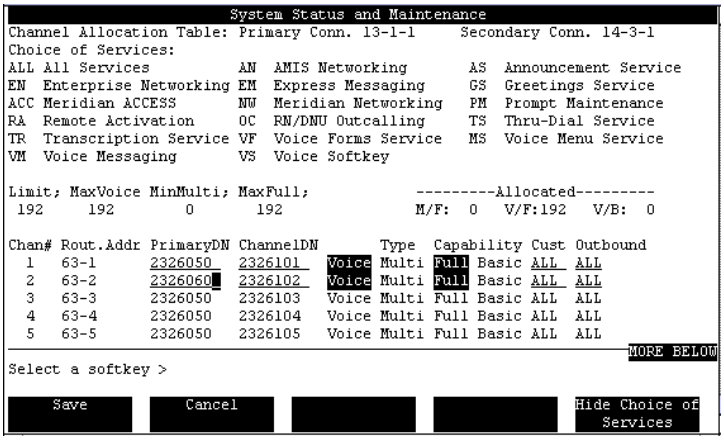
Modifying the CAT on the MSM

To modify the primary DN of moved agents in the Channel Allocation table, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance.
2	Disable the T1 channels that correspond to the moved agents. ***Note:*** See “Disabling/enabling T1 channels in single mode” on page 29-99.
3	Select Channel Allocation Table from the System Status and Maintenance menu. ***Result:*** A list of T1 links is displayed.
4	Move the cursor to the T1 link that contains the T1 channel you want to dedicate and press the space bar to select it. ***Result:*** The T1 link you selected is highlighted.
5	While the T1 link is highlighted, press Return. ***Result:*** The Channel Allocation Table is displayed.
6	Move the cursor to the channel you moved and need to modify.

Step	Action
7	Go to the Primary DN column and enter the DN of the UCD group to which it was moved.



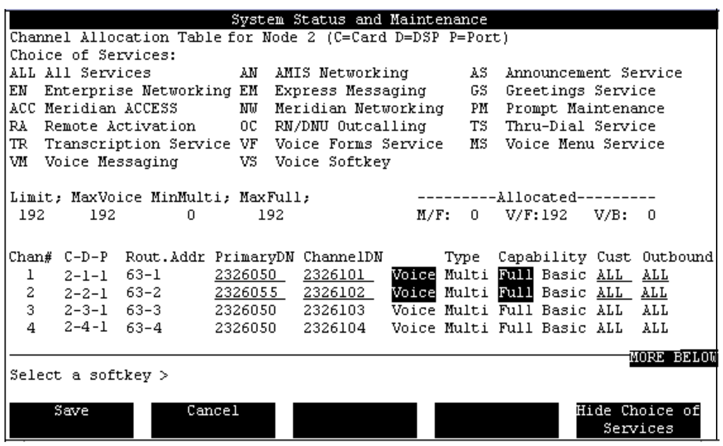
8	Did you move any other agents (channels)? • If yes, repeat steps 6 to 7 until you have modified the Primary DNs of all agents that were moved. • If no, go to step 9.
9	Press [Save] to save the changes.
10	Reenable the T1 channels. ***Note:*** See “Disabling/enabling T1 channels in single mode” on page 29-99.

Modifying the CAT on the ModOp GP

To modify the primary DN of moved agents in the Channel Allocation table, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance.
2	Disable the DSP ports that correspond to the moved agents. ***Note:*** For instructions, see “Disabling/enabling DSP ports in single mode” on page 29-53.
3	Select Channel Allocation Table from the System Status and Maintenance menu.
4	If you have a multinode system, enter the number of the node on which the DSP port resides and press Return. ***Result:*** The Channel Allocation Table is displayed.
5	Move the cursor to the agent you moved and need to modify.
6	Go to the Primary DN column and enter the DN of the UCD group to which it was moved.


```
                System Status and Maintenance
Channel Allocation Table for Node 2 (C=Card D=DSP P=Port)
Choice of Services:
ALL All Services          AN  AMIS Networking      AS  Announcement Service
EN  Enterprise Networking EM  Express Messaging    GS  Greetings Service
ACC Meridian ACCESS       NW  Meridian Networking  PM  Prompt Maintenance
RA  Remote Activation     OC  RN/DNU Outcalling    TS  Thru-Dial Service
TR  Transcription Service VF  Voice Forms Service  MS  Voice Menu Service
VM  Voice Messaging       VS  Voice Softkey

Limit; MaxVoice MinMulti; MaxFull;           ---------Allocated---------
 192     192        0       192              M/F:  0   V/F:192   V/B:  0

Chan# C-D-P  Rout.Addr PrimaryDN ChannelDN        Type  Capability Cust Outbound
  1   2-1-1  63-1      2326050   2326101   Voice Multi Full Basic ALL  ALL
  2   2-2-1  63-2      2326055   2326102   Voice Multi Full Basic ALL  ALL
  3   2-3-1  63-3      2326050   2326103   Voice Multi Full Basic ALL  ALL
  4   2-4-1  63-4      2326050   2326104   Voice Multi Full Basic ALL  ALL
                                                                  MORE BELOW
Select a softkey >

   Save      Cancel                             Hide Choice of
                                                   Services
```

Step	Action
7	Did you move any other agents (ports)? • If yes, repeat steps 5 to 6 until you have modified the Primary DNs of all agents that were moved. • If no, go to step 8.
8	Press [Save] to save the changes.
9	Reenable the DSP ports. ***Note:*** For instructions, see “Disabling/enabling DSP ports in single mode” on page 29-53.

Disabling calling DN suppression on DMS-10 systems

Introduction

In a DMS-10 configuration where the Voice Messaging DN forwards to the main UCD group, you must disable the Calling DN Suppression feature on the UCD group. If this feature is left enabled, it will prevent the operation of AutoLogon.

Procedure

To disable calling DN suppression, follow these steps.

Step	Action
1	Set the MDNB (Message Desk Number Block) to NO.
2	Set the OSUP (Originating Suppression) to NO.
3	Set the TSUP (Terminating Suppression) to NO.

Chapter 25

The VSDN table

In this chapter

Section A Introduction

In this section

Overview

Introduction

Voice service directory numbers (VSDNs) are defined for every service that you want to make directly accessible to internal users or external callers, or both. These directory numbers (DNs) are entered in the Voice Services-DN (VSDN) table which maps DNs to services.

Administration levels

You can perform the following tasks at each of the administration levels.

Admin Level	Add VSDNs	View/Modify VSDNs	Delete VSDNs
Customer	yes	yes	yes
System		yes	yes

Access DNs

Part of defining a VSDN is specifying the access DN. This is the number that users and callers dial to access the service.

ATTENTION

Ensure that access DNs in your VSDN definitions do not duplicate mailbox numbers or switch trunk route access codes.

Nightly audits

Every day at 3:30 a.m., Meridian Mail performs an audit. This audit can take anywhere from 10 minutes (if the system has not been modified since the last audit) to 2 hours (if many changes have been made, such as users or services being added or modified).

ATTENTION

Do not add, modify, or delete VSDNs during the nightly audit.

When to create a VSDN

Requirement

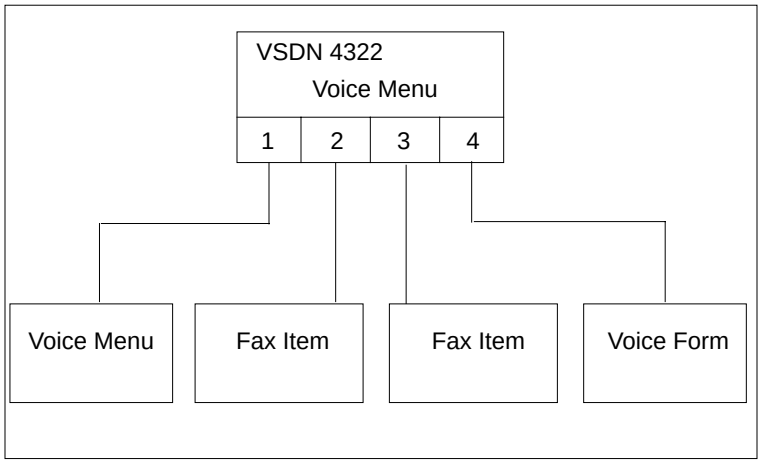
You need a VSDN for any service that you want to be directly accessible. This means that a caller dials a number to access a particular service such as a Voice Menu or Express Messaging.

You do not have to create VSDNs for services that are accessed indirectly through other services.

Example

You want to create a voice menu that starts up the following services:

- another Voice Menu
- two Fax Items
- a Voice Form



Only the first Voice Menu (that starts the other services) requires a VSDN since it is the service that you want callers to dial in to directly.

The other services that it invokes do not need VSDNs since they are not dialed in to directly. They are accessible only through the Voice Menu.

However, if you want to make the same service (like the voice form) also directly dialable, you need to create a VSDN for it.

Accessing the VSDN table

Introduction

All of the procedures in this chapter are performed in the VSDN table. This procedure describes how to access the VSDN table.

Before you begin

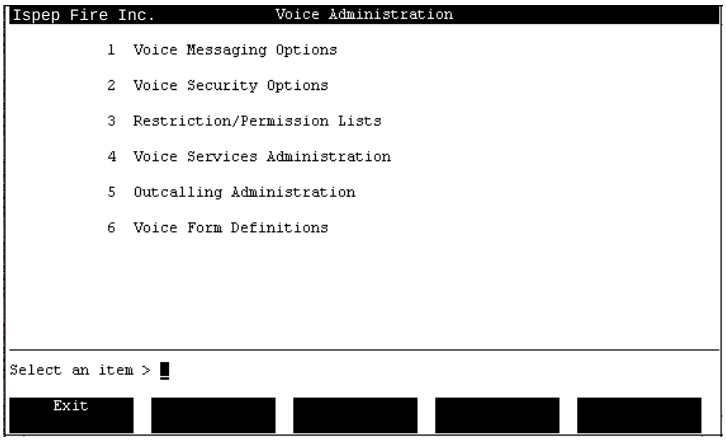
To add new VSDNs, you must select a customer and access the table at the Customer Administration level. See “Selecting a customer to view or modify” on page 5-17.

Procedure

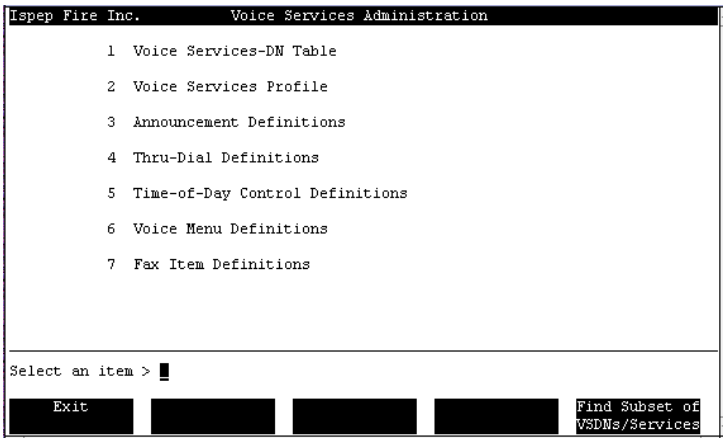
To access the VSDN table, follow these steps.

Starting Point: The Main Menu or the Customer Administration Menu

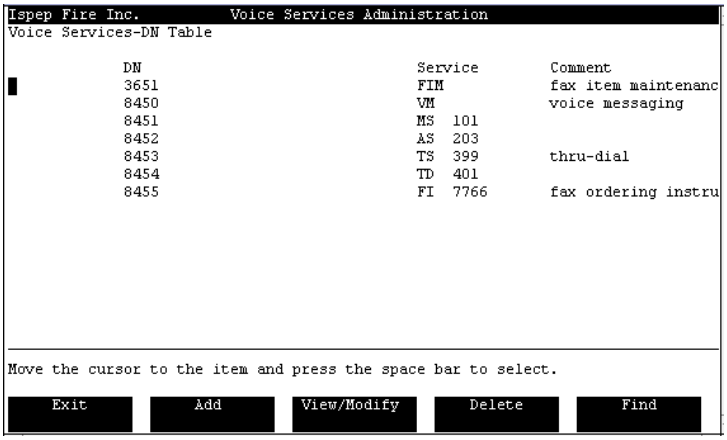
Step	Action
1	Select Voice Administration. ***Result:*** The Voice Administration menu is displayed.



Step	Action
2	Select Voice Services Administration. ***Result:*** The Voice Services Administration menu is displayed.



Step	Action
3	Select Voice Services-DN Table. ***Result:*** The Voice Services-DN Table is displayed.



Note: The [Add] softkey is displayed only if the table is accessed from the Customer Administration level.

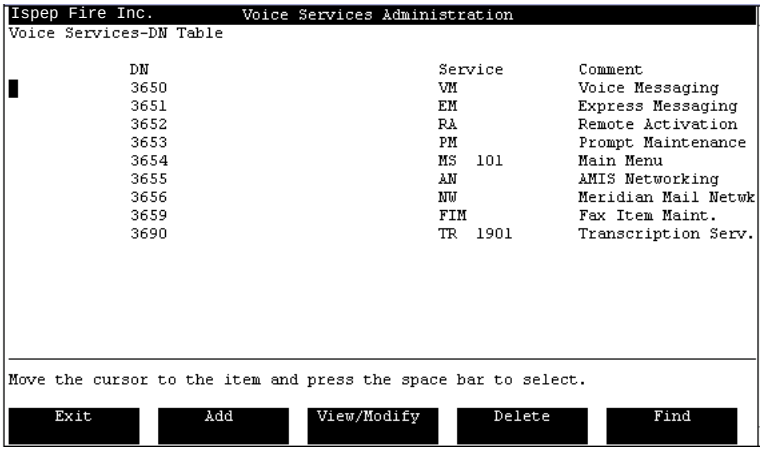
Step	Action
4	What action do you want to perform?

IF you want to	THEN	AND see
add a VSDN	press [Add]	Section B to Section D.
view or modify a VSDN	select the VSDN and press [View/Modify]	page 25-114.
delete a VSDN	select the VSDN and press [Delete]	page 25-118.
find a VSDN or subset of VSDNs	press [Find]	Chapter 23.

The VSDN table

The screen

This is the VSDN table for an operational system in which a number of VSDNs have already been defined.



System administration

If accessed at the System Administration level, an extra column, Customer #, appears to the left of the DN column. It indicates the customer to which each DN belongs.

Field descriptions

This table describes the fields in the VSDN table.

DN	
Description	This is the directory number of the service. It is the number that is dialed to access the service.
Service	
Description	This is the service that is accessed when the DN is dialed. Only the service acronym is displayed.
ID	For certain services, such as Announcements and Voice Menus, an ID is displayed next to the acronym. This is the specific service that is accessed.
Comment	
Description	This is a description or title that has been assigned to the VSDN.

Section B Adding messaging VSDNs

In this section

Overview

Introduction

This section describes how to add VSDNs for Voice Messaging services.

Deciding which VSDNs you need

Use this table to decide which VSDNs you need to add to your system.

IF	THEN	AND see
MMUI or VMUIF Voice Messaging is installed	create a VSDN for VM	page 25-13.
you want express messaging	create a VSDN for EM	page 25-17.
VMUIF voice messaging is installed	create a VSDN for GS	page 25-22.

Adding a VSDN for Voice Messaging

Description

Voice Messaging is the basic voice mail service that records voice messages when a phone is not answered (Call Answering) and allows users to compose and send voice messages.

When to use

Add a VSDN for the Voice Messaging service during initial Meridian Mail setup.

Expansion digits

Address expansion
If address expansion is enabled (the System Addressing Length field in General Options is set to a non-zero value), the Expansion Digits field and the next field, Enforce Prefix, are displayed.

Description
These are the digits that are attached to mailbox numbers entered during message addressing. These digits expand the supplied mailbox number to the full system addressing length.

Example
The system addressing length is 10. The expansion digits are 416555. A user enters a 4-digit mailbox number (2335). The digits are added to the mailbox number to generate the following mailbox number: 4165552335.

Default
Blank

Enforce prefix

Users can still enter full-length mailbox numbers. The setting in this field determines whether users can enter mailbox numbers with prefixes that conflict with the defined expansion digits.

WHEN prefixes	THEN users
are enforced	are not allowed to enter system-length mailbox numbers that contain a prefix that conflicts with the defined prefix.
are not enforced	are allowed to enter system-length mailbox numbers that contain a prefix that conflicts with the defined prefix.

Example

The system addressing length is 10. The local addressing length is 4. The expansion digits are 416543. The Enforce Prefix field is set to Yes.

A user tries to enter the following mailbox number: 4165162390. The user cannot address a message to this number.

See also

Setting up the address expansion feature involves several steps. For a step-by-step procedure and for more information about address expansion, see “Enabling address expansion” on page 14-8.

Before you begin

Access the VSDN table if you are not already at the screen. See “Accessing the VSDN table” on page 25-6.

Procedure

To add the Voice Messaging VSDN, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN. ***Note:*** This is the DN of the primary UCD agent queue.
3	Enter VM in the Service field. ***Result:*** If address expansion is enabled, the Expansion Digits and Enforce Prefix fields are displayed.

```
Ispep Fire Inc.          Voice Services Administration
Add DN Information

Choice of Services:
AN  AMIS Networking       EM  Express Messaging     ACC Meridian ACCESS
VM  Voice Messaging

Access DN:          4165552300

Service:            VM      Expansion digits:  416555

                            Enforce Prefix:    No Yes

Comment:            Voice Messaging

Select a softkey >

 Save      Cancel
```

Step	Action
4	If address expansion is enabled, enter the expansion digits that are to precede the user-supplied mailbox numbers during message addressing.
5	Do you want to force users who enter system-length mailbox numbers to include the defined expansion digits? • If yes, set the Enforce Prefix field to Yes. • If no, set the Enforce Prefix field to No.

Step	Action
6	Enter an optional comment in the Comment field.
7	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for Express Messaging

Description

Express Messaging allows users to directly leave a message in another user's mailbox without ringing a phone.

When to use

Express Messaging is a basic feature that should be available to users once Meridian Mail is operational. The VSDN for Express Messaging should, therefore, be added during initial Meridian Mail setup.

Mailbox ID

If you define a Mailbox ID, callers to the Express Messaging service are automatically transferred to the specified mailbox.

Types of express messaging services

You can create a number of Express Messaging services, each with its own VSDN.

Application 1: general Express Messaging service
This is the typical Express Messaging application that allows users to activate the Express Messaging service, dial any mailbox without ringing the associated phone, and leave a message directly in the mailbox.

For this type of service, do not enter a mailbox ID.

Application 2: suggestion box
In this application, when the Express Messaging DN is dialed, the caller is forwarded to a specific mailbox (a suggestion box) to leave a message.

This application requires that you

- set up a special mailbox just for this purpose. (See "Adding a local voice user" on page 9-5.)
- enter the mailbox ID in the Add DN Information screen

Expansion digits

Address expansion
If address expansion is enabled (the System Addressing Length field in General Options is set to a non-zero value), the Expansion Digits field is displayed.

If you enter expansion digits, the Enforce Prefix fields is also displayed.

Description
These are the digits that precede the mailbox numbers entered during Express Messaging sessions. These digits expand the supplied mailbox number to the full system addressing length.

Example
The system addressing length is 10. The expansion digits are 416555. A user enters a 4-digit mailbox number (2335). The digits are added to the mailbox number to generate the following mailbox number: 4165552335.

Default
Blank

Note: You can fill in the Mailbox ID or Expansion Digits field, but not both.

Enforce prefix

Users can still enter full-length mailbox numbers.

The setting in this field determines whether users can enter mailbox numbers with prefixes that conflict with the defined expansion digits.

WHEN prefixes	THEN users
are enforced	are not allowed to enter system-length mailbox numbers that contain a prefix that conflicts with the defined prefix.
are not enforced	are allowed to enter system-length mailbox numbers that contain a prefix that conflicts with the defined prefix.

Impact

When this field is set to Yes, prefixes are enforced under the following circumstances:

- when a user enters the mailbox number to which he or she wants to send an express message
- when a user tries to log in to his or her mailbox from an Express Messaging session (by pressing 81)

Example

The system addressing length is 10. The local addressing length is 4. The expansion digits are 416543. The Enforce Prefix field is set to Yes.

A user tries to enter the following mailbox number: 4165162390. The user cannot send an express message to this number.

See also

Setting up the address expansion feature involves several steps. For a step-by-step procedure and for more information about address expansion, see “Enabling address expansion” on page 14-8.

Before you begin

Access the VSDN table if you are not already at the screen. See “Accessing the VSDN table” on page 25-6.

Procedure To add the Express Messaging VSDN, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter EM in the Service field. ***Result:*** The Mailbox ID field is displayed. If address expansion is enabled, the Expansion Digits and Enforce Prefix fields are also displayed.

```
Ispep Fire Inc.          Voice Services Administration
Add DN Information

Choice of Services:
EM  Express Messaging     VM  Voice Messaging

Access DN:          4552

Service:            EM      Mailbox ID:

                            Or Expansion digits:  416555

                               Enforce Prefix:    No Yes

Comment:            Express Messaging

Select a softkey >

 Save |  Cancel |          |          |
```

4	Do you want callers to be forwarded to a particular mailbox when using this service? • If yes, enter the number of the mailbox to which you want to forward users in the Mailbox ID field, and go to step 7. • If no, leave the Mailbox ID field blank.
5	If address expansion is enabled, enter the expansion digits that are to be attached to user-supplied mailbox numbers during express messaging sessions.

Step	Action
6	Do you want to force users who enter system-length mailbox numbers to include the defined expansion digits? • If yes, set the Enforce Prefix field to Yes. • If no, set the Enforce Prefix field to No.
7	Enter an optional comment in the Comment field.
8	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for the Greetings Service

Description

The Greetings Service allows VMUIF users who do not have DTMF (touch-tone) phones to update their greetings without having to provide any keypad input. This service can also be provided to subscribers with digitone phones if they want a simplified interface for changing greetings.

When to use

If VMUIF is installed on your system, you should create a VSDN for the Greetings Service.

Before you begin

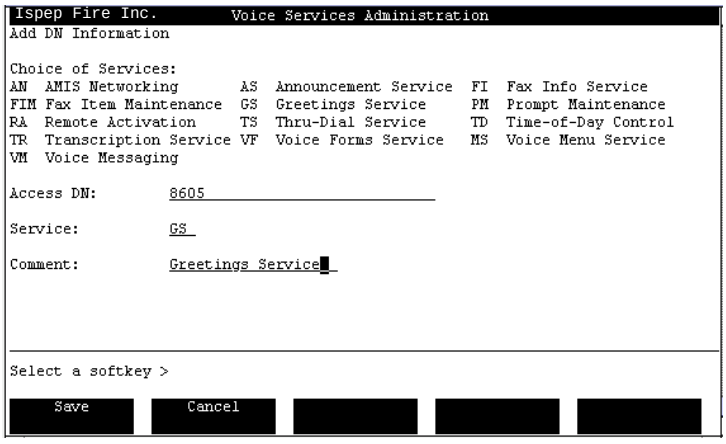
Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To add a DN for the Greetings Service, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter GS in the Service field.



4	Enter an optional comment in the Comment field.

Step	Action
5	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Section C Adding networking and ACCESS VSDNs

In this section

Overview

Enterprise Networking

In Meridian Mail Release 11, Meridian Networking has been enhanced with Enterprise Networking.

A VSDN is required for Enterprise Networking if you are expanding to Enterprise Networking or if you are adding Enterprise Networking.

AMIS and Enterprise Networking

When both AMIS Networking and Enterprise Networking are installed, they can share the same VSDN. The drawback to this method is that you will not be able to see separate statistics in Operational Measurements for these two services as they will be combined.

If both AMIS and Enterprise Networking are installed, you can do any one of the following:

- Create two separate VSDNs, one for AMIS (AN) and one for Enterprise Networking (EN).
- Create only one VSDN for AN that is shared by both networking types.
- Create only one VSDN for EN that is shared by both networking types.

Adding a VSDN for AMIS Networking

Description

AMIS Networking allows Meridian Mail users to send voice messages to and receive voice messages from other voice messaging systems that use the AMIS protocol.

When to use

If you are adding AMIS Networking to your system, you must create a VSDN for it. This VSDN establishes a network connection for the AMIS format message transfer.

If Enterprise Networking is installed, it can share this DN.

Before you begin

Access the VSDN table if you are not already at the screen. See “Accessing the VSDN table” on page 25-6.

Procedure

To add a DN for AMIS Networking, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter AN in the Service field.

```
Ispep Fire Inc.          Voice Services Administration
Add DN Information

Choice of Services:
AN  AMIS Networking       AS  Announcement Service  EN  Enterprise Networking
EM  Express Messaging     FI  Fax Info Service      FIM Fax Item Maintenance
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     TS  Thru-Dial Service     TD  Time-of-Day Control
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging

Access DN:        3655

Service:          AN

Comment:          AMIS Networking

Select a softkey >

 Save    Cancel
```

Step	Action
4	Enter an optional comment in the Comment field.
5	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for Meridian Networking

Description

Meridian Networking allows Meridian Mail users to send voice messages to and receive voice messages from users at other Meridian Mail sites that are defined in the network database. This type of networking uses the Meridian protocol to transfer messages.

When to use

If Meridian Networking is installed and you have enabled it for the current customer, you must create a VSDN for it. The VSDN establishes a network connection for the transfer of voice messages.

Before you begin

Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To add a DN for Meridian Networking, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter NW in the Service field.

```
Ispep Fire Inc.        Voice Services Administration
Add DN Information

Choice of Services:
AN  AMIS Networking       AS  Announcement Service  EN  Enterprise Networking
EM  Express Messaging     FI  Fax Info Service      FIM Fax Item Maintenance
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     TS  Thru-Dial Service     TD  Time-of-Day Control
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging

Access DN:        3656

Service:          NW

Comment:          Meridian Networking

Select a softkey >

   Save      Cancel
```

Step	Action
4	Enter an optional comment in the Comment field.
5	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for Enterprise Networking

Description

Enterprise Networking provides most of the functionality of Meridian Networking, but uses DTMF signaling, based on the AMIS protocol, instead of modems to transmit messages.

The Remote Voice User Propagation feature is unique to Enterprise Networking. It allows you to automatically add temporary remote voice users to your system.

When to use

If you are adding Enterprise Networking to your system and you want to implement it, you must create a VSDN. This DN is used to establish a network connection for the transfer of voice messages using Enterprise Networking.

Dedicated versus shared DN

You can create a DN specifically for Enterprise Networking (EN). Alternatively, Enterprise Networking can share a DN with any of the following services:

- AMIS networking (AN)
- Voice Menu Service (MS)
- Thru-Dial Service (TS)
- Announcement Service (AS)
- Time-of-day Controller Service (TD)

If Enterprise Networking shares a DN with any of these other services, it means that there is one less VSDN to configure.

Before you begin

Access the VSDN table if you are not already at the screen. See “Accessing the VSDN table” on page 25-6.

Adding an EN DN for Enterprise Networking

To add an EN DN for Enterprise Networking, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter EN in the Service field.

```
Ispep Fire Inc.        Voice Services Administration
Add DN Information

Choice of Services:
AN  AMIS Networking       AS  Announcement Service  EN  Enterprise Networking
EM  Express Messaging     FI  Fax Info Service      FIM Fax Item Maintenance
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     TS  Thru-Dial Service     TD  Time-of-Day Control
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging

Access DN:        3691

Service:          EN

Comment:          Enterprise Network

Select a softkey >

   Save      Cancel
```

4	Enter an optional comment in the Comment field.
5	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Sharing the AMIS DN

To have Enterprise Networking share a DN with AMIS, add a VSDN for AMIS if this has not already been done. If an AMIS DN already exists, no additional configuration is required. See “Adding a VSDN for AMIS Networking” on page 25-27.

Sharing a DN with a voice service

If you want Enterprise Networking to share a DN with one of MS, TS, AS, or TD, follow these steps. This procedure assumes that at least one VSDN exists for one of these four services.

Starting Point: The Voice Services Administration menu at the Customer Administration level

Step	Action
1	Select Voice Services Profile. ***Result:*** The Voice Services Profile screen is displayed.

```
Ispep Fire Inc.        Voice Services Administration
Voice Services Profile

Voice Services Volume: 1

Timeouts
   Command Entry:      3.5 seconds     Short Disconnect: 10.0 seconds
   Record (mm:ss):   02:00

Maximum Prompt Sizes for Announcements (mm:ss):          00:30
                         other voice recordings (mm:ss): 02:00

Act on AMIS/Enterprise Initiator Tone:  No Yes

Enable Update Logging:                  No Yes

Business Hours Default:       08:30 to 17:00

Holidays   Start Date         End Date        Start Time    Comments
                                                                MORE BELOW
Select a softkey >

 Save      Cancel
```

2	Is the Act on AMIS/Enterprise Initiator Tone field set to Yes? • If yes, leave it as is. • If no, set it to Yes.
3	Press [Save]. ***Result:*** Whenever a call comes into any voice menu (MS), thru-dialer (TS), announcement (AS), or time-of-day controller (TD), Meridian Mail will be able to tell whether it is an Enterprise Networking call and process it accordingly.

Adding a VSDN for a Meridian ACCESS application

Description

ACCESS applications include IVR applications and VISIT Messenger.

When to use

Create a VSDN for each ACCESS application that you want to make directly accessible to callers.

The ACCESS class

Every ACCESS application has a unique identifier known as a class. This is similar to the concept of an ID. It indicates which ACCESS application you want to run when the VSDN is dialed.

The Revert DN

When adding a VSDN for an ACCESS application, you can specify a Revert DN in your VSDN definition. If an ACCESS application goes off-line, calls are transferred to this DN.

Before you begin

Access the VSDN table if you are not already at the screen. See “Accessing the VSDN table” on page 25-6.

Procedure

To add a DN for an ACCESS application, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter ACC in the Service field. ***Result:*** The Class and Revert DN fields are displayed.

```
Ispep Fire Inc.          Voice Services Administration
Add DN Information

Choice of Services:
AN  AMIS Networking       AS  Announcement Service  EN  Enterprise Networking
EM  Express Messaging     FI  Fax Info Service      FIM Fax Item Maintenance
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     TS  Thru-Dial Service     TD  Time-of-Day Control
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging

Access DN:        3682

Service:          ACC     Class:     1334

                          Revert DN: 3900

Comment:          IVR App 1

Select a softkey >

 Save     Cancel
```

Step	Action
4	Enter the ACCESS class.
5	Enter a Revert DN if necessary.
6	Enter an optional comment in the Comment field.
7	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Section D Adding voice service and fax service DNs

In this section

Overview

Introduction

When you add a VSDN for any of the following services, you must assign a session profile to it:

- voice menu
- time-of-day controller
- fax item
- fax item maintenance service

Session profiles

There are three predefined session profiles from which to choose. They are based on the channel capability that is required to run the service:

- Basic service
- Full-service voice
- Full-service multimedia

If none of these predefined session profiles meets your needs, you can create a custom session profile. Procedures in this section indicate when you need to select or customize a session profile.

For more information about session profiles, see the section "Session profiles" on page 25-65.

Adding a VSDN for an announcement

Description

An announcement is a voice service that is part of the Voice Menus feature. An announcement is simply a recording that is played to a caller.

When to use

Create a VSDN for an announcement if you want users or callers to be able to access the announcement directly by dialing a number.

Before you begin

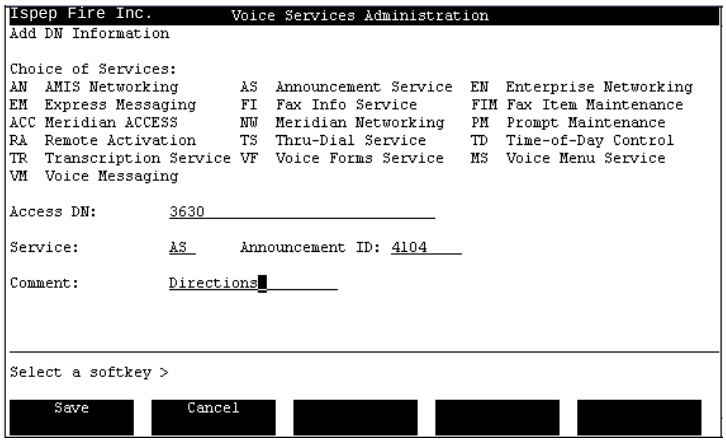
Access the VSDN table if you are not already at the screen. See “Accessing the VSDN table” on page 25-6.

Procedure

To create a VSDN for an announcement, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter AS in the Service field. ***Result:*** The Announcement ID field is displayed.



Step	Action
4	Enter the Announcement ID. ***Note:*** If you have not created the announcement yet, you must enter an ID to save the VSDN. Enter an ID and use this ID when creating the announcement.
5	Enter an optional comment in the Comment field.
6	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for a thru-dial service

Description

A thru-dialer is a voice service that is part of the voice menus feature. Its function is to provide call handling. When a caller accesses a thru-dialer, he or she is prompted for an extension number. The thru-dialer then places the phone call.

When to use

Create a VSDN for a thru-dialer if you want users or callers to be able to access the thru-dialer directly by dialing a number.

Before you begin

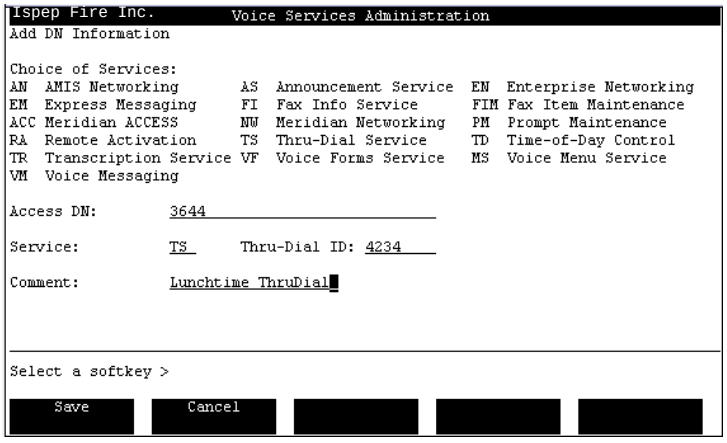
Access the VSDN table if you are not already at the screen. See “Accessing the VSDN table” on page 25-6.

Procedure

To create a VSDN for a thru-dialer, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter TS in the Service field. ***Result:*** The Thru-Dial ID field is displayed.



Step	Action
4	Enter the Thru-Dial ID. ***Note:*** If you have not created the thru-dialer yet, you must enter an ID to save the VSDN. Enter an ID and use this ID when creating the thru-dialer.
5	Enter an optional comment in the Comment field.
6	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for a voice menu

Description

Voice menus present callers with a list of options from which they can make a selection by pressing the appropriate key on their telephone keypad.

When to use

Create a VSDN for a voice menu if you want users or callers to be able to access the voice menu directly by dialing a number.

Choosing the session profile

You must assign a session profile to all voice menus for which you add a VSDN. Use this table to decide what kind of session profile you need for the voice menu.

IF the voice menu	THEN
invokes one or more of the following *only:* • ACCESS applications (such as IVR) • announcements • thru-dial services • voice prompt maintenance • remote activation • voice menu commands (such as play prompt, call revert DN, or repeat menu choices) • other voice menus or time-of-day controllers that invoke the above services only	• select the basic service session profile or • create a custom session profile and set channel capability to Basic.
invokes any of the following: • voice messaging • express messaging • fax items using call back delivery mode • other voice menus or time-of-day controllers that invoke any of the above services	• select the full-service voice session profile, or • create a custom session profile and set channel capability to Full Voice.
invokes any of the following: • fax item maintenance • fax items using same call or caller choice delivery mode	• choose the full-service multimedia session profile, or • create a custom session profile and set channel capability to Full MultiMedia.

When to create a custom session profile

Review the default session profiles starting on page 25-79. If the default session profiles do not meet your needs, you must create a custom profile. See "Customizing the session profile for Voice Menus, Fax Items, and Time-of-Day Controllers" on page 25-88.

Determining how many VSDNs you need

If the voice menu invokes fax services that you want to be able to deliver to different caller markets (such as national and international), you may have to create multiple VSDNs. See "Determining how many VSDNs you need for a callback fax service" on page 25-76.

Before you begin

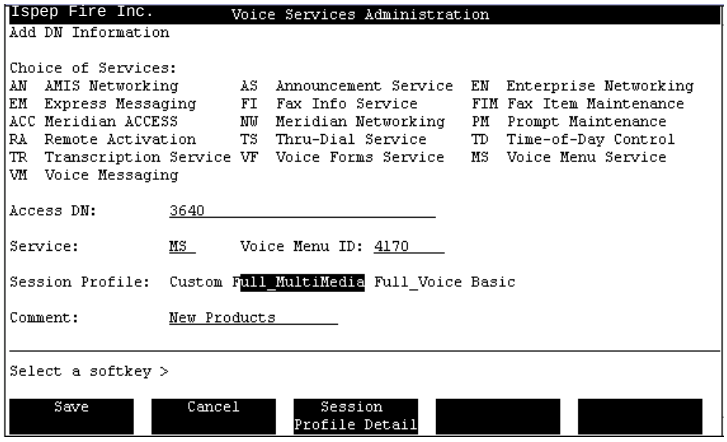
Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To create a VSDN for a voice menu, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter MS in the Service field. ***Result:*** The Voice Menu ID and Session Profile fields are displayed. The [Session Profile Detail] softkey is also displayed.



Step	Action
4	Enter the Voice Menu ID. ***Note:*** If you have not created the voice menu yet, you must enter an ID to save the VSDN. Enter an ID and use this ID when creating the voice menu.
5	Do you need to create a custom session profile? • If yes, see the section "Session profiles" on page 25-65 and then go to step 9. • If no, go to step 6.
6	Select one of the predefined session profiles (Basic, Full Voice, or Full MultiMedia).
7	Do you want to view the session profile? • If yes, press the [Session Profile Detail] softkey. • If no, go to step 9.
8	Review the session profile and press [Return to Previous Form] when you are ready to return to the Add DN Information screen.
9	Enter an optional comment in the Comment field.
10	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for a time-of-day controller

Description

Time-of-day controllers direct calls to different services based on the time of day that the call is received.

When to use

Create a VSDN for a time-of-day controller if you want users or callers to be able to access the time-of-day controller directly by dialing a number.

Selecting the session profile

Use this table to decide what kind of session profile you need for the time-of-day controller.

IF the time-of-day controller	THEN
invokes one or more of the following *only:* • ACCESS applications (such as IVR) • announcements • thru-dial services • voice prompt maintenance • remote activation • other voice menus or time-of-day controllers that invoke the above services only	• choose the basic service session profile, or • create a custom session profile and set channel capability to Basic.
invokes any of the following: • voice messaging • express messaging • fax items using callback delivery mode • other voice menus or time-of-day controllers that invoke any of the above services	• choose the full-service voice session profile, or • create a custom session profile and set channel capability to Full Voice.
invokes any of the following: • fax item maintenance • fax items using same call or caller choice delivery mode	• choose the full-service multimedia session profile, or • create a custom session profile and set channel capability to Full MultiMedia.

When to create a custom session profile

Review the default session profiles starting on page 25-79. If the default session profiles do not meet your needs, you must create a custom profile. See “Customizing the session profile for Voice Menus, Fax Items, and Time-of-Day Controllers” on page 25-88.

Determining how many VSDNs you need

If the time-of-day controller invokes fax services that you want to be able to deliver to different caller markets (such as national and international), you may have to create multiple VSDNs. See "Determining how many VSDNs you need for a callback fax service" on page 25-76.

Before you begin

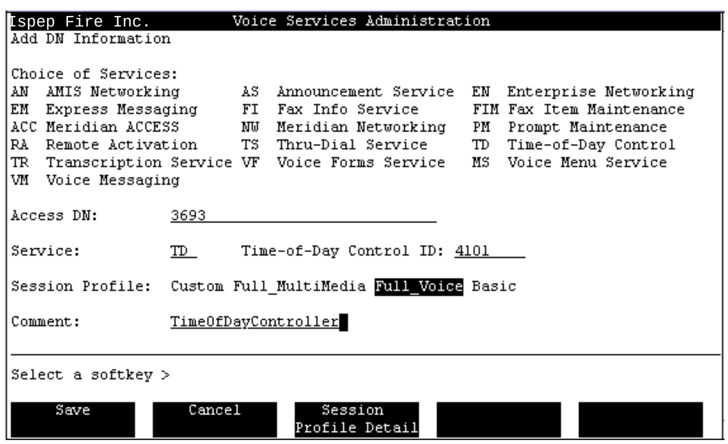
Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To create a VSDN for a time-of-day controller, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter TD in the Service field. ***Result:*** The Time-of-Day Control ID and Session Profile fields are displayed. The [Session Profile Detail] softkey is also displayed.



Step	Action
4	Enter the Time-of-Day Control ID. ***Note:*** If you have not created the time-of-day controller yet, you must enter an ID to save the VSDN. Enter an ID and use it when creating the time-of-day controller.

Step	Action
5	Do you need to create a custom session profile? • If yes, see the section "Session profiles" on page 25-65 and then go to step 9. • If no, go to step 6.
6	Select one of the predefined session profiles (Basic, Full Voice, or Full MultiMedia).
7	Do you want to view the session profile? • If yes, press the [Session Profile Detail] softkey. • If no, go to step 9.
8	Review the session profile and press [Return to Previous Form] when you are ready to return to the Add DN Information screen.
9	Enter an optional comment in the Comment field.
10	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for Voice Prompt Maintenance

Description

Voice prompt maintenance is a service that allows you to update prompts in voice menus and related services from a remote phone.

When to use

Create a VSDN if you want to use this service and have it directly accessible.

Before you begin

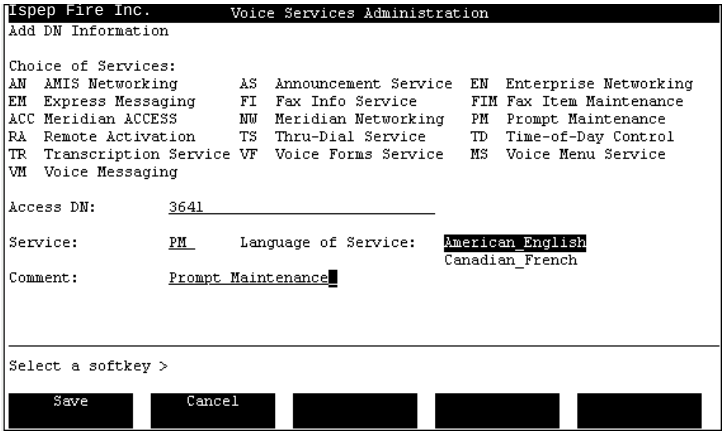
Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To create a VSDN for the voice prompt maintenance service, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter PM in the Service field. ***Result:*** When more than one language is installed, the Language of Service field is displayed.



Step	Action
4	If more than one language is installed, select the language in which you want prompt maintenance prompts to be played.
5	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for Remote Activation

Description

Remote Activation allows you to call in to Meridian Mail from a remote phone and assign a different service to a VSDN.

When to use

Create a VSDN for the Remote Activation service if you want it to be directly accessible by dialing a number.

The remote activation password

You must define a password for Remote Activation. When a caller dials in to the service, this password must be entered to gain access. This is a security measure to ensure that unauthorized personnel do not use this feature.

Before you begin

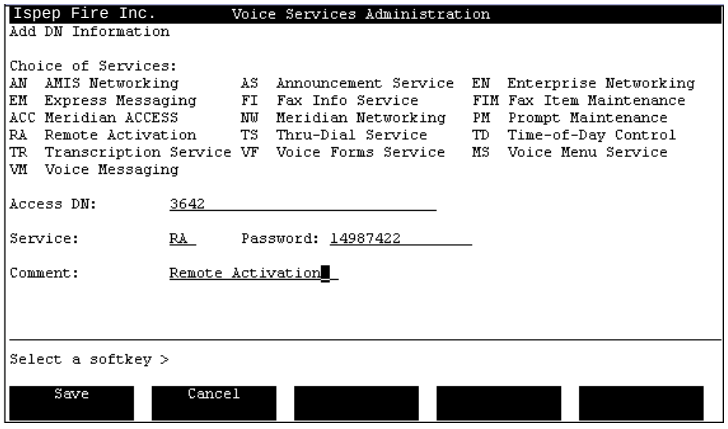
Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To create a VSDN for Remote Activation, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter RA in the Service field. ***Result:*** The Password field is displayed.



Step	Action
4	Enter a password. ***Note:*** This password must be defined. If no password is entered, remote activation is not enabled.
5	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for a voice form

Description

Voice forms present callers with a series of questions to which callers respond with spoken answers.

When to use

Create a VSDN for a voice form if you want it to be directly accessible by dialing a number.

Before you begin

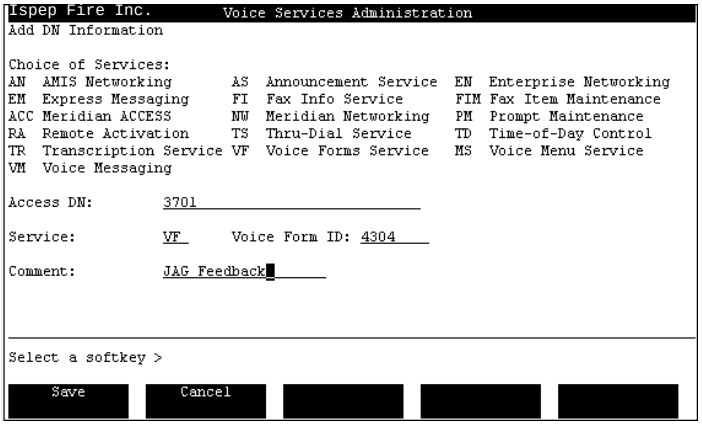
Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To create a VSDN for a voice form, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter VF in the Service field. ***Result:*** The Voice Form ID field is displayed.



Step	Action
4	Enter the voice form ID. ***Note:*** If you have not created the voice form yet, you must enter an ID to save the VSDN. Enter an ID and use this ID when creating the voice form.
5	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for the Transcription Service

Description

The Transcription Service is part of the Voice Forms feature. It allows a transcriber to log in to a voice form, listen to the recorded responses, and transcribe them.

When to use

Create a VSDN for the Transcription Service if you want it to be directly accessible by dialing a number.

Types of transcription services

You can create two different types of Transcription Services:

- a service that retrieves any voice form as specified by the transcriber
- a service that retrieves a specific voice form as defined in the Add DN Information screen

Application 1: general transcription service

In this application, when the transcriber logs on to the service, he or she is prompted for the ID of the voice form to be transcribed. This allows the transcriber to access any existing voice form.

If you want to create only one Transcription Service, create this kind and leave it up to the transcriber to decide which voice form to retrieve.

For this application, do not enter a Voice Form ID when adding the VSDN.

Application 2: voice-form specific

In this application, a particular voice form is associated with the VSDN. Whenever the VSDN is dialed, that voice form is automatically retrieved for transcription. You can have multiple transcription VSDNs so that a number of voice forms can be called up directly depending on the VSDN that was dialed.

You may want to do this if you have just implemented a voice form to which you expect a lot of responses, and you, therefore, want to have it transcribed frequently.

For this application, enter a Voice Form ID when adding the VSDN.

Before you begin

Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To create a VSDN for the Transcription Service, follow these steps.

Starting Point: The VSDN table.

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter TR in the Service field. ***Result:*** The Voice Form ID field is displayed.

```
Ispep Fire Inc.          Voice Services Administration
Add DN Information

Choice of Services:
AN  AMIS Networking       AS  Announcement Service  EN  Enterprise Networking
EM  Express Messaging     FI  Fax Info Service      FIM Fax Item Maintenance
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     TS  Thru-Dial Service     TD  Time-of-Day Control
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging

Access DN:        3710

Service:          TR     Voice Form ID: _______

Comment:          General Transcriber

Select a softkey >

 Save     Cancel
```

Step	Action
4	Do you want this transcription service to automatically retrieve a particular voice form? • If yes, enter the Voice Form ID. ***Note:*** If you have not created the voice form yet, you must enter an ID to save the VSDN. Enter an ID and use it when creating the voice form. • If no, leave the Voice Form ID field blank.

Step	Action
5	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for the Fax Information Service

Description

The Fax Information Service is part of the Fax on Demand feature. It is used to create fax items that are sent to callers on request.

When to use

Create a VSDN for a fax item if you want users or callers to be able to access it directly by dialing a number.

Selecting the session profile

Use this table to decide which session profile you need for a fax item.

If the fax delivery mode	THEN
is callback	• choose the full-service voice session profile, or • create a custom session profile and set the channel capability to Full Voice.
is caller choice or same call	• choose the full-service multimedia session profile, or • create a custom session profile and set the channel capability to Full MultiMedia.

When to create a custom session profile

Review the configurations of the default full-service voice session profile on page 25-81 and the full-service multimedia session profile on page 25-84. If the default session profiles do not meet your needs, you must create a custom profile. See "Customizing the session profile for Voice Menus, Fax Items, and Time-of-Day Controllers" on page 25-88.

Determining how many VSDNs you need

If you want this fax item to be delivered to different caller markets (such as national and international), you may have to create multiple VSDNs. See "Determining how many VSDNs you need for a callback fax service" on page 25-76.

Before you begin

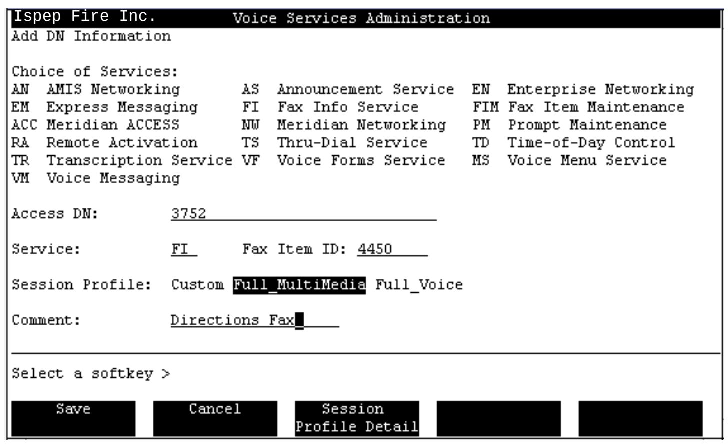
Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To create a VSDN for a fax item, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter FI in the Service field. ***Result:*** The Fax Item ID and Session Profile fields are displayed. The [Session Profile Detail] softkey is also displayed.



Step	Action
4	Enter the Fax Item ID. ***Note:*** If you have not created the fax item yet, you must enter an ID to save the VSDN. Enter an ID and use it when creating the fax item.
5	Do you need to create a custom session profile? • If yes, see the section "Session profiles" on page 25-65 and then go to step 9. • If no, go to step 6.
6	Select one of the predefined session profiles (Full Voice or Full MultiMedia).
7	Do you want to view the session profile? • If yes, press the [Session Profile Detail] softkey. • If no, go to step 9.

Step	Action
8	Review the session profile and press [Return to Previous Form] when you are ready to return to the Add DN Information screen.
9	Enter an optional comment in the Comment field.
10	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Adding a VSDN for the Fax Item Maintenance Service

Description

The Fax Item Maintenance service is part of the Fax on Demand feature. It is used to remotely maintain the content and characteristics of fax items using a telephone set. This service also allows you to verify changed content by sending a verification fax to a specified fax number.

When to use

Create a VSDN for the Fax Item Maintenance service if you want to be able to access it directly by dialing a number.

Selecting the session profile

You must use the full-service multimedia session profile or create a custom profile with channel capability set to Full Multimedia.

Do you need a custom session profile?

Review the configuration for the default full-service multimedia session profile on page 25-84. If the default session profile does not meet your needs, you must create a custom profile. See "Customizing the session profile for the Fax Item Maintenance Service" on page 25-107.

Before you begin

Access the VSDN table if you are not already at the screen. See "Accessing the VSDN table" on page 25-6.

Procedure

To create a VSDN for the Fax Item Maintenance service, follow these steps.

Starting Point: The VSDN table

Step	Action
1	Press the [Add] softkey. ***Result:*** The Add DN Information screen is displayed.
2	Enter the Access DN.
3	Enter FIM in the Service field. ***Result:*** The Session Profile field and [Session Profile Detail] softkey are displayed. If more than one language is installed, the Language of Service field is displayed.

```
Ispep Fire Inc.          Voice Services Administration
Add DN Information

Choice of Services:
AN  AMIS Networking       AS  Announcement Service  EN  Enterprise Networking
EM  Express Messaging     FI  Fax Info Service      FIM Fax Item Maintenance
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     TS  Thru-Dial Service     TD  Time-of-Day Control
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging

Access DN:        3759

Service:          FIM     Language of Service:   American_English
                                                 Canadian_French
Session Profile:  Custom Full_MultiMedia

Comment:          Fax Maintenance

Select a softkey >

 Save      Cancel    Session
                     Profile Detail
```

4	If more than one language is installed, select the language of service. ***Note:*** This is the language in which system prompts are played while using the fax item maintenance service.
5	Do you need to create a custom session profile? • If yes, see the section "Session profiles" on page 25-65 and then go to step 9. • If no, go to step 6.
6	Select the Full MultiMedia profile.
7	Do you want to view the session profile? • If yes, press the [Session Profile Detail] softkey. • If no, go to step 9.

Step	Action
8	Review the session profile and press [Return to Previous Form] when you are ready to return to the Add DN Information screen.
9	Enter an optional comment in the Comment field.
10	Do you want to add the VSDN with the information you have entered? • If yes, press the [Save] softkey. • If no, press [Cancel], or make any necessary corrections and then press [Save]. ***Result:*** You are returned to the VSDN table. If you pressed the [Save] softkey, there is now a new entry in the table for this DN.

Section E Session profiles

In this section

What is a session profile?

Description

A session profile is a set of operational characteristics that determines how the following features work.

- Voice Menus
- Time-of-Day Controllers
- the Fax Information Service (Fax Items)
- the Fax Item Maintenance Service

A session profile is required when you add a VSDN for any of these services.

Example

A session profile for a Voice Menu that invokes Fax on Demand services controls the following aspects (among others) of Voice Menu operation.

- the maximum session length
- the maximum number of invalid menu selections
- the maximum number of faxes that a caller can select
- how fax transmission errors are handled

When session profiles are required

The session profile is selected or defined when you add the VSDN. You can either

- select a predefined session profile, or
- create a custom session profile

You cannot create a session profile for one of these services if it does not have a VSDN. Session profiles are necessary only if a VSDN is necessary.

Three predefined profiles

There are three predefined session profiles to choose from. The names of the profiles indicate the type of ports that will be used.

Profile	Described on page
Basic service session profile	25-79
Full-service voice session profile	25-81
Full-service multimedia session profile	25-84

Custom session profiles

The three pre-defined session profiles cannot be modified in any way. If none of the three preconfigured session profiles meets your requirements for a particular service, you must create a custom session profile.

A session profile is customized for only one service (the service for which you are adding a VSDN). You cannot share the same custom session profile among a number of services.

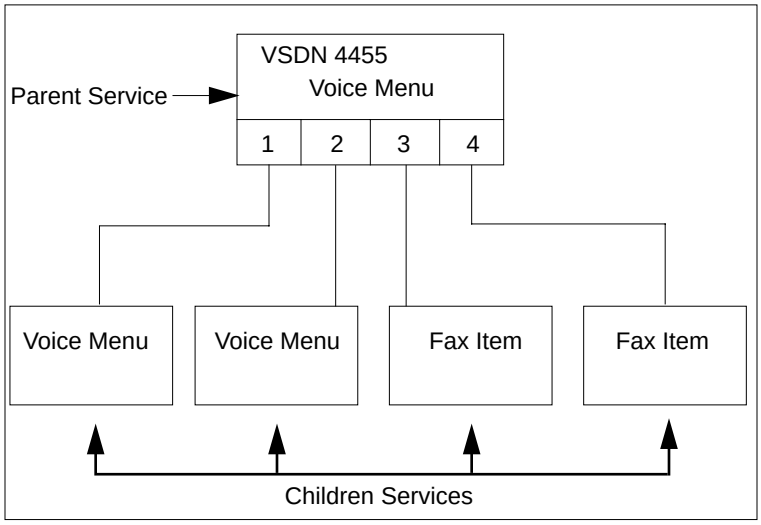
How session profiles work when multiple services are invoked by one VSDN

Introduction

Some services have the ability to invoke, or start up, other services. Two such services are Voice Menus and Time-of-Day Controllers.

Parent versus children services

When you create a Voice Menu or Time-of-Day Controller that invokes other services, it is considered the “parent” service. The services it invokes are the “children” services.



The parent service

The parent service must have a VSDN since this is the service through which users or callers gain access to the other services. The parent service will, therefore, also have a session profile associated with it.

Children services

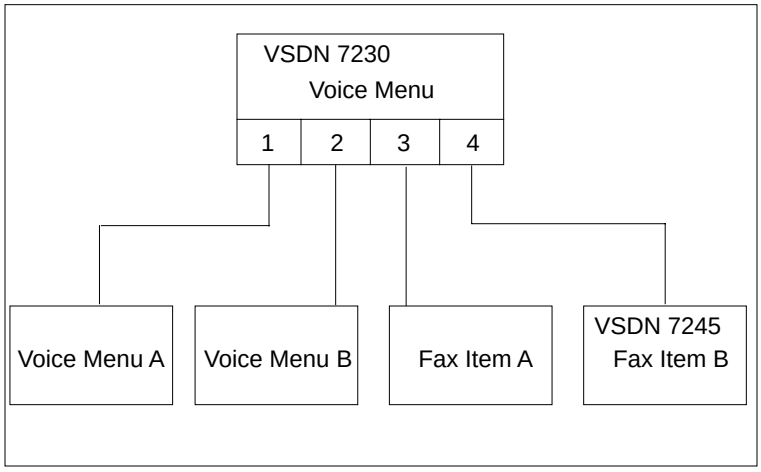
The session profile of the parent service is applied to all children services. If, however, you need a different session profile for one or more of the children services, you can add a VSDN for the child service and, therefore, give it a different session profile.

The VSDN of the child service does not need to be known to callers or users. It is not directly dialed.

Example

In this example, you have a Voice Menu that invokes four other services. The first three services, Voice Menu A, Voice Menu B, and Fax Item A do not have VSDNs. They use the session profile of the parent Voice Menu.

However, since a different session profile was needed for Fax Item B, a separate VSDN was created for this item and a unique session profile could, therefore, be created. The fourth option in this menu is set to call this VSDN.



How Meridian Mail 9/10 session profiles are converted to Meridian Mail 11 session profiles

Introduction

The following three fields that were in MM9 and MM10 session profiles have been replaced by one field, Treat Call Back Number As, in Meridian Mail 11:

- Call Back Number Area Code Translation
- Call Back International DDD
- IDDD Prefix

Description of changes

Call Back Number Area Code Translation

This field could be set to North American and None. This field no longer applies. Due to enhancements, dialing translations of numbers outside North America are now fully supported.

Call Back International DDD

This field was used to define whether international call back delivery was required, optional, or not allowed. This functionality is directly replaced by the new field.

IDDD Prefix

This field was used only if Call Back International DDD was set to optional. It allowed callers to indicate whether they wanted call back delivery to an international location or a national location relative to the Meridian Mail system. In Meridian Mail 11, a service is set up either as National or International. There is, therefore, no longer a need for this field.

How profiles were converted

When you converted to Meridian Mail 11, any existing session profiles were automatically converted. The only field that was used in the conversion was the Call Back International DDD field.

This table shows how the old session profile field was mapped to the new field.

WHEN the Call Back International DDD field was	THEN the Treat Call Back Number As field was set to
Required	International.
Optional	International.
Not Allowed	National.

Optional Call Back International DDD

If you had any session profiles in which the Call Back International DDD field was set to Optional, callers who dial that VSDN are now prompted to enter call back numbers in the international format (country code + area/city code + fax number). They do not have the option of entering a number in the national format (area/city code + fax number).

Options

You can leave these services as is. However, if you want to give callers the opportunity to enter either a national number or an international number, you can do one of the following.

- Set up a “National” VSDN for the same service and publish this number.
- Create a Voice Menu as a front end to the service that allows callers to select national or international.

  This solution means that you do not have to publish another number. See “Determining how many VSDNs you need for a callback fax service” on page 25-76.

Fax callback number formats

Introduction

Session profiles for fax services or services that invoke fax services must specify the fax delivery method. When the fax delivery method is call back, the fax is delivered on a separate call. Callers are prompted to enter a call back number during the session. When the session is terminated, Meridian Mail phones the callback number in order to deliver the fax.

When the delivery method is call back or caller choice (in which case the caller might choose call back), the callback number format must be specified.

Description: callback number formats

When a caller enters a callback number, it must be translated into a number that Meridian Mail can dial so that the fax can be delivered.

This means that callers must enter callback numbers in certain formats depending on where they are located relative to the Meridian Mail system.

Example

Your Meridian Mail system is located in California.

Caller is located in Washington
Since the caller's country code is the same as yours, the caller needs to enter the callback number in the following format:

area/city code + fax phone number

Caller is located in France
Since the caller's country code is different from yours, the caller must enter the callback number in the following format:

country code + area/city code + fax phone number

Caller is an employee on your ESN network
An employee that is on your ESN network should specify the ESN number of the receiving fax machine in the format:

ESN prefix + fax phone extension

Callback number treatment

The format in which callers must enter their callback number is specified in the Treat Call Back Number As field in the Session Profile. There are four callback number treatment options.

- National
- International
- Dial as Entered
- ESN2

National

Purpose

This option is for services aimed at callers within your country code.

Both local and long distance callers need to enter the area/city code.

The prompt

Callers hear the following prompt when this option is chosen.

"Please enter the fax number, including area or city code, followed by number sign."

International

Purpose

This option is for services aimed at international callers that have country codes different from yours.

Local and long distance callers within your country code can use this type of service. However, they need to know their country code. The number cannot be processed without the country code.

The prompt

Callers hear the following prompt when this option is chosen.

"*Please enter the fax number, including country code and area or city code, followed by number sign."*

Dial as Entered

Purpose

This option is for services aimed at callers that

- are on the same switch
- are within the same Coordinated Dialing Plan (CDP) as the Meridian Mail system
- want to be able to enter a call back in any format (perhaps because they travel a lot), and know how to enter a call back number so that it is dialable from the Meridian Mail system

The prompt

Callers hear the following prompt.

"Please enter the fax number, followed by number sign."

Publish required formats

For callers who will be using this type of service, such as a sales force that travels extensively, provide written instructions for the required formats based on situation.

For example:

Within the head office:	*Enter the four-digit extension of the fax machine. Example: 7100*
For an ESN site:	*Enter 6 followed by your ESN fax number. Example: 6 333-7100*
For a local external call:	*Enter 9 followed by your fax number. Example: 9 555-7100*
For a long-distance call:	*Enter 91 followed by your area code and fax number. Example: 91 519 555-7100*

ESN

Purpose

This option is for callers (employees) who are on your ESN network.

The prompt

Callers hear the following prompt when this option is chosen.

"Please enter the ESN number of the fax machine followed by number sign."

Translation of callback numbers

Once a callback number is entered, Meridian Mail translates it into a dialable number. All callback formats, except Dial As Entered, require translation.

The way in which Meridian Mail should translate each callback format is defined in translation tables. This is described in Chapter 18, "Dialing translations".

Determining how many VSDNs you need for a callback fax service

Limitation

When the Fax Delivery Option field is set to Call Back or Caller Choice, you can choose only one of the four types of call back treatments (national, international, dial as entered, or ESN).

Consequence

This means that if you want to be able to deliver the same Fax Item to more than one of the following – national numbers, international numbers, ESN numbers, or any number – you must choose one of the following strategies.

- Create separate VSDNs for each required call back format.
- Create a Voice Menu as a front end.
- Create only one VSDN.

Option 1: separate VSDNs

Set up separate VSDNs for each caller market, with corresponding marketing materials that instruct callers to use the number that is appropriate for them (depending on their location).

Option 2: Voice Menu

Create a Voice Menu as a front end that allows callers to specify where their fax machine is located and how they need to enter the call back number.

You still need to create multiple VSDNs as described in the example on page 25-77. However, only the VSDN of the Voice Menu needs to be published to callers.

Option 3: a single VSDN

Create a single VSDN for all callers; that is, set up for international call back. Callers are always prompted to include their country code as part of the fax number, even if they are within the same country code.

This is the least effective solution since many people who are unfamiliar with international dialing may not know their own country code.

Example: creating a Voice Menu as a front end

Your company is located in Boston. You have a new product bulletin that you want to make available to your North American customers. However, you also have a strong European customer base, so you also want to make this fax bulletin available to your European customers. You want to create only one set of marketing materials and publish one number for both caller markets.

Setup

To set up this service you must do the following.

1. Create a Fax Item.

   For example, Fax 1.

2. Add a VSDN (4110) for Fax 1.

   In the session profile, set the Treat Call Back Number As field to International.

   Callers do not have to know this VSDN.

3. Create the Voice Menu.

   - Make menu choice 1 invoke Fax Item 1.
   - Make menu choice 2 call (CL) the VSDN 4110.
   - Record a menu choices prompt that instructs callers on what to do.
     "If your fax machine is in North America, press 1. If your fax machine is in any other country, press 2."

4. Add a VSDN for the Voice Menu (4009).

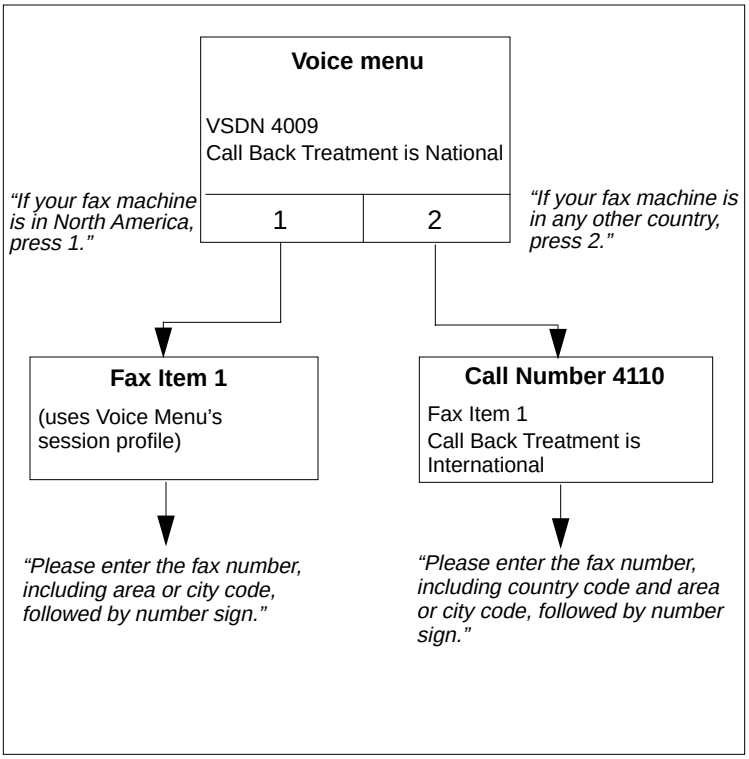
   In the session profile, set the Treat Call Back Number As field to National.

   The VSDN of this Voice Menu is the number you publish to callers.

Result

When a caller presses 1, the session profile for the Voice Menu is used. The caller is prompted to enter an area/city code and the fax number.

When a caller presses 2, VSDN 4110 is called. The session profile for this VSDN, therefore, is used. The caller is prompted to enter a country code, area/city code, and the fax number.



The basic service session profile

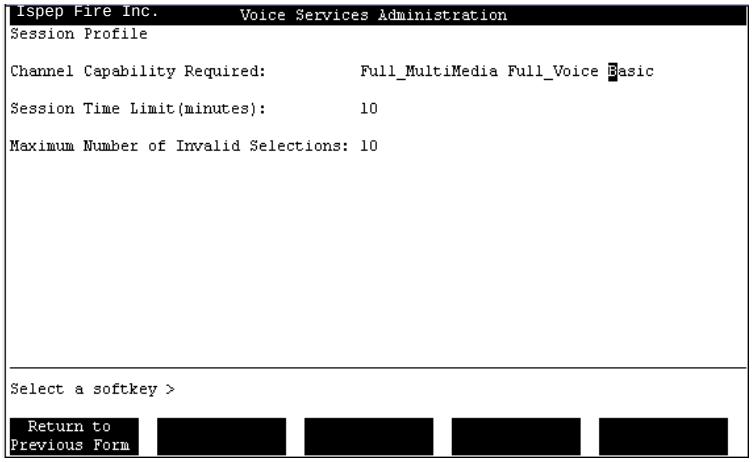
When to use

You can use the Basic Service Session Profile for Voice Menus and Time-of-Day Controllers that run services that require basic service voice ports only. These services are

- Meridian ACCESS or IVR applications
- Announcements
- Thru-Dial Services
- Voice Prompt Maintenance
- Remote Activation
- Voice Menu commands (such as Call, Play Prompt, and Repeat Menu Choices)
- Time-of-Day Controllers and Voice Menus that invoke only the above services

The profile

This is the Basic Service Session Profile. It is a read-only screen. This screen is used when adding VSDNs and is accessible from the Add DN Information screen for Voice Menus and Time-of-Day Controllers.



Profile configuration

When you choose the Basic Service Session Profile, the following characteristics and controls are placed on the service.

- Basic service channels are used.
- The Voice Menu or Time-of-Day Controller session is limited to a maximum of 10 minutes.
- The maximum number of invalid selections that a caller can make in a Voice Menu is 10.

The full-service voice session profile

When to use

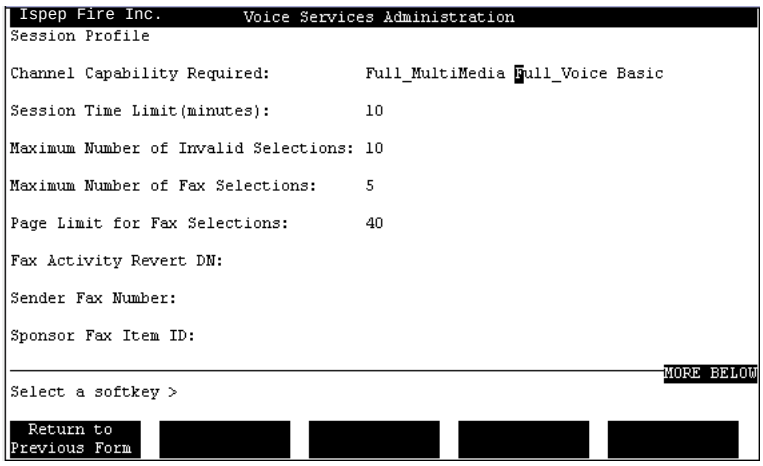
The following services require channels with a minimum channel capability of full-service voice.

- Fax Items that use the callback delivery option
- Voice Menus and Time-of-Day Controllers that invoke any service except
  - Fax Items that use same call or caller choice as the delivery mode
  - the Fax Item Maintenance Service

The profile

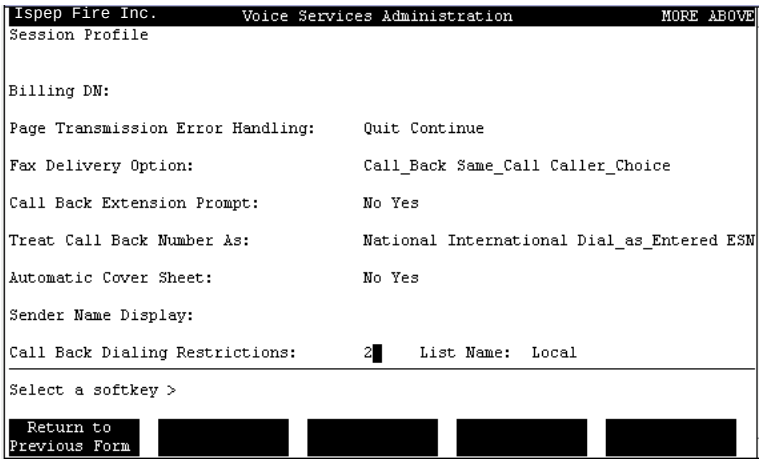
This is the full-service voice session profile. It is a read-only screen. This screen is used when adding VSDNs and is accessible from the Add DN Information screen for Voice Menus, Time-of-Day Controllers, and Fax Items.

Part 1



Note: If Fax on Demand is not installed, only the first three fields are displayed.

Part 2



Profile configuration

When you choose the full-service voice session profile, the following characteristics and controls are placed on the service.

General characteristics and limitations

These limitations are applied to all Voice Menus, Fax Items, and Time-of-Day Controllers to which you assign the full-service voice session profile.

- Full-service voice channels are used.
- The length of the session is limited to 10 minutes.
- The maximum number of invalid selections a caller can make in a Voice Menu is 10.

Profile configuration, cont'd

Fax on Demand

These limitations and controls do not apply if Fax on Demand is not installed or if you are adding a VSDN for a service that does not invoke any fax services.

- For Voice Menus that invoke Fax Items, the maximum number of faxes a caller can select during one call session is 5. For Fax Items, the maximum is 1.
- The maximum number of pages that can be transmitted during a session is 40.
- If an error occurs during transmission of a fax page, the error is ignored and the next page is transmitted.
- The fax delivery option is call back. This means that callers do not have to make the call on a fax phone since they are prompted for a callback number. After the session is terminated, the fax is delivered to the specified number as long as it is not restricted.
- Callers are prompted for an extension number in addition to the callback number. This number is printed on the automatic cover sheet so that the fax can be delivered to the right person.
- The callback number is treated as a national number. This means that the callback number entered by callers must be within the same country code as your system.
- A system-generated cover sheet is attached to the fax.
- Restriction/Permission List 2 (named Local by default) is applied to call back delivery.

The full-service multimedia session profile

Introduction

This session profile is available only if you have multimedia ports installed on your Meridian Mail system.

When to use

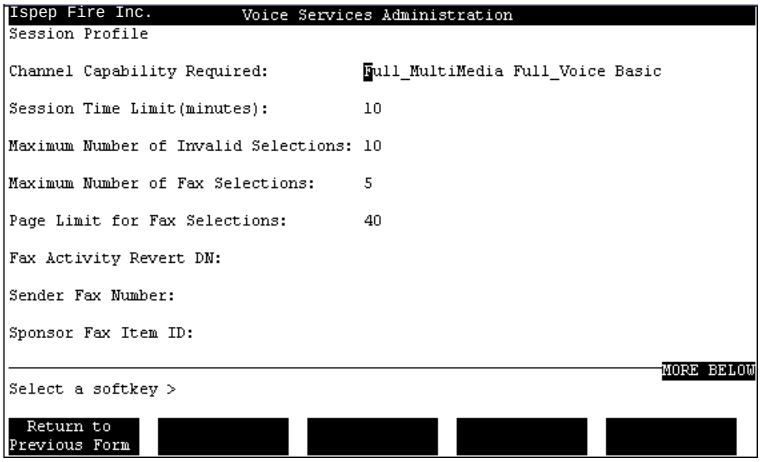
You must use the full-service multimedia session profile or create a custom session profile with multimedia channel capability for the following types of services.

- Fax Items that you want delivered on the same call
- Fax Items for which you want the caller to choose the delivery mode (callback or same call)
- the Fax Item Maintenance Service
- Voice Menus and Time-of-Day Controllers that invoke any of the above fax services

The profile: for MS, TD, FI

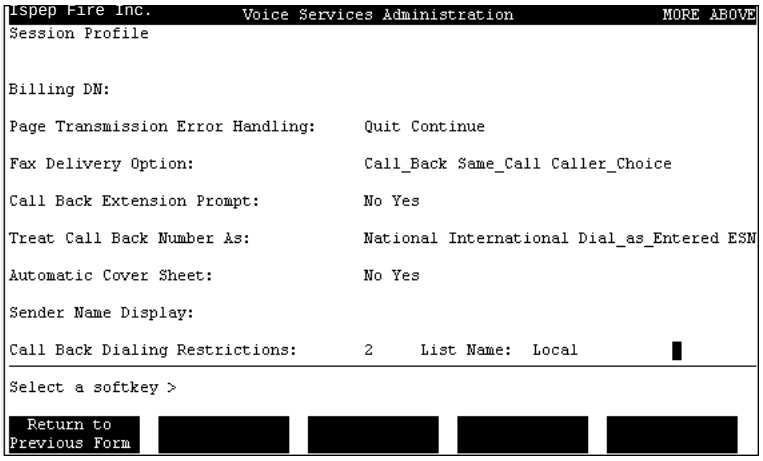
When you select the default MultiMedia session profile in the Add DN Information screen for a Voice Menu (MS), Time-of-Day Controller (TD), or Fax Item (FI), this version of the screen is displayed. It is a read-only screen.

Part 1



Note: If the service is FI, Basic is not displayed in the Channel Capability Required field.

Part 2



Profile configuration

When you choose the full-service multimedia session profile, the following characteristics and controls are placed on the service.

General characteristics and limitations

These limitations are applied to all Voice Menus, Fax Items, and Time-of-Day Controllers to which you assign the full-service multimedia session profile.

- Full-service multimedia channels are used.
- The length of the session is limited to 10 minutes.
- The maximum number of invalid selections a caller can make in a Voice Menu is 10.

Profile configuration, cont'd

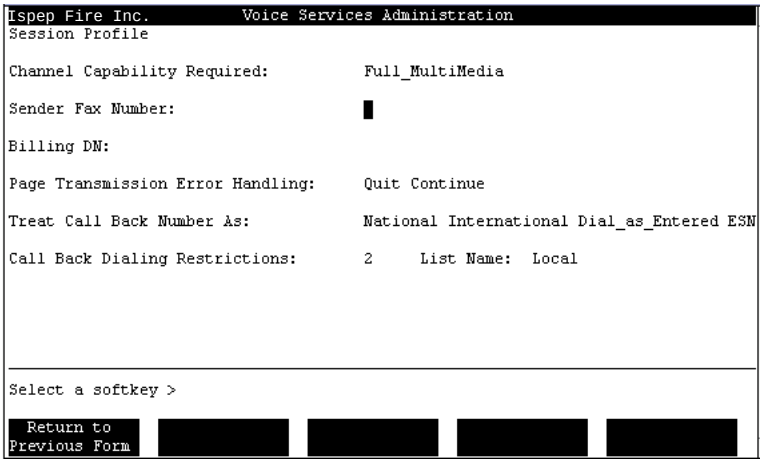
Fax on Demand

These following limitations and controls do not apply if Fax on Demand is not installed or if you are adding a VSDN for a service that does not invoke any fax services.

- For Voice Menus that invoke Fax Items, the maximum number of faxes a caller can select during one call session is 5. For Fax Items, the maximum is 1.
- The maximum number of pages that can be transmitted during a session is 40.
- If an error occurs during transmission of a fax page, the error is ignored and the next page is transmitted.
- Fax delivery is set to caller choice. This means the caller can request to have the fax delivered on the same call (to the fax phone on which the caller placed the call) or can specify the callback number of the fax phone to which he or she wants the fax delivered.
- If the caller chooses callback delivery, the caller is prompted for an extension number in addition to the call back number. This number is printed on the automatic cover sheet so that the fax can be delivered to the right person.
- The callback number is treated as a national number. This means that if a caller chooses callback delivery, the callback number entered by callers must be within the same country code as your system.
- A system-generated cover sheet is attached to the fax.
- Restriction/Permission List 2 (named Local by default) is applied to callback delivery.

The screen: FIM

This is the full-service multimedia session profile. This version of the screen is displayed when you are adding a VSDN for the Fax Item Maintenance Service. It is a read-only screen.



Profile configuration

When you choose the full-service multimedia session profile, the following characteristics and controls are placed on the Fax Item Maintenance Service.

- Full-service multimedia channels are used.
- If an error occurs during transmission of a verification fax page, the error is ignored and the next page is transmitted.
- The callback number is treated as a national number. This means that if a caller chooses callback delivery, the callback number entered by callers must be within the same country code as your system.
- The fax verification number is checked against Restriction/ Permission List 2 (named Local by default).

Customizing the session profile for Voice Menus, Fax Items, and Time-of-Day Controllers

Introduction

If the default session profiles do not meet your requirements for a particular service, create a custom session profile.

The custom Session Profile screen

This is the custom Session Profile screen for Voice Menus, Fax Items, and Time-of-Day Controllers.

Part 1

```
Ispep Fire Inc.        Voice Services Administration
Session Profile

Channel Capability Required:          Full_MultiMedia Full_Voice Basic

Session Time Limit(minutes):          10

Maximum Number of Invalid Selections: 10

Maximum Number of Fax Selections:     5

Page Limit for Fax Selections:        40

Fax Activity Revert DN:               ____________________________

Sender Fax Number:                    ____________________

Sponsor Fax Item ID:                  ________
                                                                MORE BELOW
The Session Profile will be saved only if the Previous Form is saved.

 Return to
Previous Form
```

Note: If Fax on Demand is not installed on your system, only the first three fields in this screen are displayed.

Part 2

```
Ispep Fire Inc.        Voice Services Administration          MORE ABOVE
Session Profile

Billing DN:                           ____________________________

Page Transmission Error Handling:     Quit Continue

Fax Delivery Option:                  Call_Back Same_Call Caller_Choice

Call Back Extension Prompt:           No Yes

Treat Call Back Number As:            National International Dial_as_Entered ESN

Automatic Cover Sheet:                No Yes

Sender Name Display:                  ____________________

Call Back Dialing Restrictions:       2_    List Name:  Local
The Session Profile will be saved only if the Previous Form is saved.

 Return to
Previous Form
```

Procedure

Following is a high-level procedure for creating a custom session profile. Detailed procedures are provided on the corresponding pages.

Step	Action	See page
1	Specify the channel capability, session time limit, and maximum number of invalid selections. ***Requirement:*** This step is necessary for all Voice Menus, Fax Items, and Time-of-Day Controllers.	25-90
2	Specify fax service options. ***Requirement:*** This step is necessary if the service you are defining is a Fax Item or a Voice Menu or Time-of-Day Controller that invokes a fax service.	25-94
3	Specify call back delivery options. ***Requirement:*** This step is necessary if step 2 was necessary and if the fax delivery option for the service is Call Back or Caller Choice.	25-100

Specifying the channel capability, session time limit, and maximum number of invalid selections

When to use

For all Voice Menus, Fax Items, and Time-of-Day Controllers, you must

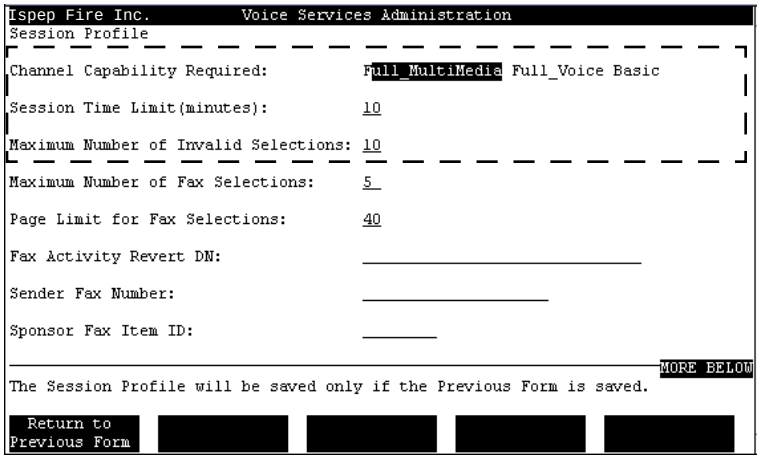
- select the channel capability that is appropriate to the service for which you are adding a VSDN
- specify the session time limit,

  and
- specify the maximum number of invalid selections

If Fax on Demand is not installed, or if you are defining a VSDN for a Voice Menu or Time-of-Day Controller that does not invoke fax services, this is all you have to do to customize the session profile.

Fields in the Session Profile screen

Relevant fields are highlighted by the dotted box.



Field descriptions

These fields are used by all services (Voice Menus, Fax Items, and Time-of-Day Controllers).

Channel Capability Required	
Description	The type of port that the service will use.
Valid Options	Full MultiMedia, Full Voice, Basic
See Also	Certain kinds of services require certain kinds of ports. See “Choosing the channel capability” on page 25-92.

Session Time Limit (minutes)	
Description	This is the maximum amount of time that a call session can last.
Default	10 minutes
Valid Range	0 to 99 (minutes)

Maximum Number of Invalid Selections	
Description	This field applies to Voice Menus and Fax Items. Each time a caller makes an invalid selection, an error counter is incremented by one.
Action taken	If this limit is reached, one of the following happens. • When the menu does not contain Fax Items, the session is terminated. • When the menu contains Fax Items or when a Fax Item is accessed directly, the following message is played. *“You have reached the maximum number of selections that may be made in one call. If you would like to make additional selections, please call in again.”*
Security	To make it difficult for hackers to abuse your system via a voice menu, this field should be set to a relatively low number (for example, the default of 10).
Default	10
Valid Range	1 to 99

Choosing the channel capability

Use the following table to choose the channel capability that is required for a particular service.

IF the service is	AND	THEN select
a Voice Menu or a Time-of-Day Controller	it invokes one or more of the following services *only:* • ACCESS applications (such as IVR) • Announcements • Thru-Dial services • Voice Prompt Maintenance • Remote Activation • Voice Menu commands (such as Call, Play Prompt, or Repeat Menu Choices) • other Voice Menus or Time-of-Day Controllers that invoke the above services only	Basic.
	it invokes any of the following: • Voice Messaging • Express Messaging • Fax Items using callback delivery mode • other Voice Menus or Time-of-Day Controllers that invoke any of the above services	Full Voice.
	it invokes any of the following: • Fax Item maintenance • Fax Items using same call or caller choice delivery mode	Full MultiMedia.
a Fax Item	the fax delivery mode is call back	Full Voice.
	the fax delivery mode is same call or caller choice	Full MultiMedia.

Customizing the session profile

To begin customizing the session profile for a Fax Item, Voice Menu, or Time-of-Day Controller, follow these steps.

Starting Point: The Add DN Information screen

Step	Action
1	Select Custom in the Session Profile field.
2	Press the [Session Profile Detail] softkey. ***Result:*** The Session Profile screen is displayed.
3	Select the channel capability that is required for the service. ***Note:*** See “Choosing the channel capability” on page 25-92.
4	Change the current session time limit if necessary.
5	Change the maximum number of invalid selections if necessary.
6	Are you adding this VSDN for a Fax Item or for a Voice Menu or Time-of-Day Controller that invokes fax services? • If yes, go to “Specifying fax service options” on page 25-94. • If no, set the Maximum Number of Fax Selections to 0 and press [Return to Previous Form]. You are done customizing the session profile. The session profile will be saved when you save the VSDN.

Specifying fax service options

When to use

You must specify fax service options if you are defining a VSDN for

- a Fax Item,

  or

- a Voice Menu or Time-of-Day Controller that invokes fax services

Fields in the Session Profile screen

These are the fields in which you specify fax service options.

```
Ispep Fire Inc.          Voice Services Administration          MORE ABOVE
Session Profile


Maximum Number of Fax Selections:      5
Page Limit for Fax Selections:         40
Fax Activity Revert DN:                3600
Sender Fax Number:                     4165553500
Sponsor Fax Item ID:                   4455
Billing DN:
Page Transmission Error Handling:      Quit Continue
Fax Delivery Option:                   Call_Back Same_Call Caller_Choice
                                                                MORE BELOW
The Session Profile will be saved only if the Previous Form is saved.

 Return to
Previous Form
```

Field descriptions

This table describes the fields you use to define fax service options.

Maximum Number of Fax Selections	
Description	This is the maximum number of faxes that a caller can select during one call session.
Action taken	If this limit is reached, the following message is played. "*You have reached the maximum number of selections that may be made in one call. If you would like to make additional selections, please call in again.*"
Default	1 if you are creating a profile for a Fax Item (FI). The field cannot be modified for FI 5 if you are creating a profile for a Voice Menu (MS) or Time-of-Day Controller (TD)
Valid range	0 to 25 When this field is set to 0 (because no Fax Items are invoked by the service), the remaining fields in the screen are not displayed.

Page Limit for Fax Selections	
Description	This is the maximum number of pages that a caller can request for transmission.
Action taken	As a caller makes selections, Meridian Mail counts the total number of pages. If this maximum is reached, the caller is prohibited from making any more selections. The currently selected faxes are delivered.
Default	40
Valid range	1 to 99

Fax Activity Revert DN	
Description	This is the DN to which a caller is transferred if he or she encounters difficulties while engaged in fax-related activities.
Default	Blank
Other revert DNs	When this field is left blank, the Attendant DN defined in General Options is used. When the caller is in a Voice Menu with Fax Items, but outside the fax selections when difficulty is experienced, the caller is reverted to the revert DN that is defined for the Voice Menu.
Maximum length	30 digits

Sender Fax Number	
Description	This is the number of your sending fax machine. It identifies your system to the caller so that the caller can contact you if there was a transmission problem. It is displayed in the trim tab on the fax along with other information such as the start time of transmission and the page number.
Default	Blank

Sponsor Fax Item ID	
Description	Use this field if you want to create a custom cover sheet. This field specifies the ID of the Fax Item (the cover sheet).
How it works	The Fax Item associated with the ID entered in this field is transmitted after the automatic cover sheet (if turned on) or in place of it, and before the first caller-selected Fax Item(s).
Default	Blank
See also	For more information about customizing cover sheets, see “Creating a custom cover sheet” on page 25-105.

Billing DN	
Description	When fax delivery is callback, Meridian Mail places the call to deliver the fax. This is the number used by the owners of the system (you) for billing each fax callback delivery, if so desired.
Default	Blank When this field is left blank, the VSDN that the caller dialed is reported as the billing DN.

Page Transmission Error Handling	
Description	This field determines how Meridian Mail responds to page transmission errors.
Default	Continue
Valid Options	Continue, Quit • ***Continue.*** The error is ignored and the next page is transmitted. • ***Quit.*** The current delivery attempt is aborted.

Fax Delivery Option	
Description	This field determines how the selected faxes are delivered.
Default	Call Back
Channel capability	When the channel capability is Full Voice, this field is set to Call Back and cannot be modified. When the channel capability is Full MultiMedia, you can select any of the delivery options.
Valid options	Call Back, Same Call, Caller Choice • ***Call Back*** Selected faxes are delivered on a separate call. The caller is prompted to enter a call back phone number. This is the number to which the selected faxes are delivered. • ***Same Call*** The selected faxes are delivered on the same call. This means that the caller must phone from a fax phone. The faxes are delivered after the caller presses Receive on the receiving fax machine. • ***Caller Choice*** The caller chooses the fax delivery option. The caller hears the following prompt. *"To enter a fax number for later delivery, press 1. If you would like delivery during this call and are calling from a faxphone, press 2."*

Procedure

To specify fax service options, follow these steps.

Starting Point: The Session Profile

Step	Action
1	Change the maximum number of fax selections if necessary.
2	Change the page limit for fax selections if necessary.
3	If you want callers to be reverted to a specific DN if they encounter difficulties while engaged in fax-related activities, enter a Fax Activity Revert DN.
4	If you want the number of your sending fax phone to appear in the trim tab, enter this number in the Sender Fax Number field.
5	If you have created a custom cover sheet, enter its ID in the Sponsor Fax Item ID field.
6	If you want calls to this VSDN to be reported as a specific number (as the billing DN), enter it in the Billing DN field.
7	If an error is encountered during transmission, do you want Meridian Mail to ignore it and continue with the next page? • If yes, select Continue. • If no, select Quit.
8	If the Channel Capability is Full MultiMedia, select the fax delivery option.

IF you want	THEN select
faxes to be delivered on the same call on which the caller dialed into Meridian Mail	Same Call.
faxes to be delivered on a separate call, placed by Meridian Mail, to a call back number specified by the caller	Call Back.
callers to choose how they want their fax selections delivered (same call or call back)	Caller Choice.

9	Is the Fax Delivery Option field set to Call Back or Caller Choice? • If yes, go to “Specifying callback delivery options” on page 25-100. • If no, press [Return to Previous Form]. You are done customizing the session profile. The session profile will be saved when you save the VSDN.

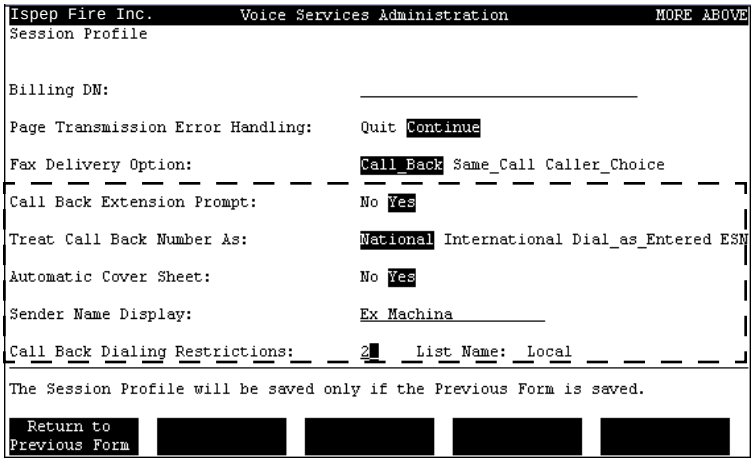
Specifying callback delivery options

When to use

You must specify callback options if the Fax Delivery Option is set to Call Back or Caller Choice. In the case of caller choice, callers may choose to have faxes delivered to a callback number. It is, therefore, necessary to define callback options when the fax delivery method is up to the caller.

Fields in the Session Profile screen

The dotted box highlights the fields in which you specify call back options.



Field descriptions

This table describes the fields in which you define callback options.

Call Back Extension Prompt	
Description	This field determines whether or not the caller is prompted for an extension number when arranging call back delivery. This extension is printed on the automatic cover sheet to ensure that the appropriate person receives the fax.
Default	Yes (the caller is prompted for an extension)
Valid Options	Yes, No

Treat Call Back Number As	
Description	This field determines the format of numbers that callers can enter for callback purposes and how the user is prompted to enter a callback number.
Default	National
Valid Options	National, International, Dial as Entered, ESN • ***National.*** Only callers with callback numbers within the same country code as your system can use the service. • ***International.*** Callers from other countries can use the service. • ***Dial as Entered.*** Callers can enter a callback number in any format. Callers must, however, know what format is necessary depending on where they are located relative to your system. • ***ESN.*** Only callers that are on your ESN network can use the service.
See Also	See "Fax callback number formats" on page 25-72.

Automatic Cover Sheet	
Description	This is a system-generated cover sheet that you can choose to transmit along with selected Fax Items. In the case of caller choice delivery, this cover sheet is sent only if callback delivery is chosen.
Default	Yes
Valid Options	Yes, No
See Also	If you want to create and use a custom cover sheet instead of using the automatic one, see "Creating a custom cover sheet" on page 25-105.

Sender Name Display	
Description	The sender name is displayed on the automatic cover sheet in the From field. This is typically the name of your organization or department.
Conditions of display	This field is displayed if the Automatic Cover Sheet field is set to Yes.
Default	Blank
Maximum length	20 characters

Call Back Dialing Restrictions	
Description	These are the dialing restrictions that are placed on the callback numbers that callers enter. It is important to restrict this number since you will be charged for all callback fax deliveries.
Default	Restriction/Permission List 2
Valid Options	Any of the available restriction/permission lists (1–80), or 0 to create a custom list for the service.

Procedure

To specify callback options, follow these steps.

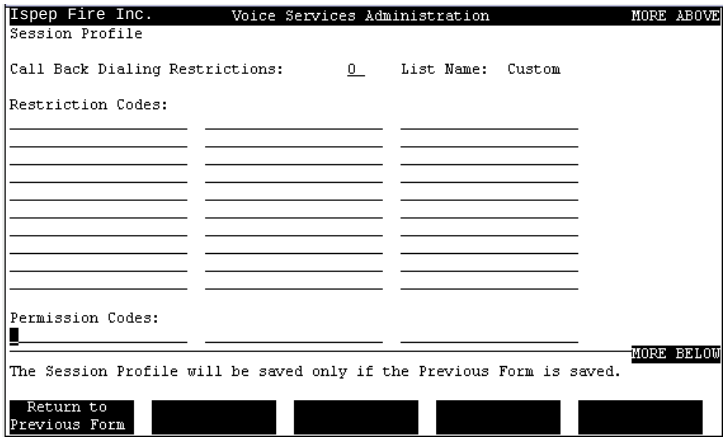
Starting Point: The Session Profile

Step	Action
1	Do you want callers to be prompted for an extension number so that it can appear on the automatic cover sheet? • If yes, select Yes in the Call Back Extension Prompt field. • If no, select No.
2	Select the format of callback numbers to which you want to allow fax delivery in the Treat Call Back Number As field.

IF you want faxes to be delivered	THEN select
to callback numbers within your country code only	National.
to international numbers	International.
to on-switch extensions, to numbers in a CDP network, or to numbers as they are entered	Dial as Entered.
to numbers that are on your ESN network only	ESN.

3	Do you want the system-generated automatic cover sheet to be transmitted with the selected Fax Items? • If yes, select Yes in the Automatic Cover Sheet field. • If no, select No.
4	If the automatic cover sheet is enabled, do you want to identify your organization or department, or both, as the source of the fax on the cover sheet? • If yes, enter your organization's or department's name, or both, in the Sender Name Display field. • If no, leave the field blank.
5	Do you want to create a custom restriction/permission list for this service? • If yes, go to step 6. • If no, enter the number of the predefined restriction/ permission list that you want to assign to this service and go to step 8.

Step	Action
6	Enter 0. ***Result:*** The restriction/permission codes fields are displayed.



7	Enter the restriction codes and permission codes for this service.
8	Press the [Return to Previous Form] softkey to return to the Add DN Information screen. ***Note:*** You are done customizing the session profile. The session profile will be saved when you save the VSDN.

Creating a custom cover sheet

Introduction

If you set the Automatic Cover Sheet field to Yes in the session profile, an automatic system-generated cover sheet will be transmitted.

The automatic cover sheet

This is the automatic cover sheet that is generated by the system.

```
<trim tab>
_____________________________________________________

FACSIMILE TRANSMISSION

TO:       THE PERSON AT EXTENSION xxxx
FAX #:    nnnnnnnnnn
FROM:     sendername.................
          (AUTOMATED FACSIMILE SERVICE)
PAGES:    nn (INCLUDING THIS COVER PAGE

_____________________________________________________

IF THIS FACSIMILE IS NOT COMPLETELY READABLE OR IS
MISSING PAGES, PLEASE INFORM THE PERSON AT THE
EXTENSION xxxx; THEY WILL HAVE TO RE-REQUEST THE
INFORMATION FROM THIS SERVICE.

_____________________________________________________
```

When to use

You might, however, want to create a custom cover sheet to replace the system-generated cover sheet, or to transmit in addition to the system-generated cover sheet.

Example

You have created a Voice Menu with Fax Items for your German customers. The system-generated cover sheet is in English. You decide to replace it with a custom cover sheet that is in German.

Creating a custom cover sheet

To create a custom cover sheet, you must do the following.

1. Create a Fax Item which will serve as the cover sheet for your service.

   For more information, refer to the *Fax on Demand Application Guide*.

2. Create a VSDN for the service (the stand-alone Fax Item or the service that invokes it).

3. Customize the session profile for the service.

   - Enter the ID of the Fax Item (that is the cover sheet) in the Sponsor Fax Item ID field.
   - If you want to suppress the system-generated cover sheet, set the Automatic Cover Sheet field to No.

Customizing the session profile for the Fax Item Maintenance Service

When to use

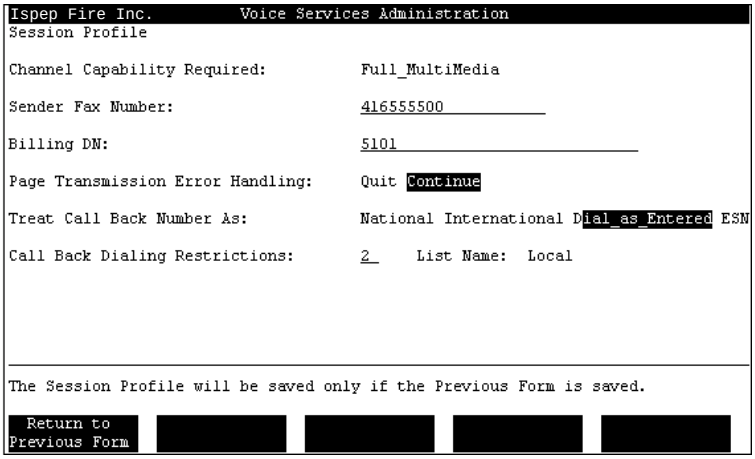
If the full-service multimedia session profile does not meet your requirements for the Fax Item Maintenance Service, you must create a custom session profile.

Fax delivery option

You do not have the option of choosing the fax delivery option for the Fax Item Maintenance Service. This service uses callback delivery only.

The custom Session Profile screen

This is the custom session profile for the Fax Item Maintenance Service.



Field descriptions

This table describes the fields in the custom session profile for the Fax Item Maintenance Service.

Channel Capability Required	
Description	This is the type of port that the service will use. This field is read-only.
Default	Full_MultiMedia

Sender Fax Number	
Description	This is the number of your sending fax phone. It identifies your system to the caller so that the caller can contact you if there is a transmission problem. It is displayed in the trim tab on the fax along with other information such as the start time of transmission and the page number.
Default	Blank

Billing DN	
Description	Whenever a verification fax is sent, this is the number used by the owners of the system (you) for billing each fax callback delivery, if so desired.
Default	Blank When this field is left blank, the VSDN the caller dialed is reported as the billing DN.

Page Transmission Error Handling	
Description	This field determines how Meridian Mail responds to page transmission errors.
Default	Continue
Valid Options	Continue, Quit • ***Continue.*** The error is ignored and the next page is transmitted. • ***Quit.*** The current delivery attempt is aborted.

Treat Call Back Number As	
Description	This field determines the format of numbers that callers can enter for call back purposes and how the user is prompted to enter a call back number.
Default	National
Valid Options	National, International, Dial as Entered, ESN • ***National*** Only callers with callback numbers within the same country code as your system can use the service. • ***International*** Callers from other countries can use the service. • ***Dial as Entered*** Callers can enter a callback number in any format. Callers must, however, know what format is necessary depending on where they are located relative to your system. • ***ESN*** Only callers that are on your ESN network can use the service.
See Also	See “Fax callback number formats” on page 25-72.

Call Back Dialing Restrictions	
Description	These are the dialing restrictions that are placed on the callback number to which the verification fax is sent. It is important to restrict this number, since you will be charged for all callback fax deliveries.
Default	Restriction/Permission List 2
Valid Options	Any of the available restriction/permission lists (1–80), or 0 to create a custom list.

Procedure

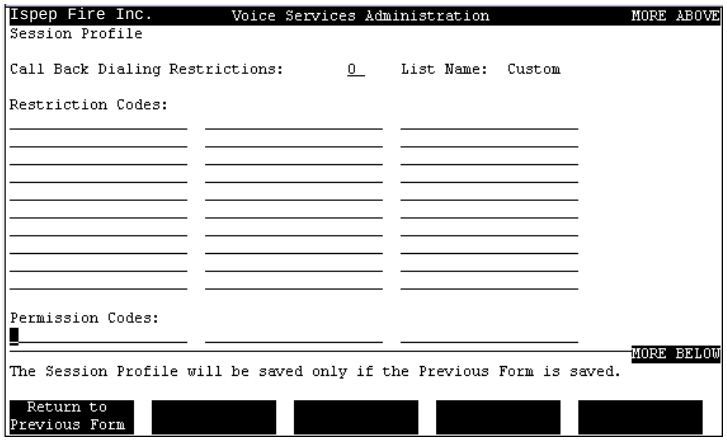
To customize the session profile for Fax Item Maintenance, follow these steps.

Starting Point: The Add DN Information screen

Step	Action
1	Select Custom in the Session Profile field.
2	Press the [Session Profile Detail] softkey. ***Result:*** The Session Profile screen is displayed.
3	Do you want the number of the sending fax machine to show up in the fax trim tab? • If yes, enter the number of the sending fax machine in the Sender Fax Number field. • If no, go to step 4.
4	Do you want calls to this VSDN to be reported as a specific number (as the billing DN) other than this VSDN? • If yes, enter this number in the Billing DN field. • If no, leave this field blank.
5	Do you want fax delivery to continue if an error is encountered during transmission? • If yes, select Continue in the Error Transmission Handling field. • If no, select Quit.
6	Select the kind of call back numbers to which you want to allow verification fax delivery in the Treat Call Back Number As field.

IF you want faxes to be delivered	THEN select
to call back numbers within your country code only	National.
to international numbers	International.
to on-switch extensions, to numbers in a CDP network, or to numbers as they are entered	Dial as Entered.
to numbers that are on your ESN network only	ESN.

Step	Action
7	Do you want to create a custom restriction/permission list for this service? • If yes, go to step 8. • If no, enter the number of the predefined restriction/ permission list that you want to assign to this service and go to step 10.
8	Enter 0. ***Result:*** The Restriction Codes and Permission Codes fields are displayed.



9	Enter the restriction codes and permission codes that are appropriate for the service.
10	Press the [Return to Previous Form] softkey to return to the Add DN Information screen.

Section F Viewing, modifying, and deleting VSDNs

In this section

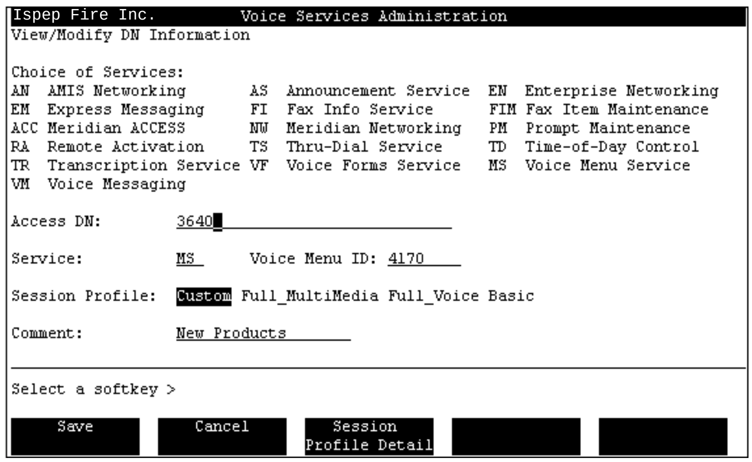
Viewing and modifying a VSDN or session profile, or both

Administration level

VSDNs and session profiles can be viewed and modified from both the System Administration and Customer Administration levels.

The View/Modify DN Information screen

Existing VSDNs are modified in the View/Modify DN Information screen (shown here at the Customer Administration level).



See also

Fields in the View/Modify DN Information screen vary depending on the service for which you are modifying a VSDN. The fields are, however, identical to the ones in the Add DN Information screens.

For more information about DN information for a particular service, see the following sections.

- Section B: Adding messaging VSDNs on page 25-11.
- Section C: Adding networking and ACCESS VSDNs on page 25-25.
- Section D: Adding voice service and fax service DNs on page 25-37.

Using the find function

If many VSDNs have been defined on your system, you can use the Find function to retrieve a subset of VSDNs first, and then choose from this smaller list of VSDNs.

See Chapter 23, “Finding and printing VSDNs and service definitions”.

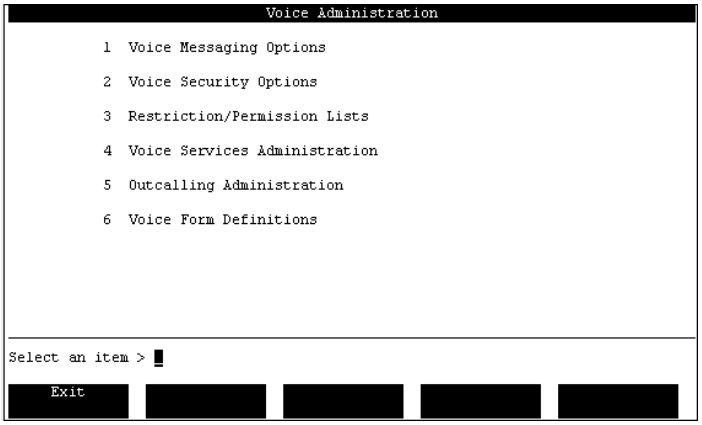
Procedure

To view or modify a VSDN, follow these steps.

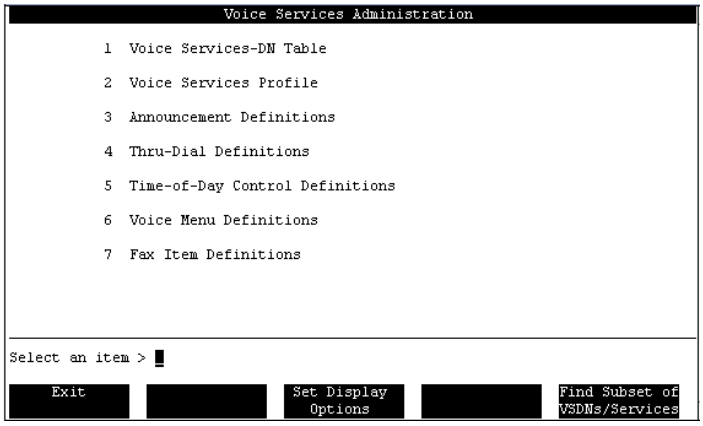
Note: In this example, the procedure is performed from the System Administration level.

Starting Point: The Main Menu or the Customer Administration Menu

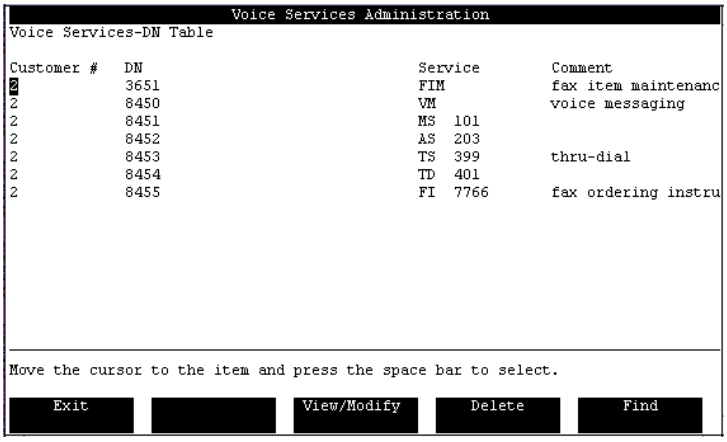
Step	Action
1	Select Voice Administration. ***Result:*** The Voice Administration menu is displayed.



Step	Action
2	Select Voice Services Administration. ***Result:*** The Voice Services Administration menu is displayed.



3	Select Voice Services-DN Table. ***Result:*** The Voice Services-DN Table is displayed.



4	Move the cursor to the VSDN you want to modify, and press the spacebar to select it.
5	Press the [View/Modify] softkey. ***Result:*** The View/Modify DN Information screen is displayed.
6	Make the necessary modifications in the DN information screen.

Step	Action
7	Do you need to modify a custom session profile? • If yes, press the [Session Profile Detail] softkey. • If no, press the [Save] softkey. You are done modifying the VSDN.
8	Make the necessary changes to the session profile. ***Note:*** For more information, see the section "Session profiles" on page 25-65.
9	Press the [Return to Previous Form] softkey when you are done modifying the session profile.
10	Press the [Save] softkey. ***Result:*** The VSDN and session profile are saved.

Deleting a VSDN

Administration level

VSDNs can be deleted from both the System Administration and Customer Administration levels.

The Delete DN Information screen

Existing VSDNs are deleted from the Delete DN Information screen (shown here at the Customer Administration level).

```
Ispep Fire Inc.          Voice Services Administration
Delete DN Information

Choice of Services:
AN  AMIS Networking       AS  Announcement Service  EN  Enterprise Networking
EM  Express Messaging     FI  Fax Info Service      FIM Fax Item Maintenance
ACC Meridian ACCESS       NW  Meridian Networking   PM  Prompt Maintenance
RA  Remote Activation     TS  Thru-Dial Service     TD  Time-of-Day Control
TR  Transcription Service VF  Voice Forms Service   MS  Voice Menu Service
VM  Voice Messaging

Access DN:        3630

Service:          AS      Announcement ID: 4104

Comment:          Directions




Select a softkey >

 OK to Delete      Cancel
```

Using the find function

If many VSDNs have been defined on your system, you can use the Find function to retrieve a subset of VSDNs first, and then choose from this smaller list of VSDNs.

See Chapter 23, “Finding and printing VSDNs and service definitions”.

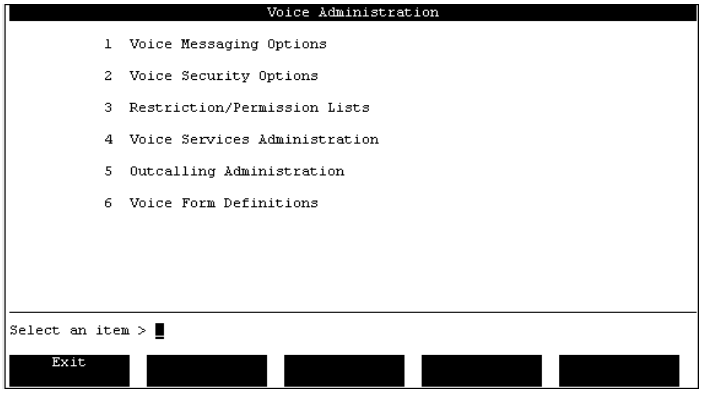
Procedure

To delete a VSDN, follow these steps.

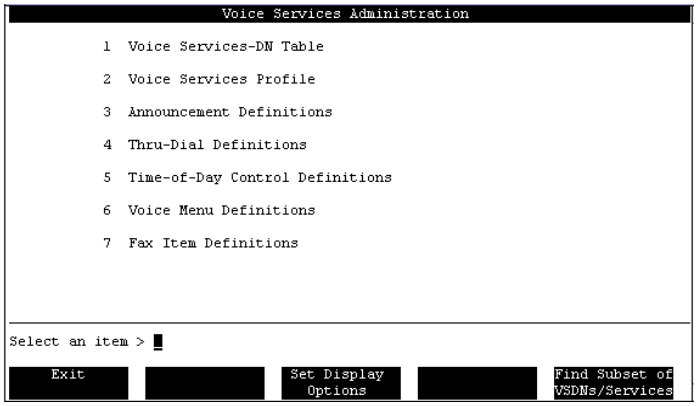
Note: In this example, the procedure is performed from the System Administration level.

Starting Point: The Main Menu or the Customer Administration Menu

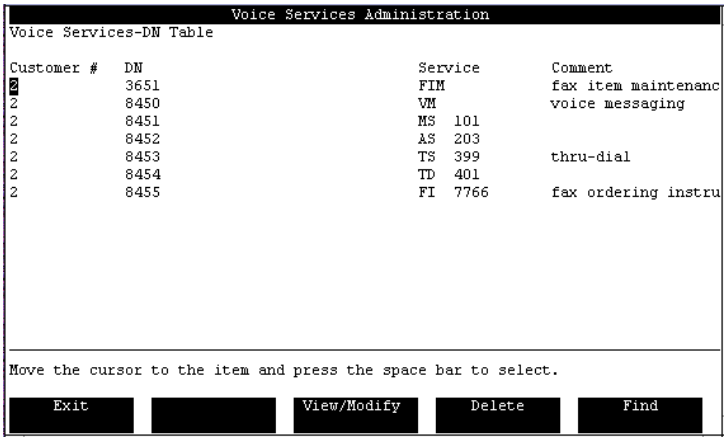
Step	Action
1	Select Voice Administration. ***Result:*** The Voice Administration menu is displayed.



2	Select Voice Services Administration. ***Result:*** The Voice Services Administration menu is displayed.



Step	Action
3	Select Voice Services-DN Table. ***Result:*** The Voice Services-DN Table is displayed.



4 Move the cursor to the VSDN you want to delete, and press the spacebar to select it.

5 Press the [Delete] softkey.

Result: The Delete DN Information screen is displayed.

Note: If the service has a session profile, you can view it before deleting by pressing the [Session Profile Detail] softkey. The profile is read-only.

6 Do you want to delete the VSDN?

- If yes, press the [OK to Delete] softkey.
- If no, press the [Cancel] softkey.

Chapter 26

Voice services profile

In this chapter

Overview

Introduction

This chapter provides an overview of the use of timeouts, and explanations of all the parameters of the Voice Services Profile screen.

The Voice Services Profile screen

The Voice Services Profile screen displays all the general parameters that apply to all voice services, including timeouts. Default values are assigned when the system is installed. You can modify these values by following the procedure on page 26-6.

Administration level

The Voice Services Profile screen is accessed from the Customer Administration level. Voice services are also created at the Customer Administration level.

Timeouts

Definition

Timeout values determine how long the system will wait under certain conditions before the system takes action (such as disconnecting or playing a prompt). Timeouts are important because they aid callers by playing appropriate prompts when the system has not received correct input.

Types of timeouts

There are three types of timeouts to define:

- command entry
- short disconnect
- record

Examples

The command entry timeout is used when the system does not receive an anticipated response from the caller, such as entering an extension number or making a selection from a voice menu. This allows for the system to respond with a prompt to aid the caller, transfer the call to the revert DN, or disconnect the call.

The short disconnect timeout is used for disconnecting from a Thru-Dial service or from a voice menu, because the caller has not input an extension number or selected a voice menu option, after entering the service.

The record disconnect timeout is used during recording prompts to prevent recording unnecessary silences.

How timeouts work

Description

Timeout values are used to determine how long the system waits before taking some sort of action when an expected response is not received. The three types of timeouts are explained below.

Command entry timeout

The command entry timeout is used when the system is waiting for a response from the caller. It allows you to set time parameters which, when exceeded, prompt the system for a response. The default value for command entry timeout is 3.5 seconds. The accepted values are between 1.0 and 5.0 seconds.

Command entry timeout may be used for any of the following situations:

Announcements

When announcements are accessed directly, the system will wait this amount of time before disconnecting the call. This timeout is intended to put a limit on how long a caller will remain connected if the caller stays on the line and does nothing after the announcement is played.

In the case where an announcement is played multiple times, this amount of silence will be heard between each play.

Voice menu

This timeout is used for initial no response and delayed response. You can define the action to be taken for an initial no response and delayed response in the voice menu definition.

Note: If you are using a voice menu to accept AMIS and/or Enterprise Networking calls, set this timeout to the maximum allowed value of five seconds. If this field is set to less that five seconds, an AMIS and/or Enterprise Networking call may be prematurely disconnected. The initial no response action in the voice menu definition should be set to repeat menu choices.

Command entry timeout, cont'd

Thru-Dial service

Command entry timeout is used if the system is waiting for an initial response (such as an extension number or name), or if the caller has provided keypad input at some point but is now delaying in providing further input.

Fax information service

With a fax information service, a caller may be prompted for an action (such as entering a callback number or extension). When the caller does not respond and the command entry timeout is exceeded, a help prompt is played. If the caller still does not enter the required information, the prompt is played a second time. If the system times out again, the caller is transferred to the revert DN defined in the session profile.

Short disconnect timeout

The short disconnect timeout is used to disconnect a call, such as when the command entry timeout has been exceeded. Callers are usually given several opportunities to provide responses before the short disconnect timeout is used.

The default value is 10.0 seconds. Valid values are from 1.0 to 30.0 seconds.

This timeout value is used in the following situations:

- disconnecting from a thru-dial service
- disconnection from a voice menu

Record timeout

This timeout value is used with the recording of prompts for voice menus, announcements, and Thru-Dial services. If during recording this amount of silence is recorded, the system will disconnect the session.

The default is 02:00 (mm:ss). Valid values are from 00:06 to 05:00. This affects all voice services other than Fax on Demand, and Voice Messaging and its associated features (login, call answering, express messaging).

Modifying the voice services profile

Introduction

The Voice Services Profile screen shows the general parameters configured for all voice services (with the exception of voice messaging services).

Administration level

The Voice Services Profile screen is accessed and modified from the Customer Administration level.

Procedure

To make changes to the parameters in the Voice Services Profile, follow these steps.

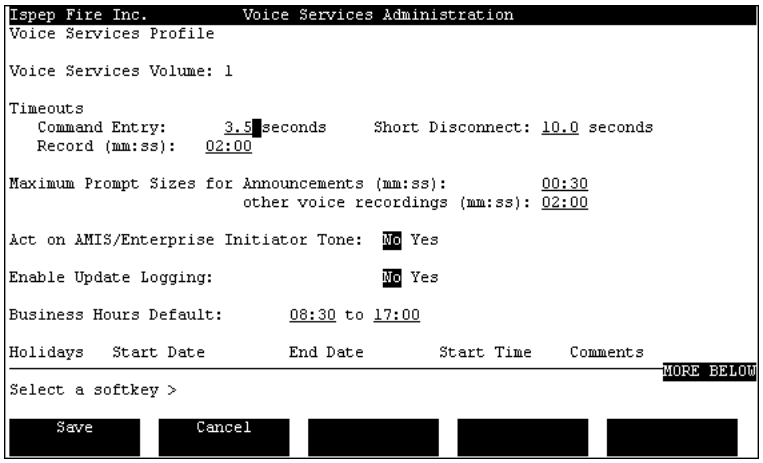
Before you begin:
Select a customer as described in the section "Selecting a customer to view or modify" on page 5-17.

Starting Point: The Customer Administration Menu

Step	Action
1	Select Voice Administration. ***Result:*** The Voice Administration screen appears.
2	Select Voice Services Administration. ***Result:*** The Voice Services Administration screen appears.
3	Select Voice Services Profile. ***Result:*** The Voice Services Profile screen appears.
4	Enter all changes you want to make to the parameters in this screen.
5	When you have made all the necessary changes, press [Save] and then [Exit] to return to the previous screen. Press [Cancel] to return to the previous screen without saving changes.

The Voice Services Profile screen

This is the Voice Services Profile screen.



Field descriptions

The following fields appear on the Voice Services Profile screen.

Voice Services Volume	
Description	This is a read-only field that indicates which volume contains voice services files and voice forms (if any).

Timeouts	
Description	The values you enter in the timeout fields determine how long the system will wait under certain conditions before the system takes action.
Options	The timeouts to be defined are command entry, short disconnect, and record.
See also	See “How timeouts work” on page 26-4.

Maximum Prompt Sizes for Announcements (mm:ss)	
Description	This field controls the recording length for prompts for announcement definitions. If 80% of the maximum prompt size has been recorded, a tone is played to warn that the maximum prompt size has nearly been reached. If you are recording using the [Voice] softkey, when the time limit is exceeded the recording is stopped, and the system displays “Recording stopped. The time limit was exceeded”. If you are recording using Prompt Maintenance, and exceed the time limit, the system plays “Recording has stopped. You have reached the recording limit.”
Default	00:30
Valid range	00:30 to 10:00

Maximum Prompt Sizes for other voice recordings (mm:ss)	
Description	This field controls the maximum recording length for voice menu and thru-dial service prompts that are recorded using either the administration terminal or the Voice Prompt Maintenance service. If 80 percent of the maximum prompt size has been recorded, a tone is played to warn that the maximum prompt size has nearly been reached. If you are recording using the [Voice] softkey, when the time limit is exceeded the recording is stopped, and the system displays “Recording stopped. The time limit was exceeded”. If you are recording using Prompt Maintenance, and exceed the time limit, the system plays “Recording has stopped. You have reached the recording limit.”
Default	02:00
Valid range	00:30 to 10:00

Act on AMIS/Enterprise Initiator Tone	
Description	If an AMIS call comes in through a voice service DN, the voice service will either ignore (“No”) or react to the AMIS tone and transfer the call to the appropriate AMIS agent (“Yes”).
Default	No
Valid options	Yes, No • ***No***. When selected, you have to configure a DN specifically for the AMIS service in the VSDN table. • ***Yes***. When selected, allows AMIS to share a DN with a voice menu, thru-dial service, announcement service, time-of-day controller or fax information service.

Enable Update Logging	
Description	This field determines whether or not a SEER is generated whenever a VSDN entry, announcement, thru-dial service, time-of-day controller, voice menu, or fax item is added, modified, or deleted.
Default	No
Valid options	Yes, No • ***Yes***. A SEER is generated. This allows you to see which operation has been performed and on which DN or service ID. • ***No***. No SEER is generated.

Business Hours Default	
Description	These are the hours that your organization is typically open from Monday to Friday. Hours that fall outside of the range defined here are considered off-hours. The hours you enter here are used as defaults in the Add a Time of Day Control Definition screen. You can however, override these defaults if necessary when defining a time-of-day controller.
Default	08:30 to 17:00

Holidays	
Description	Identify the holidays that are observed by your organization (that is, the holidays for which your organization closes). Up to 20 holidays can be defined. The holidays you specify here are used when defining time-of-day controllers.
Parameters	For each holiday you must specify the start date, end date, and start time.
Start Date	
Description	This field is mandatory. Specify the date on which the holiday begins. The date format follows that defined under the General Administration menu, in the General options screen.
End Date	
Description	This field is optional. The date entered here determines the day on which the holiday ends. If you enter a date, it must be later than or the same as the start date. If no end date is specified, the holiday will end on the start date. If the holiday ends on a regular business day, the holiday will end at the end of the business day (5:00 p.m., for example). However, if it is a nonbusiness day, the holiday will end at the end of the day (midnight).
Start Time	
Description	This field is mandatory. Enter the time at which the holiday starts on the start date. This is usually the normal start of the business day (specified using the 24-hour clock).
Comments	
Description	This field is optional. You may enter a comment to describe the holiday you are defining.

Chapter 27

Class of Service administration

In this chapter

Overview

Introduction

Class of Service (COS) administration includes

- defining the system's Classes of Service (COSs). Up to 15 COSs are permitted plus personal COSs.
- assigning a COS for each individual user.

Section A

This section is the Introduction to Class of Service. It includes concepts, and types of COS.

Section B

This section gives details and procedures on creating (adding), changing, printing, and deleting System COSs.

Section C

This section discusses various factors involved with assigning users to COSs.

Section A Introduction to Class of Service

In this section

What is a Class of Service?

Description

A Class of Service (COS) is a template that contains information about the capabilities that a user has and the values that are assigned to specific parameters. It is essentially a method of classifying users according to their needs. When you add a user to the system, you must specify the Class of Service to which he or she belongs.

The Meridian Mail COS applies dialing restrictions to Meridian Mail features, controls Meridian Mail resources, and determines which features are available to the owner of the mailbox.

Example

Before adding users, you should carefully consider the user types that you need to represent with COSs. The following scenario provides an example of the kinds of COSs you can create (add).

For instance, you might only need to add three COSs: one for secretaries, one for executives, and a standard one for all other employees. If employees in certain departments are found to have different needs, you could add one for Accounting, one for Engineering, and so on. The COSs that you end up creating will depend entirely on the types of users that you will be adding to the system.

Once you have created your COSs and added users, you may realize that a particular group of users requires some additional capabilities. You don’t have to change each individual user. You only need to change the settings in the COS, and all the users assigned to that COS will automatically pick up the changes.

If an individual user requests additional functionality (or even reduced functionality) or greater mailbox storage capacity, you can do one of two things: reassign the user to another COS that meets his or her needs, or create a personal COS for that user (only if no existing COSs are adequate). Personal COSs are described in more detail in the following section.

System Class of Service vs. Personal Class of Service

System COS

Up to 127 COSs can be defined for the entire system. For each customer group, you can assign up to 15 of the defined COSs. When adding a user, you will assign him or her to one of these COSs or to a Personal COS, if necessary.

Personal COS

In addition to the 15 system COSs, the personal COS will always be available when adding a user. The personal COS is a special class. It allows you to deal with those users who require capabilities that do not fit any existing COS. A mailbox with a personal COS remains independent of changes made to other COSs.

Keep in mind, however, that as the number of personal COSs increases, the task of maintaining your classes of service and users will become more difficult since they all will have to be managed.

How Class of Service is administered

Planning, adding, and assigning Classes of Service (COSs)

These are the steps involved in planning, adding, and assigning COSs.

Stage	Description
1	Plan the COSs for the system based on the known needs of the local users.
2	Add the COSs that have been planned (System Administration level).
3	Assign the COSs to the customer groups (Customer Administration level).
4	Assign users to the COSs according to their needs (Customer Administration level).

Changing COS for one or several users

These are the steps involved in changing users from one COS to another. These steps are done at the Customer Administration level.

Stage	Description
1	Analyze the users' current needs.
2	Assign the users to COSs that meet their current requirements.

Multiple Administration Terminals

If you have the Multiple Administration Terminal feature installed in your system and you are logged in at a Multiple Administration Terminal (MAT), you can only view existing Classes of Service. You cannot add, modify, or delete Classes of Service from this terminal.

Section B Adding, changing, printing, and deleting System Classes of Service

In this section

Adding a Class of Service

Introduction

This section describes how to add a Class of Service (COS) to the system.

Administration level

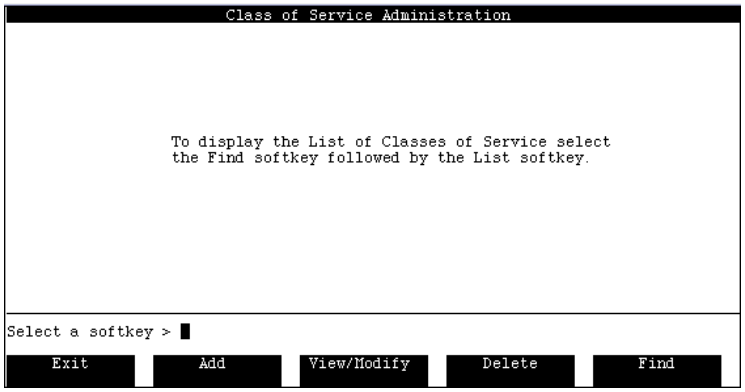
Classes of Service can be added only from the System Administration level.

Procedure

To add a new class of service, follow these steps.

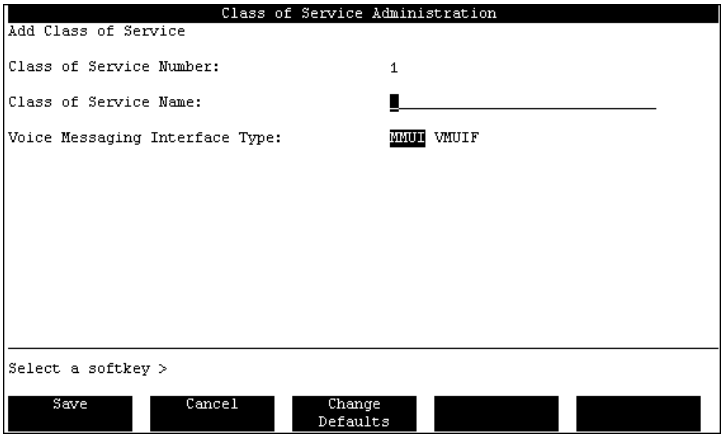
Starting Point: The Main Menu

Step	Action
1	Select Class of Service Administration. ***Result:*** The following screen appears.



2	Press the [Add] softkey. ***Result:*** You are prompted for the class of service number.

Step	Action
3	Enter a number between 1 and 127. ***Result:*** The Add Class of Service screen is displayed.



4	Give the class of service a name. ***Note:***
5	If you have both MMUI and VMUIF installed on your system, choose which interface you want this COS to provide.
6	At this point you may save the new COS with default values, or discard the COS, or change the defaults, as follows. a. To save the COS with default values, press [Save]. b. To discard the COS, press [Cancel]. c. To change the default values for this COS, press the [Change Defaults] softkey. ***Result:*** Additional screens are displayed showing the default values. These fields can be modified as required to customize the COS you have added. For field descriptions, see “The Add Class of Service screen (MMUI)” on page 27-11 or “The Add Class of Service screen (VMUIF)” on page 27-29.

Adding a class of service for users with dial pulse sets

If the system was installed with the VMUIF interface and there is a possibility that some users will have dial pulse phone sets, then at least one of the VMUIF classes of service that you add should support users who have dial pulse phone sets. The following fields in the Add Class of Service screen must be configured as indicated in order to support dial pulse:

- *Dial Pulse support:* Yes

- *Auto Logon:* Yes
- *Skip to First New Message:* Yes
- *Read Message Retention:* This must be a value other than zero so that read messages are automatically deleted on a regular basis (such as every seven days).

A dial pulse user can also record a personal greeting by calling a greeting change service. If a personal greeting is not recorded, the default system greeting is played.

If a dial pulse user logs in from a phone other than his or her home phone, a mailbox and password are required. (The user must, therefore, call in from a phone with touch-tone support.) However, once logged on, the mailbox operates as if it was accessed from a household phone (no further commands are required). However, if the user does enter a DTMF command, the call reverts to the standard DTMF interface.

The Add Class of Service screen (MMUI)

Introduction

New classes of service are added to the system through the Add Class of Service screen.

MATs

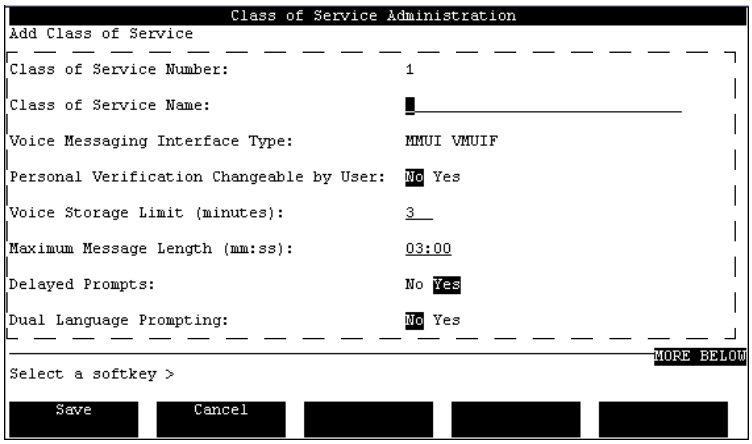
Class of Service screens are read-only from Multiple Administration Terminals (MATs).

Administration level

Classes of Service can be added only from the System Administration level.

The Add Class of Service screen

The screens that follow appear when you press the [Change Defaults] softkey on the Add Class of Service screen. This is the first part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

Class of Service Number	
Description	This is a read-only field. This field is prefilled with the number you entered to access this screen. The COS number is used to identify the Class of Service.
Valid range	1 to 127

Class of Service Name	
Description	This is the name of the class of service. This field is mandatory. The COS definition cannot be saved if this field is blank.
Maximum length	The COS name can be up to 30 characters in length.
Valid characters	All characters are valid with the exception of "+", "_", or "?", which are invalid.

Voice Messaging Interface Type	
Description	This field defaults to the selection made in the first Add Class of Service screen. This field is read-only. It is displayed only if VMUIF is installed.
Valid options	MMUI or VMUIF

Personal Verification Changeable by User	
Description	(MMUI only) If this field is set to No, only the administrator is allowed to record personal verifications for users belonging to the COS. If the field is set to Yes, users can record their own personal verifications from their telephone sets. The latter option is generally desirable since callers prefer to hear the voice of the person they are calling.
Default	The default value is No.

Voice Storage Limit	
Description	This field defines the maximum amount of storage available to the user.
How this limit is used	If messages exceed this limit, a message is played to the mailbox owner indicating that the mailbox is full and that the mailbox owner will be restricted in what he or she can do while logged in to Meridian Mail. The following restrictions are imposed: • The mailbox owner can only listen to and delete messages. • The mailbox owner cannot record a personal greeting, or compose, send, or forward messages. • After messages are deleted to reduce the storage used to below the limit, the mailbox owner must still log off and then log back in before the various mailbox functions are restored. The following conditions also exist when the mailbox is full: • Callers using Express Messaging are still allowed to leave a message. • Callers who access the Call Answering service for the user's mailbox are able to leave a message.
Affected fields	The Maximum Message Length and Maximum Call Answering Message Length cannot be greater than the Voice Storage Limit.
Default	The default value is 3 (minutes).
Valid range	You may enter a value from 1 to 360 (minutes).

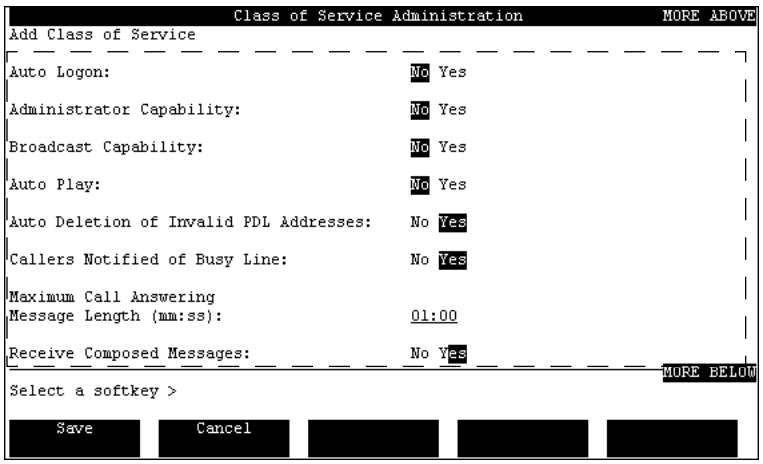
Maximum Message Length	
Description	This value determines the longest possible composed message or personal greeting that a user belonging to this COS is allowed to record.
Default	The default value is 03:00.
Valid range	You may enter a value between 00:30 and 99:00 in ten-second increments.
Restrictions	This value cannot be greater than the Voice Storage Limit. If you set this field to a number that exceeds the idle login timer, message lengths will be restricted to the login timer value. The default idle login timer value is 03:00. To change this value, contact your support organization.

Delayed Prompts	
Description	When this field is set to Yes, the system will prompt users for an action if the user does not initiate any action for 3.5 seconds. It is recommended that this field be set to Yes (especially for new users). Once the users belonging to the COS are familiar with the interface, you may get requests to turn delayed prompting off. You can inform experienced users that they do not need to wait for the prompts to finish before entering a command. This field should remain set to Yes for the benefit of new users.
Default	The default is Yes.

Dual Language Prompting	
Description	(MMUI only) This field is displayed on multilingual systems only. The selection made here affects the prompts played to callers during Call Answering and Express Messaging sessions. (It does not apply to the prompts played to users while logged into their own mailboxes. The language in which prompts are played to users while logged in to Meridian Mail is determined by the field Preferred Language, in the Add or View/Modify Local Voice User screen.)
Default Language Overrides User's Preferred Language	The "Default Language Overrides User's Preferred Language" field, which is defined in the Voice Messaging Options screen, affects which language is heard first during a call answering session, as follows: • If the Default Language Overrides User's Preferred Language field is set to "No", and the user's language is different from the primary default language, callers will hear prompts in the user's preferred language followed by the primary default language. • If the Default Language Overrides User's Preferred Language field is set to "No", and the user's language is the same as the primary default language, callers will hear prompts in the primary default language followed by the secondary default language. • If the Default Language Overrides User's Preferred Language field is set to "Yes", callers will hear prompts in the primary default language followed by the secondary default language. Users continue to hear prompts in their preferred language during login sessions.
Default	The default is Yes.
See also	For more information about dual language prompting works, see "Setting up languages on systems with dual language prompting" on page 21-18.

The Add Class of Service screen (cont'd)

This is the second part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

Auto Logon	
Description	When this field is set to Yes, the user does not need to enter a mailbox number or password to gain access to Meridian Mail. When set to No, the user must enter a mailbox number and password. For security reasons, this field should be set to No, unless the mailboxes of the users that will be added to this COS are in a secure location.
Default	The default is No.
Exceptions	Set this field to Yes if the users that will be added to this COS have requested auto logon and their phones are in a secure location. To create completely hands-free message retrieval for MMUI users, use auto logon in conjunction with auto play.
HVS users	The Hospitality Voice Messaging DN can have auto logon enabled or disabled (this is done in the VSDN table). If auto logon is enabled for the user but disabled for the DN, the setting in the VSDN table will override the setting in the user profile.
Administrator Capability	
Description	(MMUI only) If this field is set to Yes, users belonging to this COS will be allowed to record a custom call answering greeting for the system and personal verifications for all other users in the customer group. For instructions on how to record a customized call answering greeting for the system, see “Recording a customized call answering greeting” on page 21-27.)
Special COS	You can set this field to Yes to add a special COS if there are any administrative assistants at the customer site who need to be able to perform these limited administrative tasks. For all other types of users, this field should be set to No.
Default	The default is No.

Broadcast Capability	
Description	Set this field to Yes if you want users to be able to compose and send broadcast messages. Broadcast messages are sent to all users in the customer.
Default	The default is No.

Auto Play	
Description	(MMUI only) When this field is set to Yes, the messages in the user's mailbox are automatically played when the user logs on. Playback begins with the first new message. Once all new messages are played, any existing old (read) messages are then played back, starting with the oldest. However, the pound sign (#) can be pressed at any time to end playback. When this field is set to No, the user must explicitly request that each message be played by pressing <2> on the telephone keypad. Auto Play can be used in combination with Auto Logon to allow totally hands-free message retrieval.
Default	The default is No.

Auto Deletion of Invalid PDL Addresses	
Description	When this field is set to Yes, invalid addresses in categories A to D will be removed from a user's PDL in the following circumstances: • The user selects the PDL while addressing a message for Compose. • The user presses Play <2> while editing the PDL. ***Note:*** If Auto Delete is set to No, the user will be notified of the existence of bad addresses but no action will be taken to remove them.
Categories	Category A: local mailbox has been deleted Category B: network site has been deleted or COS capabilities/feature disabled. Category C: capabilities or features have been disabled (for example, delivery to non-user or AMIS) Category D: delivery to non-user or AMIS number has become restricted
Default	The default is Yes.

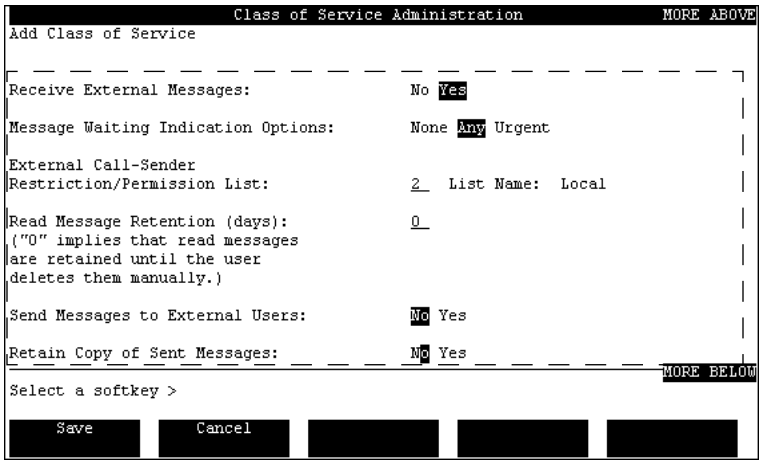
Callers Notified of Busy Line	
Description	When this field is set to Yes, a special prompt is played when the called line is busy, informing the caller that the user is on the phone. After the prompt is played, the caller is connected to Meridian Mail to leave a message. If the field is set to No, the normal Call Answering system greeting or personal greeting is played. ***Note:*** If the user's mailbox is associated with two (or three) DNs, they must all be busy for this prompt to be played.
Default	The default is Yes.

Maximum Call Answering Message Length	
Description	This value determines the longest possible call answering message or Express Messaging message that a caller can record and leave in a user's mailbox.
Format	The value must be entered in the format mm:ss.
Default	The default is 01:00.
Valid range	You may enter a value between 00:30 and 99:00 in ten-second increments.
Restriction	This value cannot be greater than the Voice Storage Limit.

Receive Composed Messages	
Description	If this field is set to No, users' mailboxes will not accept composed messages. If AMIS networking is installed, setting this field to No automatically sets the field Receive AMIS Open Network Messages to No. Similarly, setting this field to No automatically sets the Receive External Messages field to No.
Default	The default is Yes.

The Add Class of Service screen (cont'd)

This is the third part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

Receive External Messages	
Description	If this field is set to Yes, users belonging to this customer group will be able to receive composed messages from users outside the customer group. If this field is set to No, users can receive composed messages only from other users in the same customer group. ***Note:*** If this field is set to Yes, the Receive Composed Messages field must also be set to Yes.
Default	The default is Yes.

Message Waiting Indication Options	
Description	The chosen setting determines the type of messages that will cause a message waiting indication (a flashing light or an interrupted dial tone) on the user's telephone set. Set this field to Any to notify users of all new messages, Urgent to notify users of only those messages tagged as urgent, or None if users are not to be notified at all. This field should be set to None for users who don't have a physical telephone set, but do have a mailbox. For example, a salesperson may only rarely be at the office and does not have a phone as a result, but still requires a number for callers to leave messages.
Default	The default is Any.

External Call Sender Restriction/Permission List	
Description	This field specifies the number and name of the Restriction/Permission list that will be applied when the Call Sender feature is used to call back external callers. The lists are defined in the Restriction/Permission List screen, accessible from Voice Administration.
Requirement	To allow users to use call sender to place calls to external users, the External Call Sender Allowed field must be enabled in the Voice Messaging Options screen.
Default	The default is 2 (Local).
Valid range	This number can range from 0 to 80. The value 0 = unrestricted.

Read Message Retention (days)

Description

This field specifies the number of days that messages are kept in users' mailboxes after they have been read. The value in this field is limited by the system-wide value set in the Maximum Read Message Retention field in the Voice Messaging Options screen. For details, see "The Voice Messaging Options screen" on page 21-6.

Once the lesser of these two values is reached, read messages are automatically deleted. If 0 is entered in both fields, read messages are not automatically deleted by the system, but can be deleted only by the user.

Valid range

You can enter a value from 0 to 99.

Default

The default is 0.

Read message retention

The following table shows which value is used to determine how long the user's read messages are kept.

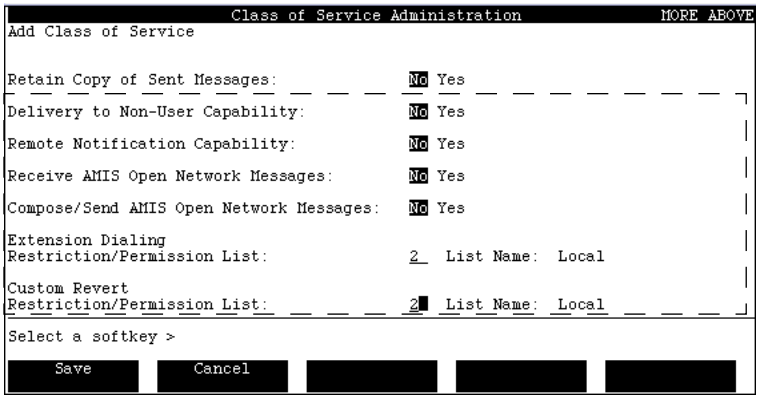
System retention limit	User retention limit	Amount of time read messages are kept
0 (zero)	0 (zero)	Messages are kept until the user deletes them. The system will not automatically delete read messages.
0 (zero)	A value other than zero	The user retention limit determines how long messages are kept.
A value other than zero	0 (zero)	The system retention limit determines how long messages are kept.
A value other than zero	A value other than zero	The lesser value is used to determine how long messages are kept.

Send Messages to External Users	
Description	This field is set to No by default in order to provide a fire wall between customer groups. If you leave this field set to No, users in other customer groups will be treated as external callers from the perspective of the current customer group. Users will not be able to compose and send messages between customer groups. If this field is set to Yes, users are allowed to compose and send messages to users outside of their own customer group. ***Note:*** If this field is set to Yes, mailbox numbers must be unique across customer groups. If a mailbox number is duplicated in a number of customer groups, a message that is addressed to these (duplicated) mailboxes will only be delivered to one of the mailboxes. For example, Mailbox 5000 exists in customer groups B, C, and D. A user in Customer A sends a message to mailbox 5000. Only mailbox 5000 in Customer B (the first one found in the directory) will get the message.
Default	The default is No.

Retain Copy of Sent Messages	
Description	(MMUI only) When this field is set to Yes, copies of sent messages are not deleted from the user's mailbox. When it is set to No, messages are deleted as soon as they are sent. Carefully consider how many users you can allow to have this capability, since the more users who have this ability, the faster your available storage space will be used up.
Default	The default is No.

The Add Class of Service screen (cont'd)

This is the last part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

Delivery to Non-User Capability	
Description	This enables the user to direct a message to an external DN. ***Note:*** This field is displayed only if Outcalling is installed. There are more fields displayed if Yes is selected. Refer to the *Outcalling Application Guide* (NTP 555-7001-320) for details about configuring the class of service fields for remote notification and delivery to non-users.
Default	The default is No.
Remote Notification Capability	
Description	This field permits the user to receive notification of messages, automatically, to an external DN or a paging device. ***Note:*** This field is displayed only if Outcalling is installed. There are more fields displayed if Yes is selected. Refer to the *Outcalling Application Guide* (NTP 555-7001-320) for details about configuring the class of service fields for remote notification and delivery to non-users.
Default	The default is No.
Receive AMIS Open Network Messages	
Description	This field permits the users to receive messages from users at the AMIS Open Network sites. ***Note:*** This field is displayed only if the AMIS Networking feature Network is installed.
Default	The default value is No.

Compose/Send AMIS Open Network Messages	
Description	This field determines whether or not users are allowed to compose and send messages to AMIS Open Network users. If this field is set to Yes, the AMIS Open Network Restriction/Permission List is displayed. ***Note:*** This field is displayed only if the AMIS Networking feature is installed.
Valid options	Yes, No No indicates that users cannot compose and send AMIS open network messages. However, users can still compose and send AMIS messages to remote users that are located at virtual nodes within a Meridian Network.
Default	The default value is No.

AMIS Open Network Restriction/Permission List	
Description	This field gives the number and name of the Restriction/Permission list that applies when a user sends an AMIS Open Network message. The lists are defined in the Restriction/Permission List screen, accessible from Voice Administration.
Valid range	This number can range from 0 to 80. The value 0 = unrestricted.
Default	The default is 2 (Local).

Extension Dialing Restriction/Permission List	
Description	(MMUI only) This field gives the number and name of the Restriction/Permission list that applies when a user dials a phone number while logged in to his or her mailbox (known as Thru-dialing). The lists are defined in the Restriction/Permission List screen, accessible from Voice Administration.
Valid range	This number can range from 0 to 80. The value 0 = unrestricted.
Default	The default is 2 (Local).

Custom Revert Restriction/Permission List	
Description	The custom revert DN is the extension to which a caller is passed when the caller presses 0 during a Meridian Mail session. Since users can customize this DN from their telephone sets you must determine which dialing codes you want to restrict (or explicitly permit). For example, you may want to ensure that users cannot revert callers to long distance numbers. This field gives the number and name of the Restriction/Permission list that is applied to the custom revert DN. The lists are defined in the Restriction/Permission List screen, accessible from Voice Administration.
Valid range	This number can range from 0 to 80. The value 0 = unrestricted.
Default	The default is 2 (Local).

The Add Class of Service screen (VMUIF)

Introduction

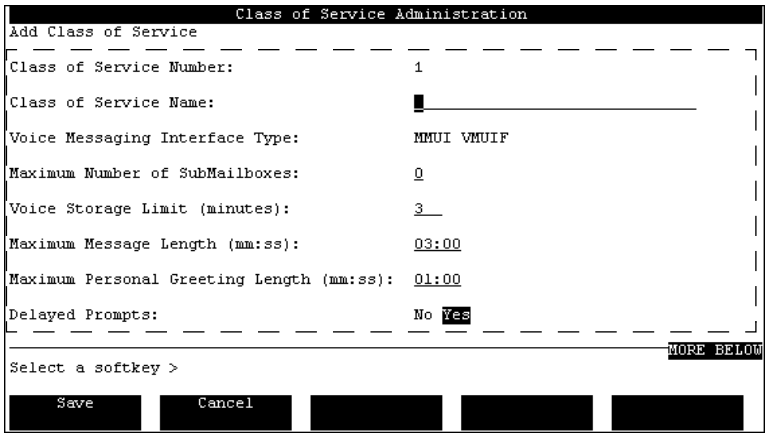
New classes of service are added to the system through the Add Class of Service screen. The following screens are available to VMUIF systems.

MATs

Class of Service screens are read-only from Multiple Administration Terminals (MATs).

The Add Class of Service screen—VMUIF

The screens that follow appear when you press the [Change Defaults] softkey on the Add Class of Service screen. This is the first part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

Class of Service Number	
Description	This is a read-only field. This field is prefilled with the number you entered to access this screen. The COS number is used to identify the Class of Service. This must be a number between 1 and 127.
Default	This field is prefilled with the number you entered to access the screen
Valid range	1 to 127

Class of Service Name	
Description	This field defaults to the name entered in the first Add Class of Service screen and is mandatory. The COS definition cannot be saved if this field is blank.
Default	Blank
Maximum length	The COS name can be up to 30 characters in length.
Valid characters	All characters are valid with the exception of "+", "_", or "?", which are invalid.

Voice Messaging Interface Type	
Description	This field is read-only and is displayed only if VMUIF is installed. This field defaults to the selection made in the first Add Class of Service screen.

Maximum Number of SubMailboxes	
Description	(VMUIF only) A value other than zero in this field means that submailbox capability is enabled for this COS. Submailboxes allow each member of a household to have his or her own personal mailbox, all of which are accessible from a single DN. A value of 0 implies that submailbox capability is disabled. If enabled, between 1 and 8 submailboxes are permitted. The value entered here is the maximum number of mailboxes permitted on a single DN. If a user requests additional submailboxes (and the total exceeds the maximum number configured here), you will have to reassign the user to another COS that has a sufficient number of submailboxes. ***Note:*** Once you have entered a value in this field and assigned users to this COS, this field becomes read-only and you cannot change this value. This is because submailboxes are chargeable by Northern Telecom. When you have used up all of your allotted submailboxes, contact your sales representative.

Valid range	Values from 1 to 8 are permitted.
Default	The default is 0.

Voice Storage Limit

Description	This field defines the maximum amount of storage available to the user. If submailboxes are enabled for this COS, all submailboxes contend for the same storage space.
How this limit is used	If messages exceed this limit, a message is played to the mailbox owner indicating that the mailbox is full and that the mailbox owner will be restricted in what he or she can do while logged in to Meridian Mail. The following restrictions are imposed: • The mailbox owner can only listen to and delete messages. • The mailbox owner cannot record a personal greeting, or compose, send, or forward messages. • After messages are deleted to reduce the storage used to below the limit, the mailbox owner must still log off and then log back in before the various mailbox functions are restored. The following conditions also exist when the mailbox is full: • Callers using Express Messaging are still allowed to leave a message. • Callers who access the Call Answering service for the user's mailbox cannot leave a message.
Affected fields	The Maximum Message Length, Maximum Personal Greeting Length, and Maximum Call Answering Message Length cannot be greater than the Voice Storage Limit.
Default	The default value is 3 (minutes).
Valid range	You may enter a value from 1 to 360 (minutes).

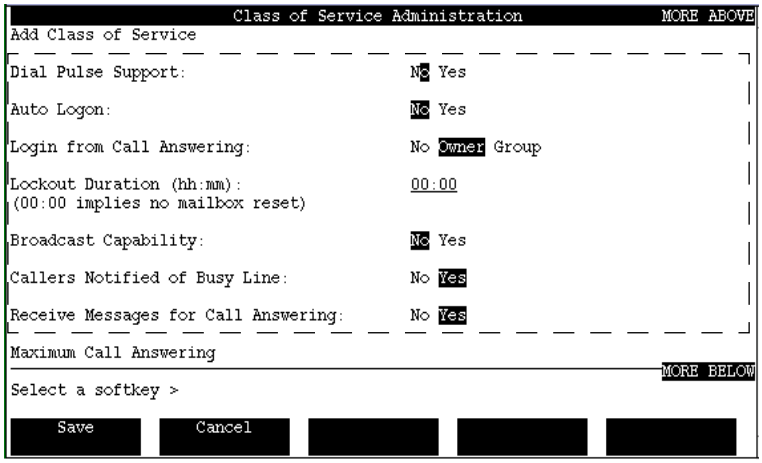
Maximum Message Length	
Description	This value determines the longest possible composed message or personal greeting that a user belonging to this COS is allowed to record.
Default	The default value is 03:00.
Valid range	You may enter a value between 00:30 and 99:00 in ten-second increments. The default is 03:00.
Restriction	This value cannot be greater than the Voice Storage Limit. If you set this field to a number that exceeds the idle login timer, message lengths will be restricted to the login timer value. The default idle login timer value is 03:00. To change this value, contact your support organization.

Maximum Personal Greeting Length	
Description	(VMUIF only) This value determines the longest possible personal greeting that a user belonging to this COS is allowed to record.
Default	The default is 01:00.
Valid range	You may enter a value between 00:30 and 05:00.
Restriction	This value cannot be greater than the Voice Storage Limit.

Delayed Prompts	
Description	When this field is set to Yes, the system will prompt users for an action if the user does not initiate any action for 3.5 seconds. It is recommended that this field be set to Yes (especially for new users). Once the users belonging to the COS are familiar with the interface, you may get requests to turn delayed prompting off. You can inform experienced users that they do not need to wait for the prompts to finish before entering a command. This field should remain set to Yes for the benefit of new users.
Default	The default is Yes.

The Add Class of Service screen—VMUIF (cont'd)

This is the second part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

Dial Pulse Support	
Description	(VMUIF only) Set this field to Yes to add a class of service that supports users with rotary or dial pulse phone sets. This option allows the user to log in to his or her mailbox without having to enter a mailbox number, password or any other key presses. ***Note:*** If this field is set to Yes, Auto Logon (the next field) must also be set to Yes.
Default	The default is No.

Auto Logon	
Description	When this field is set to Yes, the user does not need to enter a mailbox number or password to gain access to Meridian Mail, when calling from his or her home phone. When set to No, the user must enter a mailbox number and password. For reasons of mailbox security, this field should be set to No.
Exceptions	Set this field to Yes if • Dial Pulse Support is enabled (in which case, auto logon must be enabled). • The users that will be added to this COS have requested auto logon and their phones are in a secure location.
Default	The default is No.

Login from Call Answering	
Description	(VMUIF only) This field determines whether or not users can log into their mailboxes during or after a call answering session. When this feature is enabled, users have an alternative method of logging in which does not require that they dial a special access DN. Users can access their mailbox from a phone other than their home phone by dialing their telephone number and then pressing *.
Default	The default is Owner.
Valid options	No, Owner, Group • ***No*** prohibits the user from logging in from call answering. • ***Owner*** allows users to log into their mailboxes only if the destination mailbox is their own. After pressing *, the user is prompted to enter his or her password. • ***Group*** allows users to log into their mailboxes only if the user's mailbox is in the same customer group as the destination mailbox. After pressing *, the user is prompted to enter his or her password.

Lockout Duration	
Description	(VMUIF only) When a user's mailbox is disabled (as shown by the Logon Status field in the Add or View/Modify Local Voice User screen) due to password violation, this field determines how long the user is locked out before he or she can log in again. You may enter a value from 00:00 to 23:59. If you enter a value of 00:00, this means that the user ill be locked out until you decide to reenable the mailbox.
Valid range	The range of values that may be entered in this field is from 00:00 to 23:59.
Default	The default is 00:00.

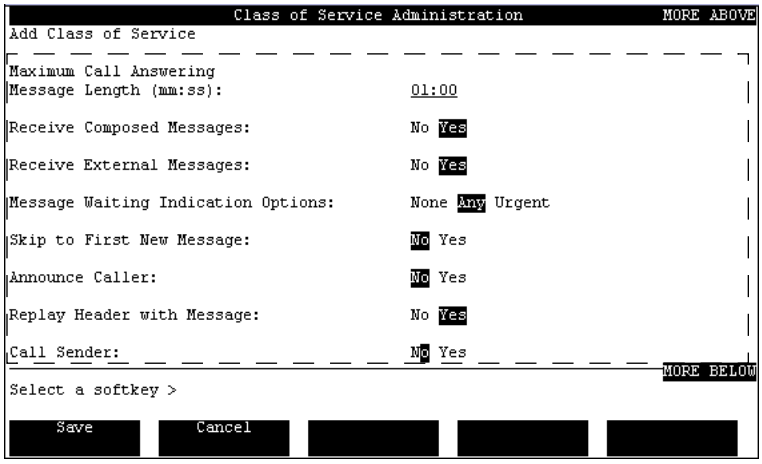
Broadcast Capability	
Description	Set this field to Yes if you want users to be able to compose and send broadcast messages. A broadcast message is one that is sent to all users in the same customer group.
Default	The default is No.

Callers Notified of Busy Line	
Description	When this field is set to Yes, a special prompt is played when the called line is busy, informing them that the user is on the phone. After the prompt is played, the caller is connected to Meridian Mail to leave a message. If the field is set to No, the normal Call Answering system greeting or personal greeting is played. ***Note:*** If the user's mailbox is associated with two (or three) DNs, they must all be busy for this prompt to be played.
Default	The default is Yes.

Receive Messages for Call Answering	
Description	(VMUIF only) If this field is set to No, users' mailboxes will not take call answering messages but can still be used to send messages. This feature is useful for users who do not have their own phone (and therefore are not expected to receive calls), but who need a mailbox so that they can compose and send messages.
Default	The default is Yes.

The Add Class of Service screen—VMUIF (cont'd)

This is the third part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

Maximum Call Answering Message Length	
Description	This value determines the longest possible call answering message that a caller can record and leave in a user's mailbox. You may enter a value between 00:30 and 99:00 in 10 second increments.
Default	The default is 01:00.
Valid range	The permitted values are from 00:30 to 99:00.
Restriction	This value cannot be greater than the Voice Storage Limit.

Receive Composed Messages	
Description	If this field is set to No, users' mailboxes will not accept composed messages. If AMIS networking is installed, setting this field to No automatically sets the Receive AMIS Open Network Messages field to No. Similarly, setting this field to No automatically sets the Receive External Messages field to No.
Default	The default is Yes.

Receive External Messages	
Description	If this field is set to Yes, users belonging to this customer group will be able to receive composed messages from users outside the customer group. If this field is set to No, users can receive composed messages only from other users in the same customer group. ***Note:*** If this field is set to Yes, the Receive Composed Messages field must also be set to Yes.
Default	The default is Yes.

Message Waiting Indication Options	
Description	The chosen setting determines the type of messages that will cause a message waiting indication (a flashing light or an interrupted dial tone) on the user's telephone set.
Default	The default is Any.
Valid options	None, Any Urgent • ***None*** should be selected for users who don't have physical telephone sets, but do have mailboxes. • ***Any*** notifies users of all new messages. • ***Urgen***t notifies users of only those messages tagged as urgent.

Skip to First New Message	
Description	(VMUIF only) This field determines what happens when users log in to listen to new messages.
Default	The default is No.
Valid Options	Yes, No • ***Yes*** causes the first new message to be automatically played when a user successfully logs on. • ***No*** means that users must use the Play command to listen to new messages.

Announce Caller	
Description	(VMUIF only) If this field is set to Yes, the prompt "From <caller>" will be announced in the header/ envelope for messages.
Default	The default is No.

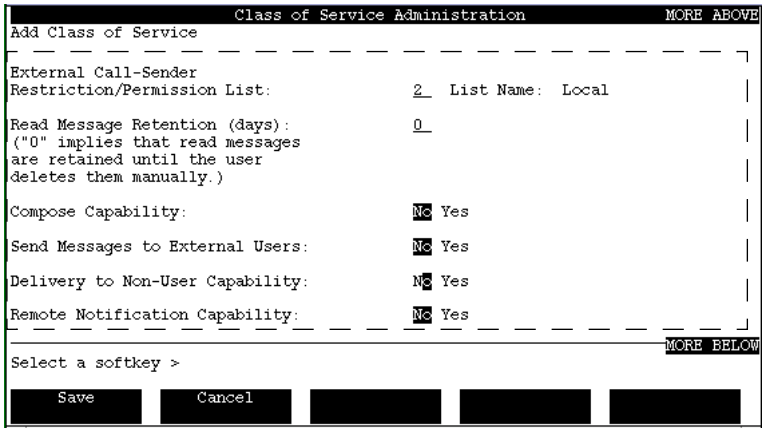
Replay Header with Message	
Description	(VMUIF only) If Yes is selected, the header will be played whenever a user selects the Play command to listen to messages that have been left in the mailbox. The header includes information such as the time at which the message was sent, the caller's name, and so on.
Default	The default is Yes.

Call Sender	
Description	Call Sender allows users to place a call to the (internal) originator of a call answering message or a voice message automatically. After listening to a message, the user presses 9 to dial the caller's number. ***Note:*** This feature is blocked if the user has logged in through remote notification.
Dial pulse	Do not enable this field if Dial Pulse Support is enabled.
Default	The default is No.
Valid Options	Yes, No • No disables Call Sender so that users cannot use the feature to call back internal or external callers who have left messages. • Yes enables Call Sender to internal callers only.

External call sender	To allow users to use Call Sender to place calls to external callers, the following fields must be set to Yes. • Call Sender • External Call Sender Allowed in the Voice Messaging Options screen Restrictions must also be applied in the External Call Sender Restriction/Permission List field in the class of service.

The Add Class of Service screen—VMUIF (cont'd)

This is the fourth part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

External Call-Sender Restriction/Permission List	
Description	This field specifies the number and the list name of the Restriction/Permission list that will be applied when the Call Sender feature is used to call back external callers. The lists are defined in the Restriction/Permission List screen, accessible from Voice Administration.
Valid range	This number can range from 0 to 80. The value 0 = unrestricted.
Default	The default is 2 (Local).

Read Message Retention (days)	
Description	This field specifies the number of days that messages are kept in users' mailboxes after they have been read. The value in this field is limited by the value set in the Maximum Read Message Retention field in the Voice Messaging Options screen. For details, see "The Voice Messaging Options screen" on page 21-6.
Valid range	You can enter a value from 0 to 99.

Default — The default is 0.

Which value is used — The following table shows which value is used to determine how long the user's read messages are kept.

System retention limit	User retention limit	Amount of time read messages are kept
0 (zero)	0 (zero)	Messages are kept until the user deletes them. The system will not automatically delete read messages.
0 (zero)	A value other than zero	The user retention limit determines how long messages are kept.
A value other than zero	0 (zero)	The system retention limit determines how long messages are kept.
A value other than zero	A value other than zero	The lesser value is used to determine how long messages are kept.

Compose Capability

Description — (VMUIF only) Set this field to Yes to give users the ability to compose and send voice messages to other users within the same customer group. If this value is set to No, then the user only has call answering capability.

If this field is set to Yes, the "Treatment for Unsent Messages if the User Disconnects During Compose" field is displayed.

Note: Once you have assigned users to the COS and put it to use, you cannot modify this field. This feature is chargeable by Northern Telecom. If you need to revoke compose capability from a particular user, you will have to reassign the user to another COS. Conversely, if a user does not have this capability and later requests it, you will have to reassign the user to a COS that has compose capability enabled.

Default — The default is No.

Send Messages to External Users	
Description	This field is set to No by default in order to provide a fire wall between customer groups. If you leave this field set to No, users in other customer groups will be treated as external callers from the perspective of the current customer group. Users will not be able to compose and send messages between customer groups. If this field is set to Yes, users are allowed to compose and send messages to users outside of their own customer group. ***Note:*** If this field is set to Yes, mailbox numbers must be unique across customer groups. If a mailbox number is duplicated in a number of customer groups, a message that is addressed to these (duplicated) mailboxes will only be delivered to one of the mailboxes. For example, Mailbox 5000 exists in customer groups B, C, and D. A user in Customer A sends a message to mailbox 5000. Only mailbox 5000 in Customer B (the first one found in the directory) will get the message.
Default	The default is No.

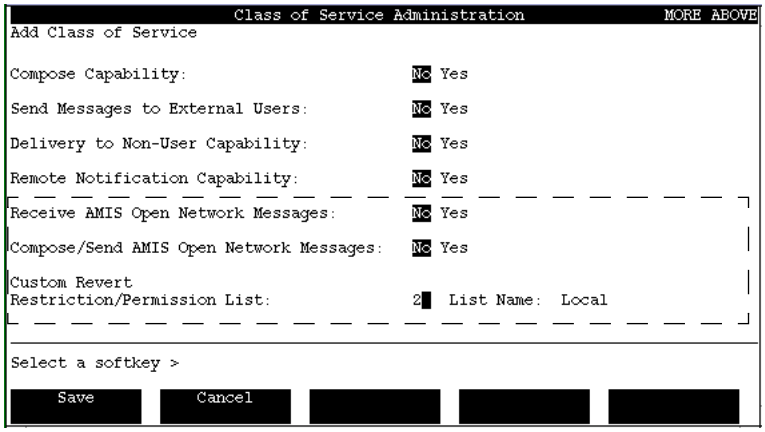
Treatment for Unsent Messages if the User Disconnects During Compose	
Description	(VMUIF only) This field is displayed only if the Compose Capability field is set to Yes. The selection you make in this field determines what happens to an unsent message if the user disconnects while composing the message.
Valid options	Delete—delete the unsent message Send—send the possibly incomplete message
Default	The default is Delete.

Delivery to Non-User Capability	
Description	This enables the user to direct a message to an external DN. ***Note:*** This field is displayed only if Outcalling is installed. There are more fields displayed if Yes is selected. Refer to the *Outcalling Application Guide* (NTP 555-7001-320) for details about configuring the class of service fields for remote notification and delivery to non-users.
Default	The default is No.

Remote Notification Capability	
Description	This field permits the user to receive notification of messages, automatically, to an external DN or a paging device. ***Note:*** This field is displayed only if Outcalling is installed. There are more fields displayed if Yes is selected. Refer to the *Outcalling Application Guide* (NTP 555-7001-320) for details about configuring the class of service fields for remote notification and delivery to non-users.
Default	The default is No.

The Add Class of Service screen—VMUIF (cont'd 5)

This is the fifth part of the Add Class of Service/Change Defaults screen.



Field descriptions

This table gives descriptions of the fields highlighted by the broken line in the preceding screen.

Receive AMIS Open Network Messages	
Description	This field permits the users to receive messages from users at the AMIS Open Network sites. ***Note:*** This field is displayed only if the AMIS Networking feature is installed.
Default	The default value is No.

Compose/Send AMIS Open Network Messages	
Description	This field determines whether or not users are allowed to compose and send messages to AMIS Open Network users. If this field is set to Yes, the AMIS Open Network Restriction/Permission List is displayed. ***Note:*** This field is displayed only if the AMIS Networking feature is installed.
Valid options	Yes, No No indicates users cannot compose and send AMIS Open Network messages. However, users can still compose and send AMIS messages to remote users that are located at virtual nodes within a Meridian Network.
Restriction	If the interface is VMUIF, this field cannot be set to Yes if the Compose Capability field is set to No.
Default	The default value is No.

AMIS Open Network Restriction/Permission List	
Description	This field gives the number and name of the Restriction/Permission list that applies when a user sends an AMIS Open Network message. The lists are defined in the Restriction/Permission List screen, accessible from Voice Administration.
Valid range	This number can range from 0 to 80. The value 0 = unrestricted.
Default	The default is 2 (Local).

Custom Revert Restriction/Permission List	
Description	The custom revert DN is the extension to which a caller is passed when the caller presses 0 during a Meridian Mail session. This field gives the number and name of the Restriction/Permission list that is applied to the custom revert DN. These lists are defined in the Restriction/Permission List screen, accessible from Voice Administration.
Valid range	This number can range from 0 to 80. The value 0 = unrestricted.
Default	The default is 2 (Local).

Assigning Classes of Service to customer groups

Introduction

After creating (adding) a new Class of Service (COS), it must be made available for use.

Administration level

Classes of Service are assigned to customer groups through the General Options screen at the Customer Administration level. See Chapter 14, “General options”.

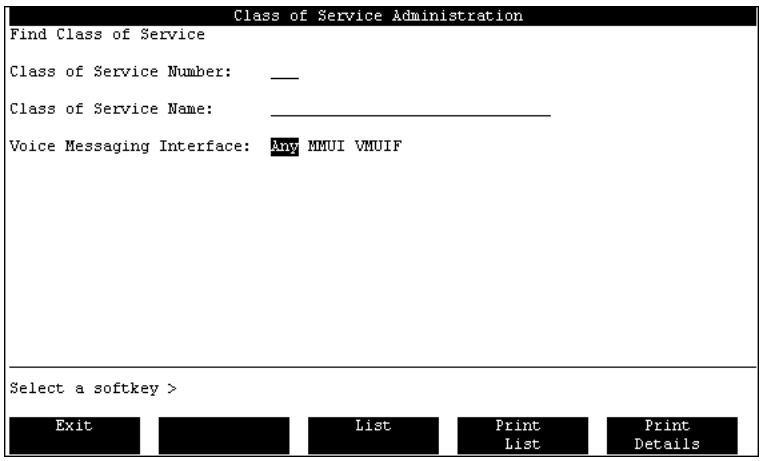
The Find Class of Service screen

Introduction

The Find Class of Service screen is used to locate a specific Class of Service (COS).

The screen

The following is the Find Class of Service screen.



Field descriptions

This table gives descriptions of the fields in the Find Class of Service screen.

Class of Service Number	
Description	This is the number of an existing COS.
Class of Service Name	
Description	This field is used for the name of a specific COS or a subset of COSs.

Voice Messaging Interface	
Description	This field appears only if VMUIF is installed on your system. If you have only one voice messaging interface installed on your system, leave this field set to "Any." If you have both MMUI and VMUIF installed on your system, you can use this field to narrow down your search to one of those two voice messaging interface types.
Valid options	Any, MMUI, VMUIF

Finding, listing, or printing a Class of Service

Introduction

This section details the steps for finding, listing, or printing a Class of Service (COS) or COSs.

Administration level

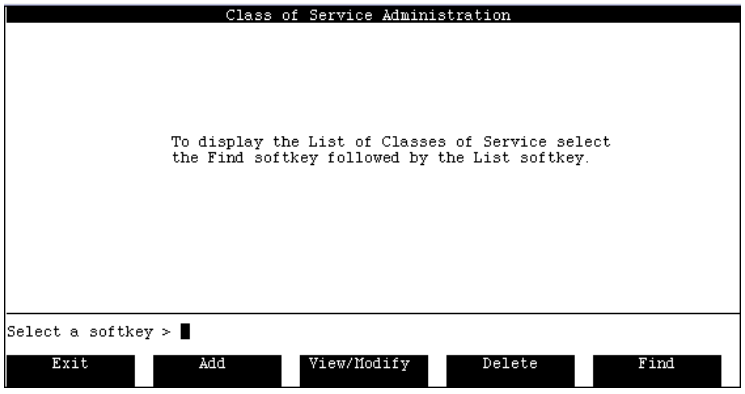
The Find COS function can be accessed from either the System Administration level or the Customer Administration level. In both cases, all COSs from across the entire system (not just from the current customer group) that match the search criteria are retrieved. However, at the Customer Administration level the found classes of service can only be viewed. They cannot be modified or deleted.

Procedure

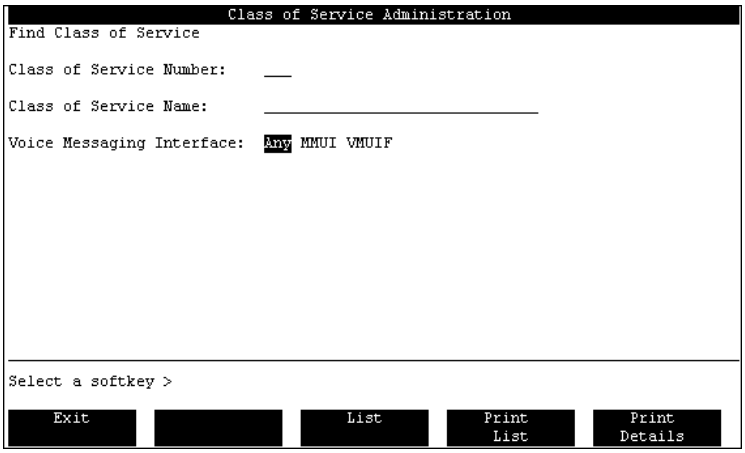
To list or print COSs, follow these steps.

Starting Point: The Main Menu

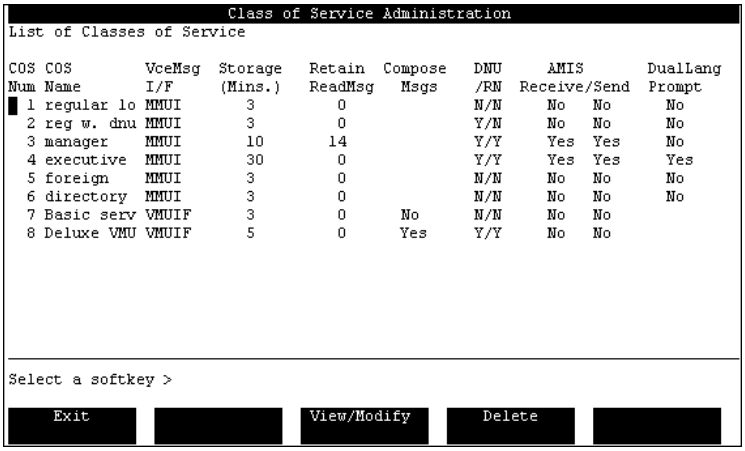
Step	Action
1	Select Class of Service Administration. ***Result:*** The following screen appears.



Step	Action
2	Press the [Find] softkey. ***Result:*** The Find Class of Service screen is displayed. The Find Class of Service screen is where you may specify the search criteria for retrieving a particular class of service or a subset of classes.



Step	Action
3	To view a list of all Classes of Service on your system, press [List]. ***Result:*** The List of Classes of Service screen is displayed.



Note: For MMUI COSs, the Compose Msgs column remains blank. For VMUIF COSs, the Dual Lang Prompt column remains blank.

Step	Action
4	To print a list of all Classes of Service on your system, press [Print List]. ***Result:*** The List of Classes of Service is printed.
5	To view or print a particular Class of Service or a specific group of Classes of Service, specify search criteria on the Find screen as follows.

IF	THEN
you want a specific COS and know its number	enter the number in the Class of Service Number field.
you want a specific COS and know its name	enter the name in the Class of Service Name field.
you want a group of COSs with similar names	enter the appropriate search pattern in the Class of Service Name field. (This pattern will consist of letters and wildcard characters.)
you want to find those COSs for a particular interface	specify either MMUI or VMUIF.

6 To view or print the selected Classes of Service, press the appropriate softkey as follows.

IF	THEN
you want a list of the COSs according to the search criteria	press the [List] softkey.
you want to print the list of COSs	press the [Print List] softkey.
you want to print the details of a single COS	enter the COS number or name in the appropriate field and press the [Print Details] softkey.

Modifying a Class of Service

Introduction

This section deals with changing the values in any of the fields for a specific Class of Service (COS).

To modify an existing COS, you must be logged on at the main administration terminal (not a multiple-administration terminal).

Administration level

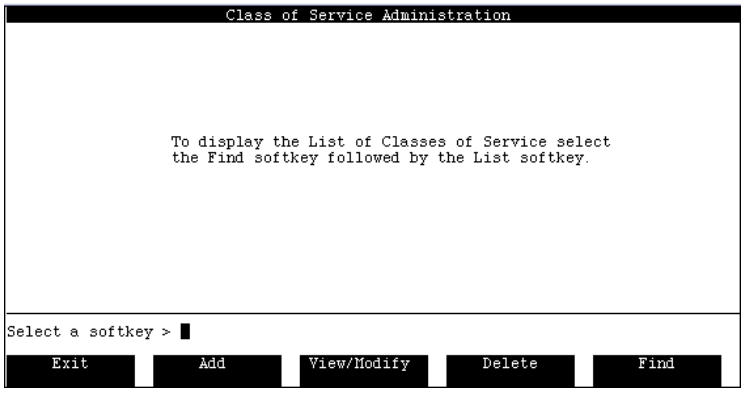
A Class of Service can be modified only at the System Administration level.

Procedure

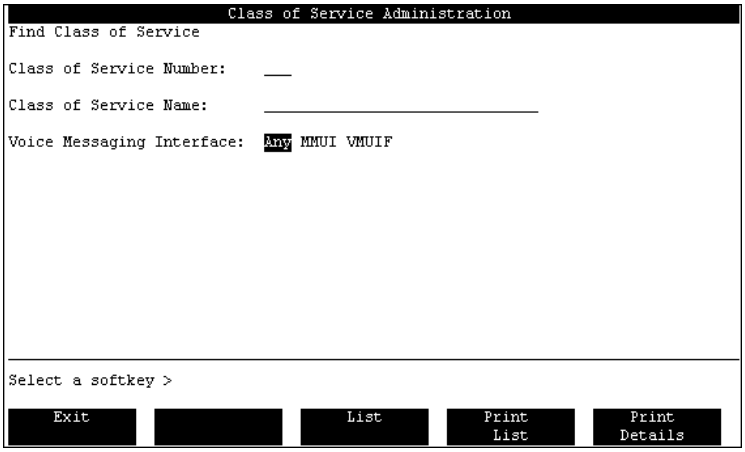
A COS is changed by modifying its values. To change the values, follow these steps.

Starting Point: The Main Menu.

Step	Action
1	Select Class of Service Administration. ***Result:*** The Class of Service Administration screen is displayed.



Step	Action
2	Press the [Find] softkey. ***Result:*** The Find Class of Service screen is displayed.



3 Specify the search criteria.

IF	THEN
you want to find a particular COS	enter the COS number in the Class of Service Number field.
you want to find a subset of COSs according to name	enter the appropriate search pattern in the Class of Service Name field. (This pattern will consist of letters and wildcard characters.)
you want to find those COSs for a particular interface	specify either MMUI or VMUIF.

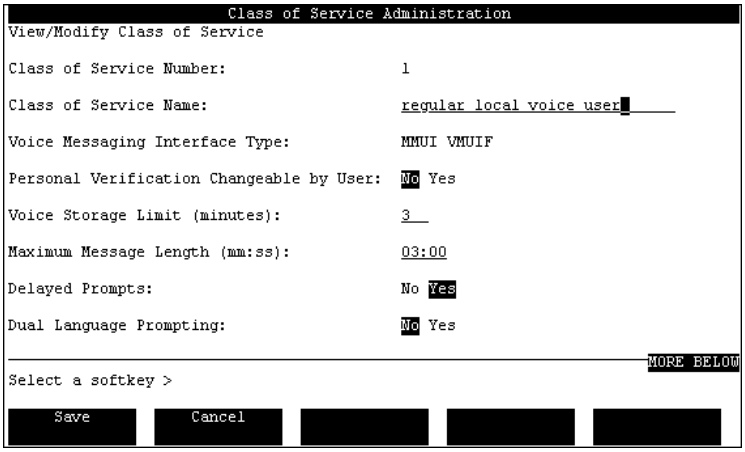
Step	Action
4	Press the [List] softkey.
	Result: The List of Classes of Service screen is displayed.

```
                         Class of Service Administration
List of Classes of Service

COS COS        VceMsg  Storage   Retain  Compose   DNU     AMIS       DualLang
Num Name       I/F     (Mins.)   ReadMsg   Msgs    /RN  Receive/Send  Prompt
  1 regular lo MMUI       3         0              N/N     No   No       No
  2 reg w. dnu MMUI       3         0              Y/N     No   No       No
  3 manager    MMUI      10        14              Y/Y     Yes  Yes      No
  4 executive  MMUI      30         0              Y/Y     Yes  Yes      Yes
  5 foreign    MMUI       3         0              N/N     No   No       No
  6 directory  MMUI       3         0              N/N     No   No       No
  7 Basic serv VMUIF      3         0      No      N/N     No   No
  8 Deluxe VMU VMUIF      5         0      Yes     Y/Y     No   No

Select a softkey >

    Exit                View/Modify      Delete
```

Note: For MMUI COSs, the Compose Msgs column remains blank. For VMUIF COSs, the Dual Lang Prompt column remains blank.

5	Move the cursor to the definition you want to modify.
6	Press the spacebar to select it.

Step	Action
7	Press the [View/Modify] softkey. ***Result:*** The View/Modify Class of Service screen is displayed.



Note: The fields that appear in the View/Modify Class of Service screen depend on what features are installed on your system. For detailed field descriptions, see "The Add Class of Service screen (MMUI)" on page 27-11 or "The Add Class of Service screen (VMUIF)" on page 27-29.

8 Make the necessary changes to the COS.

9 Save or cancel the changes.

IF	THEN
you want to save the changes	press the [Save] softkey. ***Result:*** The changes to the COS are saved. All users belonging to the COS will use the updated values in the COS. The List of Classes of Service screen is displayed.
you want to exit the screen without saving the changes	press the [Cancel] softkey. ***Result:*** Any changes that you have made are not saved and the List of Classes of Service screen is displayed.

Field descriptions

The View/Modify Class of Service screen contains the same fields as the Add Class of Service screen. For field descriptions, see “The Add Class of Service screen (MMUI)” on page 27-11 or “The Add Class of Service screen (VMUIF)” on page 27-29.

Deleting a Class of Service

Introduction

This section deals with deleting a Class of Service (COS) from the system.

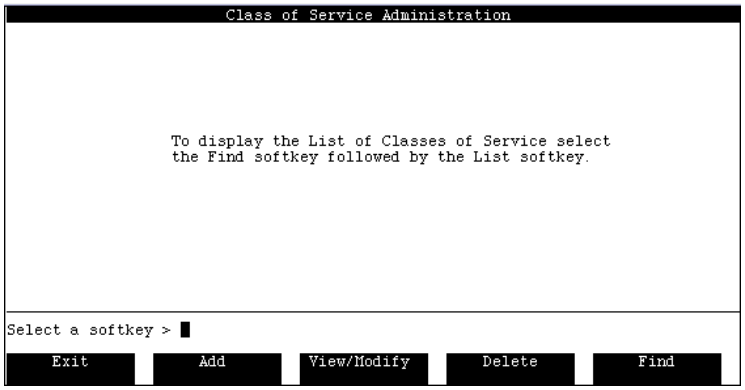
Administration level

A Class of Service can be deleted only at the System Administration level.

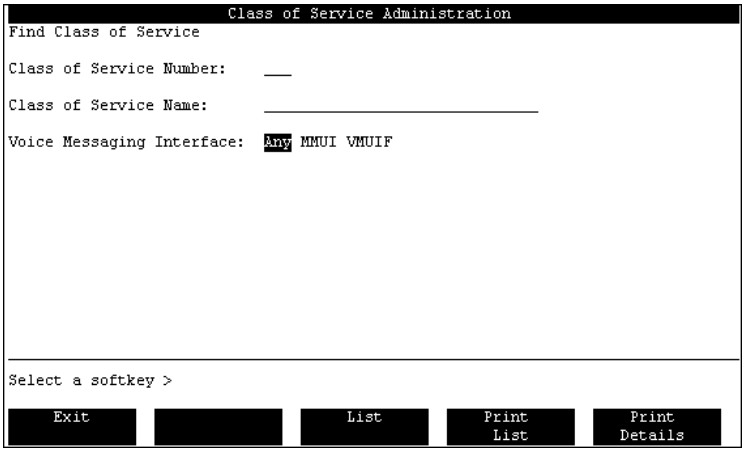
Procedure

Starting Point: Main Menu

Step	Action
1	Select Class of Service Administration. ***Result:*** The Class of Service Administration is displayed.



Step	Action
2	Press the [Find] softkey. ***Result:*** The Find Class of Service screen is displayed.



3 Specify the search criteria.

IF	THEN
you want to find a particular COS	enter the COS number in the Class of Service Number field.
you want to find a subset of COSs according to name	enter the appropriate search pattern in the Class of Service Name field. (This pattern will consist of the letters and wildcard characters to indicate the pattern that the found COSs must match.)
you want to find those COSs for a particular interface	specify either MMUI or VMUIF.

Step	Action
4	Press the [List] softkey. ***Result:*** The List of Classes of Service screen is displayed.

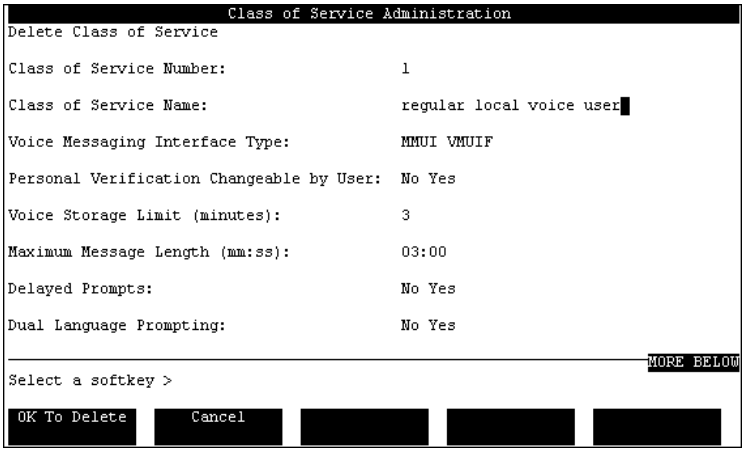
```
                    Class of Service Administration
List of Classes of Service

COS COS         VceMsg  Storage   Retain  Compose   DNU     AMIS       DualLang
Num Name        I/F     (Mins.)   ReadMsg   Msgs    /RN  Receive/Send  Prompt
 1 regular lo MMUI       3         0               N/N     No   No       No
 2 reg w. dnu MMUI       3         0               Y/N     No   No       No
 3 manager    MMUI       10        14              Y/Y     Yes  Yes      No
 4 executive  MMUI       30        0               Y/Y     Yes  Yes      Yes
 5 foreign    MMUI       3         0               N/N     No   No       No
 6 directory  MMUI       3         0               N/N     No   No       No
 7 Basic serv VMUIF      3         0       No      N/N     No   No
 8 Deluxe VMU VMUIF      5         0       Yes     Y/Y     No   No

Select a softkey >

 Exit |  | View/Modify | Delete |
```

Note: For MMUI COSs, the Compose Msgs column remains blank. For VMUIF COSs, the Dual Lang Prompt column remains blank.

5 Move the cursor to the definition you want to delete.

6 Press the spacebar to select it.

Step	Action
7	Press the [Delete] softkey. ***Result:*** The Delete Class of Service screen is displayed.



Note: The fields that appear in the Delete Class of Service screen depend on what features are installed on your system. For detailed field descriptions, see “The Add Class of Service screen (MMUI)” on page 27-11 or “The Add Class of Service screen (VMUIF)” on page 27-29.

8 Delete the COS or exit the screen without deleting.

IF	THEN
you want to delete the COS	press the [OK to Delete] softkey.
you want to exit the screen without deleting the COS	press the [Cancel] softkey.

Section C Assigning Classes of Service to users

In this section

Assigning a Class of Service to a user

Description

To assign a user to a particular COS, select the COS number in the Class of Service field in the Add Local Voice User screen. For a complete description of this screen, see Chapter 9, “Local voice users”.

Administration level

A Class of Service can be assigned to a user only at the Customer Administration level.

See Also

Please refer to the “Local voice users” chapter for the procedures.

Creating and Assigning a Personal Class of Service to a user

Description

If a user has special requirements that are not met by any of the existing COSs, you can create a personal COS for that user. All personal COSs must be maintained individually, since any changes made to a system COS will not affect the personal COSs that exist on the system. If, for example, it is decided that all users will be given access to a particular feature, you would have to modify all personal COSs as well as the system COSs.

See Also

To create a personal COS, see “Creating a personal class of service” on page 9-18.

The Class of Service conversion utility for converted systems

Description

If you have converted your system from Release 8 or earlier, all existing users will each have a personal class of service. This means that all users still have their Meridian Mail Release 8 personal settings and are not connected to or related to any system COSs. Therefore, after a conversion you must ensure that all existing users are reassigned to system COSs. This is done by adding the necessary COSs, then using the COS Conversion utility.

Process

This utility checks each user's personal COS. If it matches an existing system COS, the user is assigned to that COS. User mailboxes that do not match a system COS remain with personal COSs. You can use this utility to view these unassigned mailboxes and then use the utility to either add a system COS based on the personal COSs or assign the unassigned mailbox to a defined COS.

See Also

The COS Conversion utility is available from the tools level and allows you to reassign users to COSs. See the *System Administration Tools Guide* (NTP 555-7001-305) for details.

Chapter 28

Hardware administration

In this chapter

Overview

Introduction

The Hardware Administration screens allow you to view the contents of the hardware database in your Meridian Mail system. The hardware database is a system utility that maintains a current listing and description of all nodes, cards, and ports, and for MSM systems, T1 links and T1 channels.

CAUTION
Risk of audit failure

Do not leave any Hardware Administration menu on the administrative console overnight, as important system audits may fail due to lack of available memory, and there will be a security risk.

Administration level

The Hardware Administration screens are accessed from the System Administration level.

Modifying the hardware database

The Hardware Administration function allows you to view aspects of the Hardware database. If you or a representative from your support organization need to modify the hardware database, you must use the “Modify hardware” tool. Refer to *System Administration Tools* (NTP 555-7001-305).

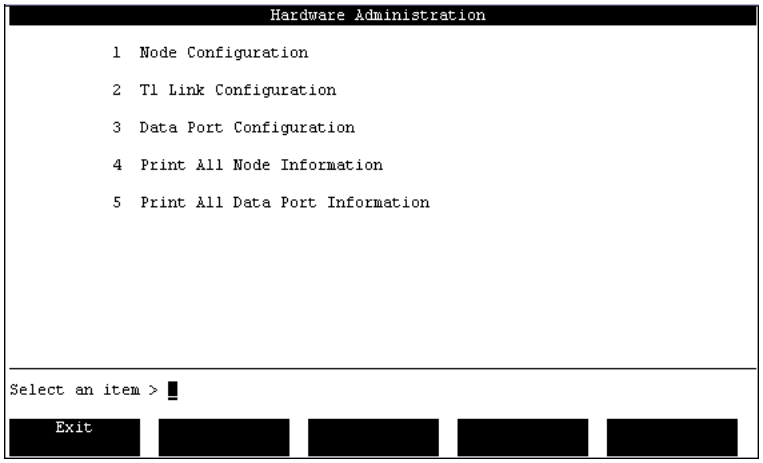
The Hardware Administration menu

Introduction

The Hardware Administration menu is accessed directly from the main System Administration menu.

Hardware Administration menu

The Hardware Administration menu is displayed in the following illustration.



Note: The T1 Link Configuration option does not appear on Modular GP systems.

Procedure

To access the Hardware Administration facilities, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select Hardware Administration. ***Result:*** The Hardware Administration menu appears.
2	Choose the number of the action you wish to perform and press <Return>. ***Result:*** The screen corresponding to your selection appears. See the following sections for details: See “The Node Configuration screen” on page 28-7. See “The T1 Link Configuration screen” on page 28-23. See “The Data Port Configuration screen” on page 28-42. See “Printing node and data port information” on page 28-65.
3	Press [Exit] to return to the Main Menu.

Section A Viewing the node configuration

In this section

Overview

Introduction

The Node Configuration screen provides a summary listing of the cards found in all nodes in your system (see “The Node Configuration screen” on page 28-7).

The View Node screens provide a more detailed view of individual nodes (see “The View Node screen” on page 28-11).

The Node Configuration screen

Introduction

The Node Configuration screen is used to view a summary listing of the cards in all nodes on your system.

Accessing the Node Configuration screen

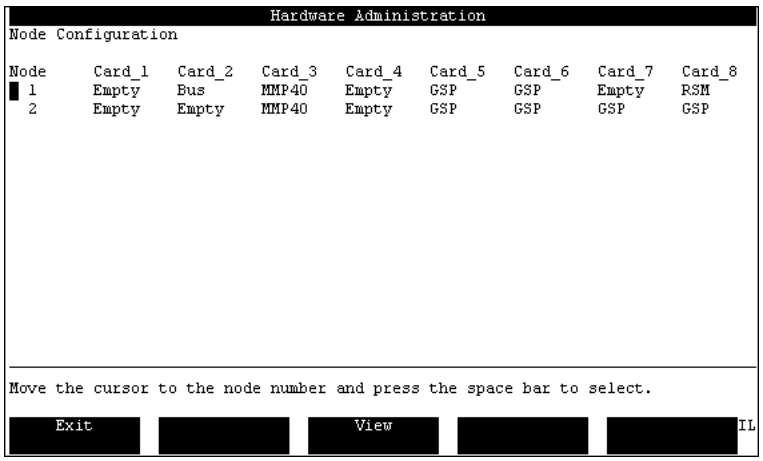
To view the Node Configuration screen, follow these steps.

Step	Action
1	Select Hardware Administration from the Main Menu. ***Result:*** The Hardware Administration menu appears.
2	Select Node Configuration from the Hardware Administration menu. ***Result:*** The Node Configuration screen appears.

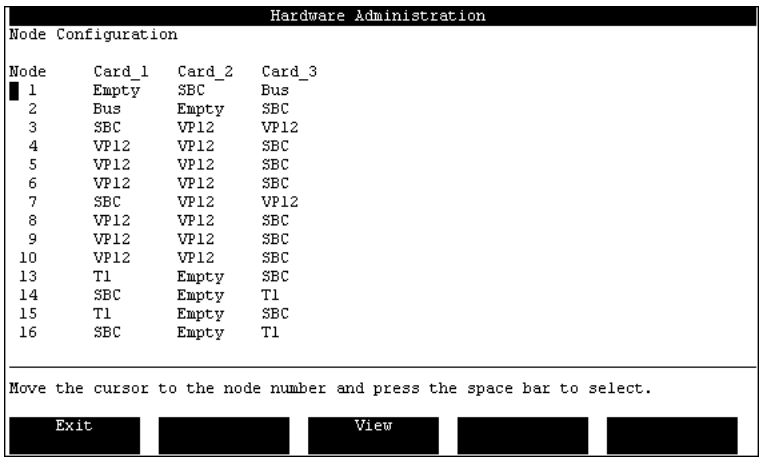
The screen

Note: The illustrations in this section do not necessarily represent the hardware configuration on your system. They are examples only.

The following example is taken from a Modular GP system.



The following example is taken from an MSM system.



Field descriptions

The following fields appear on the Node Configuration screen.

Node	
Description	Refers to the number of the node within the configuration.
Default	None.

Card_x	
Description	Identifies the card slot in the defined node, where "x" represents the position of the card slot. The card slots are numbered from left to right.
Valid entries	The possible card types are listed here. Depending on your system type, you will not see all of these cards on your system. **MMP40** This is the Meridian Mail processor (CPU) card which includes a 24 MHz 68040 processor, 16 Mbytes of memory, up to two RS-232 serial ports, and a SCSI interface processor. It is displayed for MMP40 systems. **RSM** This is an RS-232 service module. **SBC** This is the Meridian Mail processor (CPU) card (also known as the 68K card). **Bus** This is the high-speed bus (also called HABC for High Availability Bus Controller). **NVP** This is the 16-kbyte network voice processor. **NVP32** This is the 32-kbyte network voice processor. **GSP** (General-purpose signal processor) This is the voice processor card on Modular GP systems.

VP12
This is the voice processor card. It provides 12 channels.

T1
This is the T1 Link card; the T1 link is applicable to MSM only.

Empty
The card slot is empty.

The View Node screen

Introduction

The View Node screen provides a detailed view of the cards and ports that make up a node, including card types and locations, port types, and port attributes.

Screen examples

This section provides an example of three different types of nodes: system, voice, and T1 node. (T1 nodes are applicable to MSM only.)

A system node is always node 1 on your system. It contains the MMP40 or SBC card, and a Bus card.

A voice node contains voice processor cards and an MMP40 or SBC card.

A T1 node contains the T1 card as well as an SBC card. Note that Modular GP systems do not contain T1 nodes.

Viewing node configurations

To view the node configurations for your system, follow these steps.

Step	Action
1	Select Hardware Administration from the Main Menu. ***Result:*** The Hardware Administration menu appears.
2	Select Node Configuration from the Hardware Administration menu. ***Result:*** The Node Configuration screen appears.

Step	Action
3	Move the cursor to the node you want to view and press <Spacebar>. ***Result:*** Your selection is highlighted.
4	Select [View] to view the configuration information for the highlighted node. ***Result:*** The View Node screen appears. See "View Node screen (system node)" on page 28-12, "View Node screen (voice node)" on page 28-14, and "View Node screen (T1 node)" on page 28-15 for examples.
5	Select [Exit] to return to the Node Configuration screen when you have finished viewing the node configuration. Select [Exit] again to return to the Hardware Administration main menu.

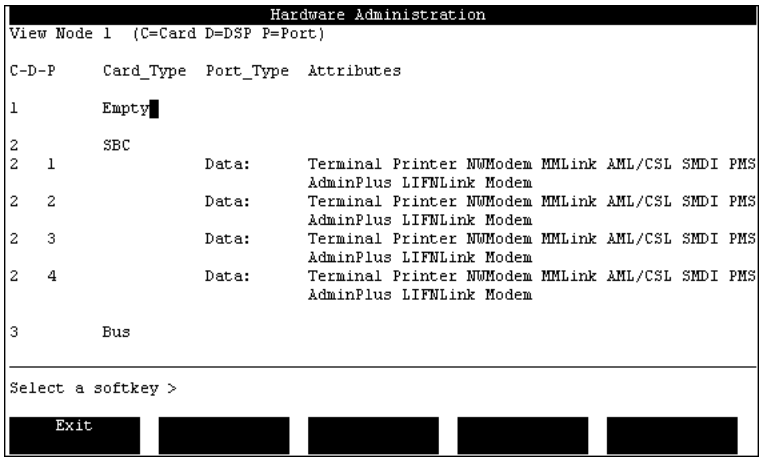
View Node screen (system node)

The following diagram illustrates the View Node screen for a system node on a Modular GP system.

```
                              Hardware Administration
View Node 1  (C=Card D=DSP P=Port)

C-D-P     Card_Type  Port_Type  Attributes

1         Empty

2         Bus

3         MMP40
3   1               Data:      Terminal Printer NWModem MMLink AML/CSL SMDI PMS
                               AdminPlus LIFNLink Modem
3   2               Data:      Terminal Printer NWModem MMLink AML/CSL SMDI PMS
                               AdminPlus LIFNLink Modem

4         Empty

5         GSP
5-1-1             Multi:    RA: 63 -1    LI:*85         LO:*86
                                                                    MORE BELOW
Select a softkey >

   Exit
```

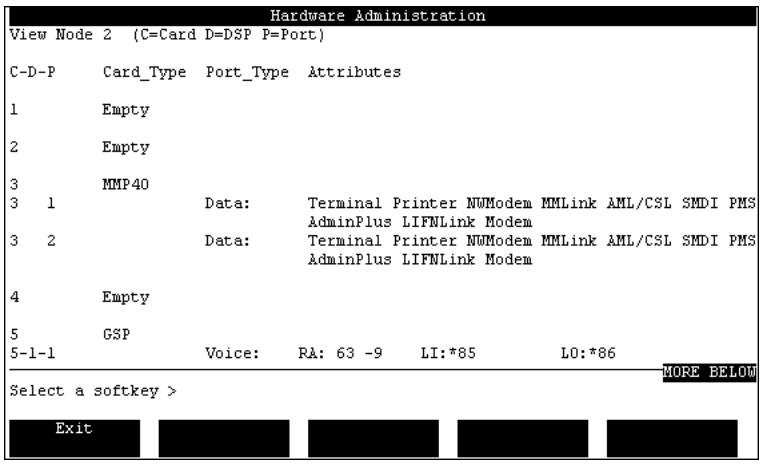
The following diagram illustrates the View Node screen for a

system node on an MSM system.

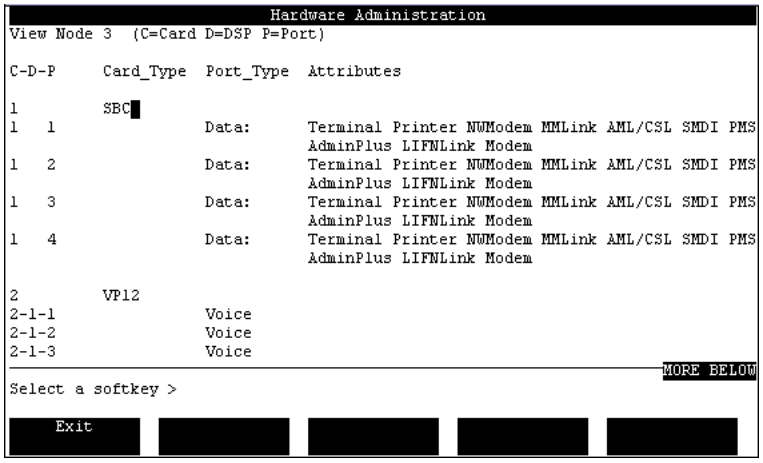


View Node screen (voice node)

The following diagram illustrates the View Node screen for a voice node on a Modular GP system.

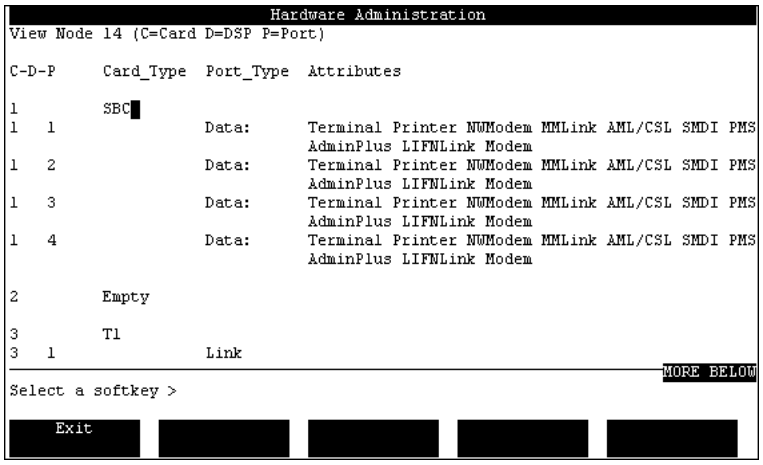


The following diagram illustrates the View Node screen for a voice node on an MSM system.



View Node screen (T1 node)

The following diagram illustrates the View Node screen for a T1 node. Note that Modular GP systems do not have T1 nodes.



Field descriptions

The View Node screens display the following read-only information about each card on the node:

C-D-P	
Description	This is the physical location of the port in the Meridian Mail system, where • C is the card. • D is the DSP number (which is displayed for voice processor cards only). • P is the port number.

Card_Type	
Description	This indicates the function of the card.
Valid entries	The possible card types are listed here. Depending on your system type, you will not see all of these cards on your system. **MMP40** This is the Meridian Mail processor (CPU) card which includes a 24 MHz 68040 processor, 16 Mbytes of memory, up to two RS-232 serial ports, and a SCSI interface processor. It is displayed for MMP40 systems. **RSM** This is an RS-232 service module. **SBC** This is the Meridian Mail processor (CPU) card (also known as the 68K card). **Bus** This is the high-speed bus (also called HABC for High Availability Bus Controller). **NVP** This is the 16-kbyte network voice processor. **NVP32** This is the 32-kbyte network voice processor. **GSP** (General-purpose signal processor) This is the voice processor card on Modular GP systems.

VP12
This is the voice processor card. It provides 12 channels.

T1
This is the T1 Link card. T1 link cards are applicable to MSM systems only.

Empty
The card slot is empty.

Port_Type	
Description	This field describes the type of port, where • **Data** indicates a serial data communications port • **Device** indicates a mass storage device or tape drive • **Voice** indicates a voice processor port • **Link** indicates a T1 link • **Multi** indicates a multimedia port

Attributes (for ports with type = Data)	
Description	• **Terminal** indicates a connection to an administration terminal. • **Printer** indicates there is a printer serial connection. • **NWModem** indicates this port has a connection to a modem used for networking calls. ***Note:*** Ports on the MMP40 or SBC card do not support networking. • **MMLink** indicates the Meridian ACCESS Link, which is the communications channel for Meridian ACCESS. • **AML/CSL** This attribute does not apply to MSM or Modular GP systems. • **SMDI** (Simplified Message Desk Interface) This is the communications channel between Meridian Mail and the switch. • **PMS** This attribute does not apply to MSM or Modular GP systems. • **AdminPlus** indicates a connection to a PC equipped with Meridian Mail Reporter. • **LIFNLink** is not applicable. • **Modem** indicates a connection to a modem used for remote access.

Attributes (for ports with type = Device)	
Description	• **Disk** indicates a mass storage subsystem (hard disk) is present. • **Tape** indicates a cartridge tape subsystem is present.

Attributes (for ports with type = Voice or Multi)	
Description	• **RA** (routing address) The location of the corresponding agent in the switch. This is the Message Desk Number in the format xxx-yyyy, where xxx is the message desk number and yyyy is the terminal number. • **LI** (login code) The channel access code for logging in to the UCD group. This field should be blank if the SMDI_AUTOLOG option has been configured as "Y" (yes) on the switch. When this field is left blank, the MSM inserts a default login code. If SMDI_AUTOLOG is configured as "N" on the switch, ensure that the code displayed here matches the code configured on the switch. See your switch administrator for details. • **LO** (logout code) The channel access code for logging out of the UCD group. This field should be blank if the SMDI_AUTOLOG option has been configured as "Y" (yes) on the switch. When this field is left blank, the MSM inserts a default login code. If SMDI_AUTOLOG is configured as "N" on the switch, ensure that the code displayed here matches the code configured on the switch. See your switch administrator for details. • **AI** (agent ID) This number must match the line number (SMDI_LINE_NO on the switch) of the UCD agent that is configured on the switch. On the switch, the SMDI_LINE_NO can be configured through the servord or through the Table IBNFEAT by entering the SMDI option. • **NR** (the Set Ready, Not Ready code) This field is not applicable here and should be blank on your system. • **LK** (link) The Link ID of the SMDI link associated with the T1 channel. (T1 channels are applicable to MSM systems only.)

Section B Viewing and modifying the T1 link configuration for MSM systems

In this section

Overview

Introduction

This section describes how to view or modify a T1 channel configuration and a T1 link setup. In addition, the following screens are described:

- T1 Link Configuration
- Modify T1 Channel Configuration
- Modify T1 Link Setup

Platform

Only MSM systems contain T1 links. If you have a Modular GP system, you will not see the screens described in this section.

The T1 Link Configuration screen

Introduction

The T1 Link Configuration screen lists the T1 links in your system.

Platform

Only MSM systems contain T1 links.

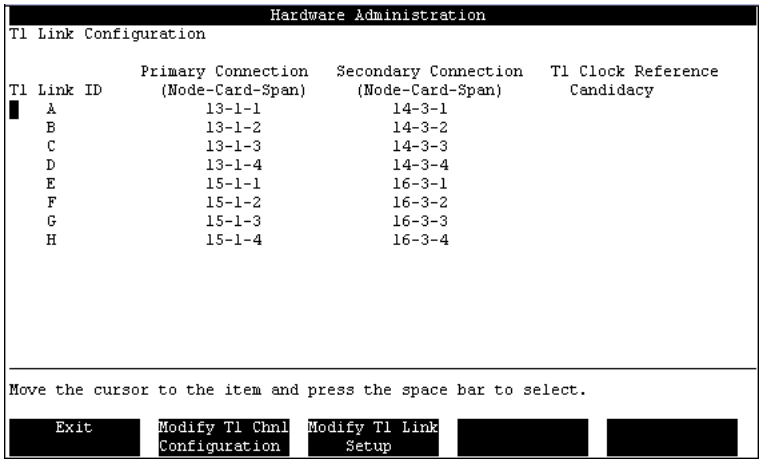
Procedure

To view the T1 Link Configuration screen, follow these steps.

Step	Action
1	Select Hardware Administration from the Main Menu. ***Result:*** The Hardware Administration menu appears.
2	Select T1 Link Configuration from the Hardware Administration menu. ***Result:*** The T1 Link Configuration screen appears.

The screen

The following is an example of the T1 Link Configuration screen.



T1 connections

Each T1 link consists of two connections, a primary and secondary connection, to provide redundancy.

Field descriptions

The following fields appear on the T1 Link Configuration screen.

T1 Link ID	
Description	This is a unique identifier for the T1 link.
Primary Connection	
Description	This is the location (node-card-span) of the primary connection.
Secondary Connection	
Description	This is the location (node-card-span) of the secondary connection.
T1 Clock Reference Candidacy	
Description	This field shows whether the link has been configured as a candidate for clock referencing. Use the [Modify T1 Link Setup] softkey to nominate a link or disqualify a current candidate.
See Also	See “Modifying a T1 link setup” on page 28-32.

Viewing or modifying T1 channels

Introduction

T1 channels are modified through the Modify T1 Channel Configuration screen.

Platform

Only MSM systems contain T1channels.

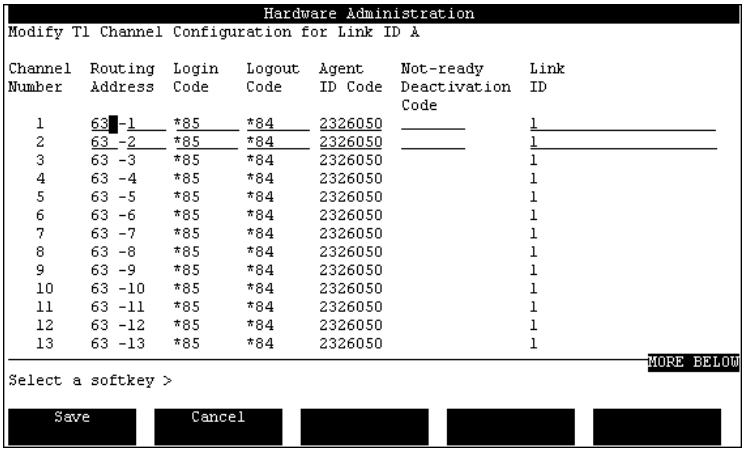
Procedure

To view or modify a T1 channel, follow these steps.

Starting Point: The Hardware Administration menu

Step	Action
1	If you are planning to modify any T1 channels, they must first be disabled using the softkeys available on the T1 Channel Status screen. For instructions on disabling T1 channels, see pages 29-99 to 29-101. After disabling the channels you wish to modify, return to the Hardware Administration menu and continue with step 2 in this procedure.
2	Select T1 Link Configuration. ***Result:*** The T1 Link Configuration screen appears.
3	Move the cursor to the T1 link you want to view or modify and press the space bar. ***Result:*** The T1 link is highlighted.

Step	Action
4	Press the [Modify T1 Chnl Configuration] softkey. ***Result:*** The Modify T1 Channel Configuration screen appears.



Disabled channels have an underline under all the modifiable fields.

5 If you are not intending to make changes, press the [Cancel] softkey when you are done to return to the T1 Link Configuration screen. Otherwise, continue with step 6.

6 Use the arrow keys to move the cursor to the disabled channels that you want to modify. Make the changes you require by typing over the current information, or deleting information as necessary. Only disabled channels can be modified.

7 Press [Save] to save the changes, or press [Cancel] to exit the screen without saving the changes.

Result: The T1 Link Configuration screen reappears.

8 Enable any T1 channels that you disabled as part of this procedure.

9 To implement the changes (if you saved the changes), follow the steps in the procedure “Implementing the saved T1 channel modifications” on page 28-27.

Implementing the saved T1 channel modifications

The T1 channel modifications are implemented automatically if you reboot the system.

To implement the T1 channel modifications without rebooting the system, follow these steps.

Step	Action
1	Select System Status and Maintenance from the Main Menu.
2	Select T1 Link Status.
3	Switch all “InService” T1 links using the [Switch Links] softkey.
4	Press [Exit]. ***Result:*** The System Status and Maintenance menu is displayed.
5	Select SMDI Link Status.
6	Switch all “InService” SMDI links using the [Switch Links] softkey.
7	Press [Exit]. ***Result:*** The System Status and Maintenance menu is displayed.
8	Select Node Status.
9	Press the [Disable Node] softkey. ***Result:*** You are prompted for a node number.
10	Enter the node number for the odd-numbered T1 node that was part of the T1 link that you modified. ***Result:*** The selected node is disabled. This may take a few minutes.
11	Press the [Enable Node] softkey. ***Result:*** You are prompted for a node number.
12	Enter the node number of the node you previously disabled. ***Result:*** The node is re-enabled. This may take a few minutes.
13	Repeat this procedure, selecting the even-numbered T1 node in steps 10 and 12. ***Result:*** When the node is re-enabled in step 12, you are done this procedure.

Field descriptions

The following fields appear on the Modify T1 Channel Configuration screen.

Channel Number	
Description	The number of the T1 channel.
Routing Address	
Description	The location of the corresponding agent in the switch. This is the Message Desk Number in the format xxx-yyyy, where xxx is the message desk number and yyyy is the terminal number.
Login Code	
Description	The channel access code for logging in to the UCD group. This field should be blank if the SMDI_AUTOLOG option has been configured as "Y" (yes) on the switch. When this field is left blank, the MSM inserts a default login code. If SMDI_AUTOLOG is configured as "N" on the switch, ensure that the code displayed here matches the code configured on the switch. See your switch administrator for details.
Logout Code	
Description	The channel access code for logging out of the UCD group. This field should be blank if the SMDI_AUTOLOG option has been configured as "Y" (yes) on the switch. When this field is left blank, the MSM inserts a default login code. If SMDI_AUTOLOG is configured as "N" on the switch, ensure that the code displayed here matches the code configured on the switch. See your switch administrator for details.

Agent ID Code	
Description	This number must match the line number (SMDI_LINE_NO on the switch) of the UCD agent that is configured on the switch. On the switch, the SMDI_LINE_NO can be configured through the servord or through the Table IBNFEAT by entering the SMDI option.
Not-ready Deactivation Code	
Description	This field is not applicable here and should be left blank.
Link ID	
Description	The Link ID of the SMDI link associated with the T1 channel.

Reference

For more details on some of the fields on the Modify T1 Channel Configuration screen, refer to the *MSM Translations Guide* (NTP 557-7001-310).

Viewing or modifying a T1 link setup

Introduction

A T1 link setup can be viewed or modified through the Modify T1 Link Setup screen.

You can modify the T1 clock reference candidacy of a link, the T1 line code format, or the T1 debounce time.

You can also nominate one or more links to serve as the clock reference for the system. An external device in the network (the switch, for example) can serve as the reference provider. The actual link that is used is defined in the T1 Link Status screen (see Chapter 29, “System status and maintenance”).

Private customer installation

In a private customer installation, the MSM typically does not use a clock. In this situation, you have to put the system in free run mode. When you put your system in free run mode, the channel banks terminating equipment must also derive its timing reference from the MSM.

Situations that cause the reference provider to change

If any problems occur on the link that is the current clock reference, or if maintenance procedures are being performed on the link or the card, the system will automatically select one of the other nominated links as the new reference. The system will also generate a SEER to indicate that a link has been activated as the reference provider.

In summary, the following situations will cause the system to select another reference provider:

- A red alarm is detected.
- A yellow alarm is detected.
- There is a hardware fault.
- The T1 card on which the link resides is disabled.
- The T1 node on which the link resides is disabled.
- The switch T1 link command is issued.
- The T1 link that is the clock reference is disabled.

Procedures

To view a T1 link setup, see “Viewing a T1 link setup” on page 28-31.

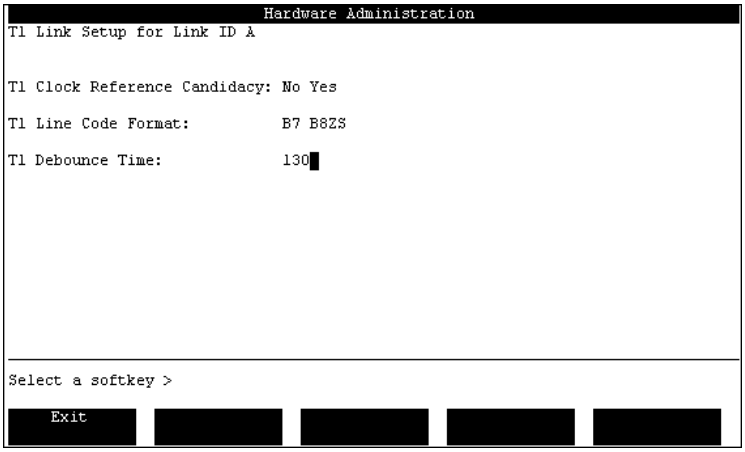
To modify a T1 link setup, see “Modifying a T1 link setup” on page 28-32.

Viewing a T1 link setup

To view a T1 link setup, follow these steps.

Starting Point: The Hardware Administration menu

Step	Action
1	Select T1 Link Configuration. ***Result:*** The T1 Link Configuration screen appears.
2	Move the cursor to the T1 link you want to view and press the space bar. ***Result:*** The T1 link is highlighted.
3	Press the [Modify T1 Link Setup] softkey. ***Result:*** The Modify T1 Link Setup screen appears.



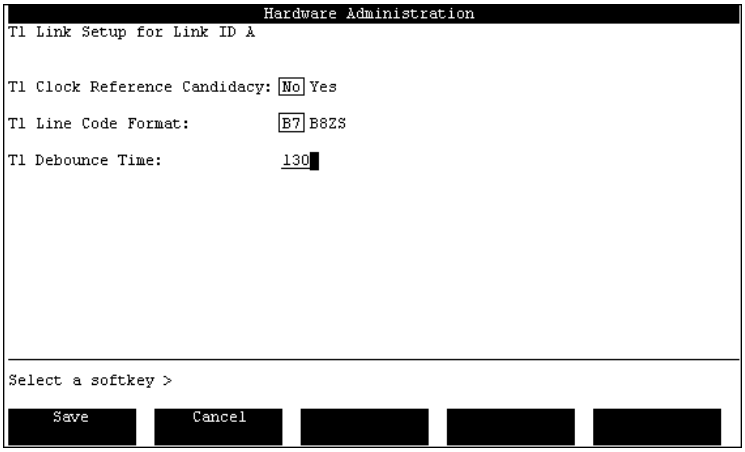
4	Press [Exit] to return to the T1 Link Configuration screen.

Modifying a T1 link setup

Before a T1 link setup can be modified, both the primary and secondary connections for the T1 link must be disabled. Follow the steps listed here to disable a T1 link and then modify the T1 link setup.

Step	Action
1	Select System Status and Maintenance from the Main Menu.
2	Select T1 Link Status.
3	Press the [Disable T1] softkey. ***Result:*** You are prompted for the T1 number of the link you want to disable.
4	Enter the Primary T1 Number for the T1 link for which the setup must be modified. ***Result:*** The T1 connection is disabled.
5	Press the [Disable T1] softkey. ***Result:*** You are prompted for the T1 number of the link you want to disable.
6	Enter the Redundant T1 Number for the T1 link for which the setup must be modified. ***Result:*** The T1 connection is disabled.
7	To disable more T1 links, repeat steps 3 to 6. Otherwise, continue with step 8.
8	Press [Exit]. ***Result:*** The System Status and Maintenance menu is displayed.
9	Press [Exit]. ***Result:*** The Main Menu is displayed.
10	Select Hardware Administration. ***Result:*** The Hardware Administration menu is displayed.
11	Select T1 Link Configuration. ***Result:*** The T1 Link Configuration screen appears.
12	Move the cursor to the T1 link you want to modify and press the space bar. ***Result:*** The T1 link is highlighted.

Step	Action
13	Press the [Modify T1 Link Setup] softkey. ***Result:*** The Modify T1 Link Setup screen appears.



Note: The box around some of the values indicates the selected option for this example.

14 In the T1 Clock Reference Candidacy field, select Yes or No as follows:

a. Select Yes to nominate a link.

b. Select No to disqualify a link.

15 Change the other fields as required.

16 Press [Save] to save the changes, or press [Cancel] to exit the screen without saving the changes.

Result: The T1 Link Configuration screen reappears.

17 Return to the System Status and Maintenance menu and the T1 Link Status screen and re-enable any links you disabled.

If necessary, activate one of the candidates as the clock reference using the [Change T1 Clocking Mode] softkey in the T1 Link Status screen.

Reference

For more details on the System Status and Maintenance functions, see Chapter 29, “System status and maintenance”.

Field descriptions

The following fields appear on the Modify T1 Link Setup screen.

T1 Clock Reference Candidacy	
Description	This field shows whether the link has been configured as a candidate for clock referencing.
T1 Line Code Format	
Description	This is the T1 Line Code format in the T1 link.
T1 Debounce Time	
Description	This is the amount of time in microseconds that the system will wait for a T1 span to be cleared of noise after a T1 signal is sent.
Range	0 to 512
Default	130
Description	This field is not applicable here and should be left blank.

Section C Viewing the data port configuration

In this section

Overview

Introduction

The Data Port Configuration screen summarizes the data ports on all nodes in your system. From this screen, you can select and view data port configurations for devices that are part of your system.

For Networking systems, the modem port settings can be modified through these screens. To modify any other data port (except AML/CSL), use "Modify hardware" at the Tools level. See *System Administration Tools* (NTP 555-7001-305).

Cumulative baud rate

On a Modular GP system, the cumulative baud rate of ACCESS links and AdminPlus data ports on a node cannot exceed 19 200 on node 1, 38 400 on other nodes.

On an MSM system, the cumulative baud rate cannot exceed 9600 for ACCESS links and AdminPlus data ports on any node.

Recommended data port uses for Modular GP systems

The following table describes the recommended data port uses for Modular GP systems.

Port	Allowable uses
Node 1, MMP40 port 1: DP1	System console
Node 1, MMP40 port 2: DP2	SMDI
Node 1, RSM port 1: DP3	Network Modem, SMDI, GAC, MAT, Printer, ACCESS/ AdminPlus
Node 1, RSM port 2: DP4	Network Modem, SMDI, GAC, MAT, Printer, ACCESS/AdminPlus
Node 1, RSM port 3: DP5	Network Modem, SMDI, PMSI Link to PMS, GAC, MAT, Printer, ACCESS/ AdminPlus
Node 1 RSM port 4: DP6	Network Modem, SMDI, PMSI Link to SL-1, GAC, MAT, Printer, ACCESS/ AdminPlus
Node 2, MMP40 port 1: DP7	SMDI, GAC, MAT, Printer, ACCESS/ AdminPlus
Node 2, MMP40 port 2: DP8	ACCESS/AdminPlus, Maintenance
Node 2, RSM port 1: DP9	Network Modem, SMDI, GAC, MAT, Printer
Node 2, RSM port 2: DP10	Network Modem, SMDI, GAC, MAT, Printer
Node 2, RSM port 3: DP11	Network Modem, SMDI, GAC, MAT, Printer
Node 2, RSM port 4: DP12	Network Modem, SMDI, GAC, MAT, Printer
Node 3, MMP40 port 1: DP13	SMDI, GAC, MAT, Printer, ACCESS/ AdminPlus
Node 3, MMP40 port 2: DP 14	ACCESS/ AdminPlus, Maintenance
Node 3, RSM port 1: DP 15	Network Modem, SMDI, GAC, MAT, Printer

Port	Allowable uses
Node 3, RSM port 2: DP16	Network Modem, SMDI, GAC, MAT, Printer
Node 3, RSM port 3: DP 17	Network Modem, SMDI, GAC, MAT, Printer
Node 3, RSM port 4: DP 18	Network Modem, SMDI, GAC, MAT, Printer
Node 4, MMP40 port 1: DP 19	SMDI, GAC, MAT, Printer, ACCESS/ AdminPlus
Node 4, MMP40 port 2: DP 20	ACCESS/AdminPlus, Maintenance
Node 4, RSM port 1: DP21	Network Modem, SMDI, GAC, MAT, Printer
Node 4, RSM port 2: DP 22	Network Modem, SMDI, GAC, MAT, Printer
Node 4, RSM port 3: DP 23	Network Modem, SMDI, GAC, MAT, Printer
Node 4, RSM port 4: DP 24	Network Modem, SMDI, GAC, MAT, Printer
Node 5, MMP40 port 1: DP 25	SMDI, GAC, MAT, Printer, ACCESS/ AdminPlus
Node 5, MMP40 port 2: DP26	ACCESS/AdminPlus, Maintenance
Node 5, RSM port 1: DP 27	Network Modem, SMDI, GAC, MAT, Printer
Node 5, RSM port 2: DP 28	Network Modem, SMDI, GAC, MAT, Printer
Node 5, RSM port 3: DP 29	Network Modem, SMDI, GAC, MAT, Printer
Node 5, RSM port 4: DP 30	Network Modem, SMDI, GAC, MAT, Printer

Recommended data port uses for MSM systems

The following table describes the recommended data port uses for MSM systems.

Node	Port	Port type	Allowable uses
1 (MSP 1)	1	20 ma	Console (note 1)
1 (MSP 1)	2	Modem	Remote Access
1 (MSP 1)	3	20 ma	Printer
1 (MSP 1)	4	20 ma	MAT (note 2)
2 (MSP 2)	1	20 ma	Console (note 1)
2 (MSP 2)	2	Modem	Remote Access
2 (MSP 2)	3	20 ma	
2 (MSP 2)	4	20 ma	MAT (note 2)
3 (SPN 1)	1	RS-232-C	Network, ACCESS/AdminPlus (note 3)
3 (SPN 1)	2	RS-232-C	Network, ACCESS/AdminPlus
3 (SPN 1)	3	RS-232-C	Network, ACCESS/AdminPlus
3 (SPN 1)	4	RS-232-C	Network, ACCESS/AdminPlus
4 (SPN 2)	1	RS-232-C	Network, ACCESS/AdminPlus
4 (SPN 2)	2	RS-232-C	Network, ACCESS/AdminPlus
4 (SPN 2)	3	RS-232-C	Network, ACCESS/AdminPlus
4 (SPN 2)	4	RS-232-C	Network, ACCESS/AdminPlus
5 (SPN 3)	1	RS-232-C	Network, ACCESS/AdminPlus
5 (SPN 3)	2	RS-232-C	Network, ACCESS/AdminPlus
5 (SPN 3)	3	RS-232-C	Network, ACCESS/AdminPlus
5 (SPN 3)	4	RS-232-C	Network, ACCESS/AdminPlus
6 (SPN 4)	1	RS-232-C	Network, ACCESS/AdminPlus
6 (SPN 4)	2	RS-232-C	Network, ACCESS/AdminPlus
6 (SPN 4)	3	RS-232-C	Network, ACCESS/AdminPlus
6 (SPN 4)	4	RS-232-C	Network, ACCESS/AdminPlus

Node	Port	Port type	Allowable uses
7 (SPN 5)	1	RS-232-C	Network, ACCESS/AdminPlus
7 (SPN 5)	2	RS-232-C	Network, ACCESS/AdminPlus
7 (SPN 5)	3	RS-232-C	Network, ACCESS/AdminPlus
7 (SPN 5)	4	RS-232-C	Network, ACCESS/AdminPlus
8 (SPN 6)	1	RS-232-C	Network, ACCESS/AdminPlus
8 (SPN 6)	2	RS-232-C	Network, ACCESS/AdminPlus
8 (SPN 6)	3	RS-232-C	Network, ACCESS/AdminPlus
8 (SPN 6)	4	RS-232-C	Network, ACCESS/AdminPlus
9 (SPN 7)	1	RS-232-C	Network, ACCESS/AdminPlus
9 (SPN 7)	2	RS-232-C	Network, ACCESS/AdminPlus
9 (SPN 7)	3	RS-232-C	Network, ACCESS/AdminPlus
9 (SPN 7)	4	RS-232-C	Network, ACCESS/AdminPlus
10 (SPN 8)	1	RS-232-C	Network, ACCESS/AdminPlus
10 (SPN 8)	2	RS-232-C	Network, ACCESS/AdminPlus
10 (SPN 8)	3	RS-232-C	Network, ACCESS/AdminPlus
10 (SPN 8)	4	RS-232-C	Network, ACCESS/AdminPlus
13 (TIFN 1)	1	Modem	SMDI
13 (TIFN 1)	2	Modem	SMDI (note 4)
13 (TIFN 1)	3	Modem	SMDI (note 4)
13 (TIFN 1)	4	Modem	SMDI (note 4)
14 (TIFN 2)	1	Modem	SMDI or standby SMDI
14 (TIFN 2)	2	Modem	SMDI or standby SMDI (note 4)
14 (TIFN 2)	3	Modem	SMDI or standby SMDI (note 4)
14 (TIFN 2)	4	Modem	SMDI or standby SMDI (note 4)
15 (TIFN 3)	1	Modem	SMDI
15 (TIFN 3)	2	Modem	SMDI (note 4)
15 (TIFN 3)	3	Modem	SMDI (note 4)

Node	Port	Port type	Allowable uses
15 (TIFN 3)	4	Modem	SMDI (note 4)
16 (TIFN 4)	1	Modem	SMDI or standby SMDI
16 (TIFN 4)	2	Modem	SMDI or standby SMDI (note 4)
16 (TIFN 4)	3	Modem	SMDI or standby SMDI (note 4)
16 (TIFN 4)	4	Modem	SMDI or standby SMDI (note 4)

Note: A relay on the I/O panel switches the terminal to MSP2 port 1 if MSP1 fails.

Multiple administration terminals

Up to three Multiple Administration Terminals (MATs) can be assigned. In the case of local terminals, it is recommended that MSP1 data port 4 be assigned to the first MAT, MSP2 data port 4 be assigned to the second MAT, and SPN1 data port 4 be assigned to the third MAT. For remote user administration, MATs can instead be assigned to a modem data port on an SPN node.

Baud rate

The cumulative baud rate of ACCESS and AdminPlus dataports cannot exceed 9600 bps.

Multi-SMDI links

If the Multi-SMDI feature is enabled, additional SMDI ports can be assigned. The maximum number of SMDI ports supported by MSM is 16 (with no redundancy). The maximum number of SMDI links that you can have on your particular system is determined by the number of ports provisioned.

Example

An MSM provisioned with 48 ports could support 8 non-redundant SMDI links, or up to 4 redundant SMDI links. A system with 120 to 192 ports can have up to 8 redundant or 16 nonredundant SMDI links.

The Data Port Configuration screen

Introduction

The Data Port Configuration screen summarizes the data ports on all nodes in your system. You can select and view the data port configurations for only those devices that are part of your system.

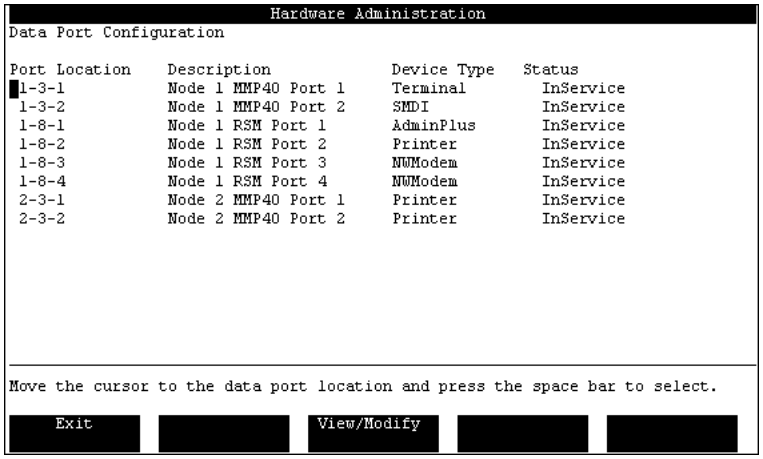
Accessing the Data Port Configuration screen

To view the Data Port Configuration screen, follow these steps.

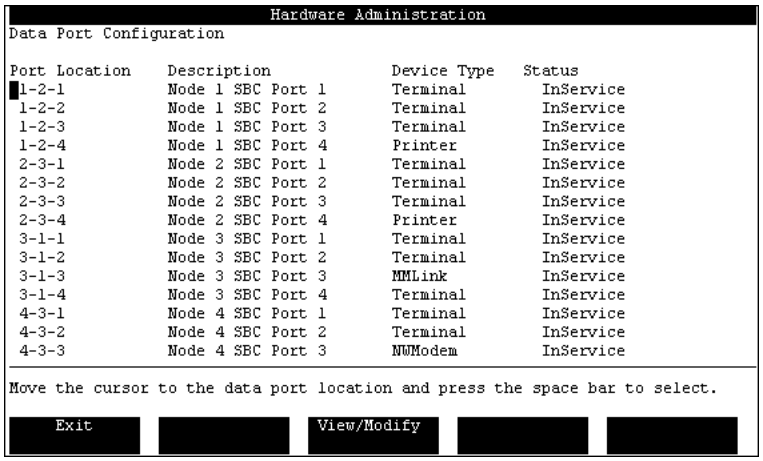
Step	Action
1	Select Hardware Administration from the Main Menu. ***Result:*** The Hardware Administration menu appears.
2	Select Data Port Configuration from the Hardware Administration menu. ***Result:*** The Data Port Configuration screen appears.

The screen

The following example is taken from a Modular GP system.



The following example is taken from an MSM system.



Field descriptions

The Data Port Configuration screen displays the following information

Port Location	
Description	This is the physical location of the port in the Meridian Mail system (node-card-port).
Description	
Description	This field identifies the node, card type and the port.
Device Type	
Description	This field identifies the function of the port.
Valid values	See the data port tables in the "Overview" on page 28-36.
Status	
Description	This field identifies the current operational state of the port.
Valid values	The status will be one of the following: **InService** The data port is operational. **OutOfService** The data port is no longer operational because the node has been disabled. **Faulty** The system has detected an error in the data port. **Unequipped** The data port has not been defined in the hardware database.

Viewing data ports

Introduction

This section describes the different data port screens that can be displayed. Depending on the device type that has been selected when you press View/Modify, the appropriate version of the View Data Port screen appears as follows:

- Terminal data ports (console or MAT)
- Printer data ports
- MMLink data ports
- NWModem data ports
- SMDI data ports
- AdminPlus data ports
- Modem data ports

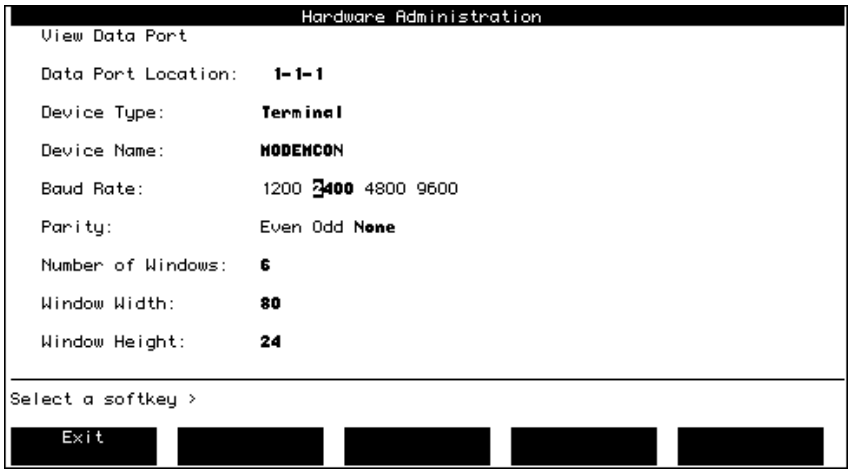
Procedure To view data ports, follow these steps.

Step	Action
1	Select “Hardware Administration” from the Main Menu. ***Result:*** The Hardware Administration menu appears.
2	Select Data Port Configuration from the Hardware Administration menu. ***Result:*** The Data Port Configuration screen appears.
3	Move the cursor to the port you want to view (or modify, if NWModem) and press <Space Bar>. ***Result:*** Your selection is highlighted.
4	Select [View/Modify] to view the configuration information for the highlighted port. ***Result:*** The View Node screen appears for the selected device. (If NWModem was selected, the Modify Data Port screen is displayed.) For further information, see the appropriate section for the selected device, as follows: “View Terminal data ports” on page 28-47 “View Data Port screen—MAT” on page 28-47 “View Printer data port” on page 28-50 “View MMLink data port” on page 28-52 “View/Modify NWModem data port” on page 28-54 “View SMDI data port” on page 28-56 “View AdminPlus data port” on page 28-58 “View Modem data port” on page 28-60
5	Select [Exit] to return to the Data Port Configuration screen when you have finished viewing the data port configuration. Select [Exit] again to return to the Hardware Administration screen. ***Result:*** The “Hardware Administration” screen is redisplayed.

View Terminal data ports

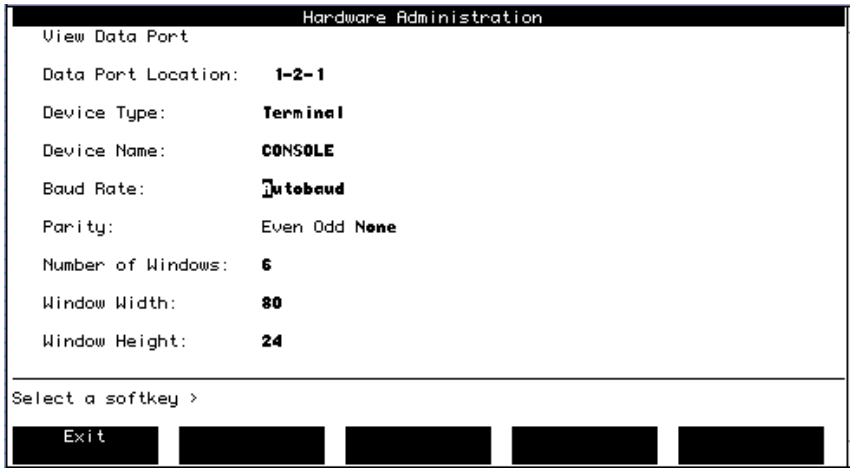
View Data Port screen—Console

The View Data Port screen for terminals (Console) allows you to view information about the terminal connected to the selected port.



View Data Port screen—MAT

The View Data Port screen for terminals (MAT) allows you to view information about the terminal connected to the selected port.



Field descriptions

The View Data Port (Terminal — Console or MAT) screens display the following read-only information about the terminals connected to the device type.

Data Port Location	
Description	This is the physical location of the port (node-card-port).
Valid entries	A terminal must be located on port 1 of node 1.
Device Type	
Description	This field describes the device type.
Valid entries	"Terminal" is displayed.
Device Name	
Description	This is the name that identifies the terminal. This name is assigned by the system when Meridian Mail is installed, or when the port is reconfigured using the Install/data tape. The Device Name for a terminal data port can also be modified later using the "Modify hardware" tool.
Baud Rate	
Description	The selected baud rate is highlighted.
Valid entries	The baud rate must be set to 2400.
Parity	
Description	This is the method by which data is communicated.
Valid entries	This can be set to Even, Odd, or None, depending on the current setup of the terminal connected to the port. It is usually set to None.

Number of Windows	
Description	This field specifies the number of windows that can be used simultaneously.
Valid entries	Set this field to 6 for the system administration terminal.
Window Width	
Description	This field specifies the window width used.
Valid entries	Set this field to 80 for the terminal.
Window Height	
Description	This field specifies the window height used.
Valid entries	Set this field to 24 for the terminal.

View Printer data port

Introduction

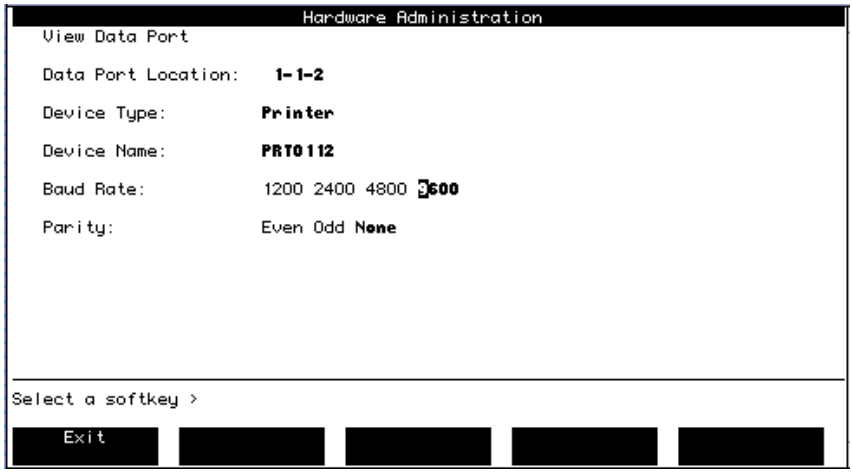
The View Data Port screen for printers allows you to view the baud rate and parity of the printer that is connected to the selected port.

A printer can be attached directly to the administration terminal. It does not require a separate data port.

SEERs and Operational Measurement reports can be directed to a particular printer. If you choose to do this, define the printer port using the "Modify hardware" tool. See *System Administration Tools* (NTP 555-7001-305). Once this has been done, specify the printer in the General Options screen. See Chapter 14, "General options".

View Data Port screen

This is the View Data Port screen for printer ports.



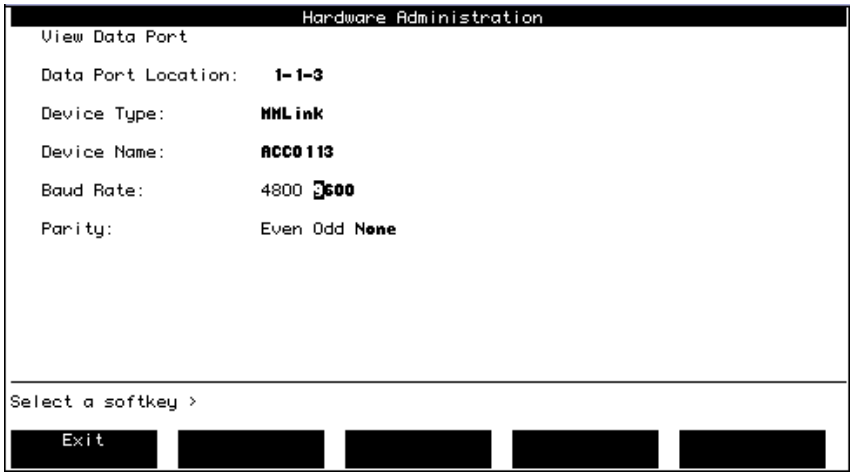
Field descriptions

The View Data Port (Printer) screen displays the following read-only information about the terminals connected to the device type.

Data Port Location	
Description	This is the physical location of the port (node-card-port).
Device Type	
Description	This field describes the device type.
Valid entries	"Printer" is displayed.
Device Name	
Description	This is the name that identifies the printer data port. This name is assigned by the system when Meridian Mail is installed, or when the port is reconfigured using Install/data tape or the "Modify hardware" tool.
Baud Rate	
Description	The selected baud rate is highlighted.
Valid entries	The setting will depend on the current setup of the printer connected to the port.
Parity	
Description	This is the method by which data is communicated.
Valid entries	The setting will depend on the current setup of the printer connected to the port.

View MMLink data port

View Data Port screen The View Data Port screen for Meridian ACCESS Link allows you to view the link characteristics.



Field descriptions The following read-only information is displayed on the screen.

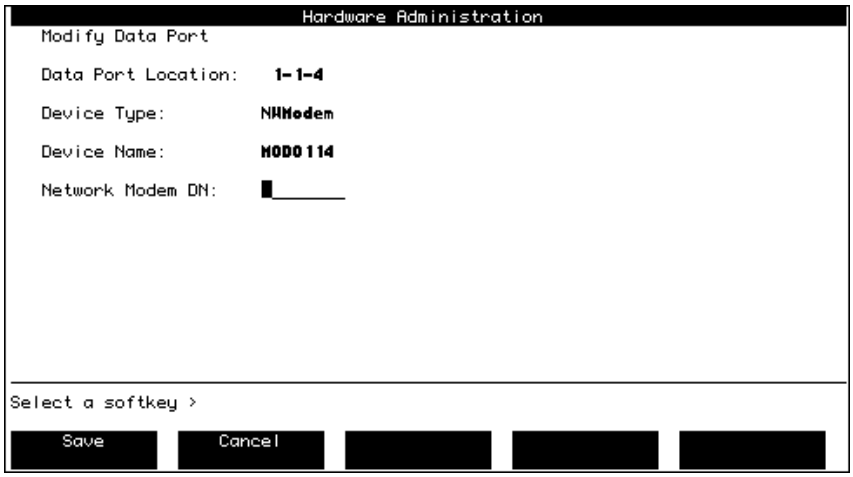
Data Port Location	
Description	This is the physical location of the port (node-card-port).
Device Type	
Description	This field describes the type of port.
Valid entries	This field is set to “MMLink.”
Device Name	
Description	This is the name of the device. This name is assigned by the system when Meridian Mail is installed, or when the port is reconfigured using the Install/data tape, or the “Modify hardware” tool.

Baud Rate	
Description	This field can be set to any rate for MMLink, subject to the cumulative baud rates specified for the system.
Valid entries	4800 and 9600 are the only available baud rates.
Parity	
Description	This is the method by which data is communicated.
Valid entries	This field is not used for MMLink.

View/Modify NWModem data port

Modify Data Port screen

The Modify Data Port screen for Networking modems allows you to view the NWModem data port information, and to specify the directory number (DN) of the modem connected to the selected port.



Field descriptions

The following fields are displayed on this screen. Only the Network Modem DN field is modifiable.

Data Port Location	
Description	This is the physical location of the port in the Meridian Mail system (node-card-port).

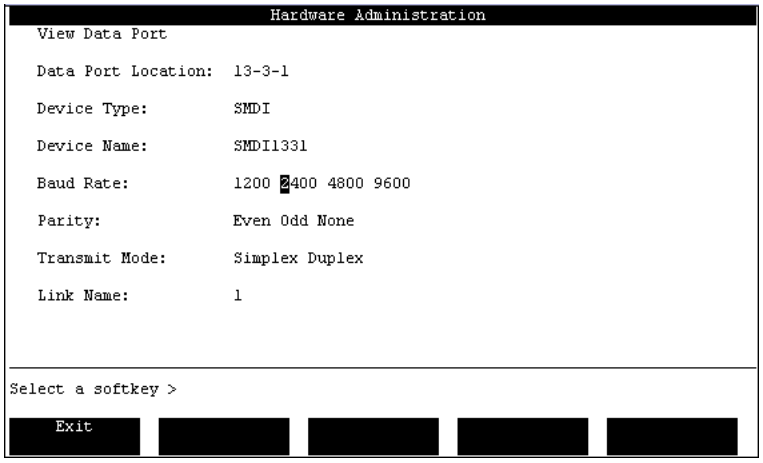
Device Type	
Description	This field describes the type of port.
Valid entries	This field is set to “NWModem.”

Device Name	
Description	This is the name of the device. This name is assigned by the system when Meridian Mail is installed, or when the port is reconfigured using the Install/data tape, or the “Modify hardware” tool.
Network Modem DN	
Description	This is the directory number (up to eight digits) used to identify the modem connected to the port.

View SMDI data port

View Data Port screen

The View Data Port screen for SMDI allows you to view the baud rate, parity, and transmit mode of the serial connection between Meridian Mail and the switch at the selected port.



Field descriptions

The following read-only information is displayed on the screen.

Data Port Location	
Description	This is the physical location of the port (node-card-port).
Device Type	
Description	This field describes the function of the port.
Valid entries	This field is set to “SMDI.”
Device Name	
Description	This is the name of the device. This name is assigned by the system when Meridian Mail is installed, or when the port is reconfigured using the Install/data tape, or the “Modify hardware” tool.

Baud Rate	
Description	This field should be set to 2400.
Parity	
Description	This should be set to Even.
Transmit Mode	
Description	This should be set to Duplex.
Link Name	
Description	The name of the link as defined during installation. This name should not be changed once users have been added to the system.

View AdminPlus data port

Introduction This screen is available only if AdminPlus is installed.

View Data Port screen The View Data Port for AdminPlus screen allows you to view the baud rate and parity of the serial connection to the Meridian Mail Reporter PC.

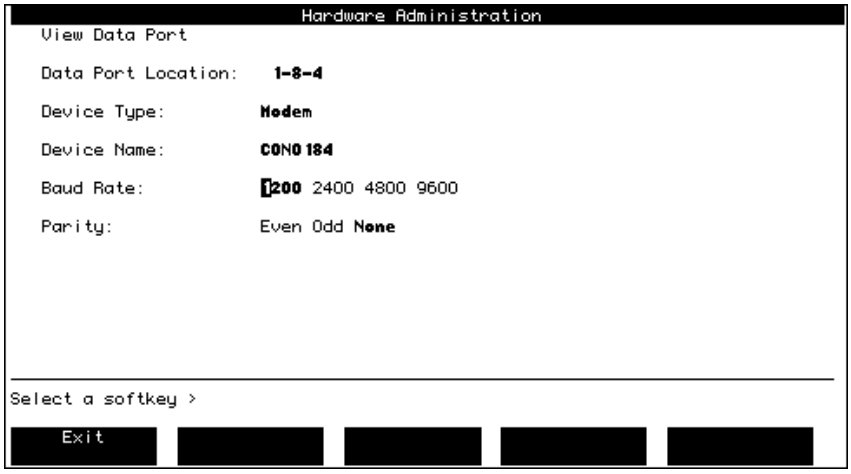
Field descriptions The following read-only fields are displayed on this screen.

Data Port Location	
Description	This is the physical location of the port in the system (node-card-port).
Device Type	
Description	This field describes the type of port.
Valid entries	This field is set to “AdminPlus.”
Device Name	
Description	This is the name of the device. This name is assigned by the system when Meridian Mail is installed, or when the port is reconfigured using the Install/data tape.

Baud Rate	
Description	The selected baud rate is highlighted.
Valid entries	The baud rate should be set to 2400, 4800, or 9600, subject to the cumulative baud rate restrictions for MMLink and AdminPlus data ports on a node. See “Cumulative baud rate” on page 28-36.
Parity	
Description	This is the method by which data is communicated.
Valid entries	This field must be set to None.

View Modem data port

View Data Port screen The View Data Port for Modems screen allows you to view the modem characteristics.



Field descriptions The following read-only fields are displayed on this screen.

Data Port Location	
Description	This is the physical location of the port in the system (node-card-port).

Device Type	
Description	This field describes the type of port.
Valid entries	This field is set to Modem.

Device Name	
Description	This is the name of the device. This name is assigned by the system when Meridian Mail is installed, or when the port is reconfigured using the Install/data tape.

Baud Rate	
Description	The selected baud rate is highlighted.
Valid entries	The setting depends on the current setup of the modem connected to the port.
Parity	
Description	This is the method by which data is communicated.
Valid entries	The setting depends on the current setup of the modem connected to the port.

Section D Printing node and data port information

In this section

Overview

Introduction

The Hardware Administration menu can be used to print the following information for your system:

- node configuration
- data port configuration

Printing node and data port information

Introduction

Node and data port information can be printed through the Hardware Administration menu.

Procedure

To print node and data port information, follow these steps.

Step	Action
1	Select “Hardware Administration” from the Main Menu. ***Result:*** The Hardware Administration menu appears.
2	Choose either “Print All Node Information” or “Print All Data Port Information” and press <Return>. ***Result:*** The following softkeys appear: [Continue Printing] and [Cancel Printing].You are prompted to check that the printer is ready and online.
3	Press [Continue Printing] to print the information. ***Result:*** The node or data port information begins printing. Once printing is complete, the Hardware Administration menu is redisplayed. You may stop printing at any time by selecting [Cancel Printing].
4	Use [Cancel Printing] to cancel printing and return to the Hardware Administration menu. ***Result:*** Printing stops and the Hardware Administration menu is displayed. There may be some delay before control is returned to the screen while the system waits for the printer to stop printing.

Chapter 29

System status and maintenance

In this chapter

Overview

Introduction

The System Status and Maintenance functions are used in the course of routine maintenance, and allow you to take any component of the system out of service for maintenance. It also allows you to perform diagnostics on selected components and schedule regular diagnostic activities.

A component can be taken out of service by disabling it (forcing it out of its operational state), or by performing a courtesy disable, which progressively disables active DSP ports as they become idle. The Courtesy Disable function available within System Status and Maintenance avoids any disruption of calls in progress.

Administration level

The System Status and Maintenance screens are accessed from the System Administration level.

T1 links

T1 links are not part of Modular GP systems. Any references to T1 links or T1 channels apply to MSM systems only.

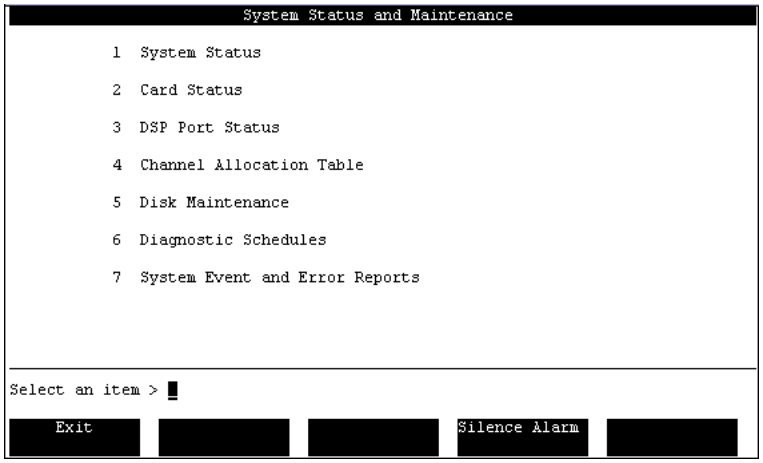
See Also

For help in developing a regular maintenance routine that includes System Status and Maintenance functions, see Chapter 19, “Routine maintenance”.

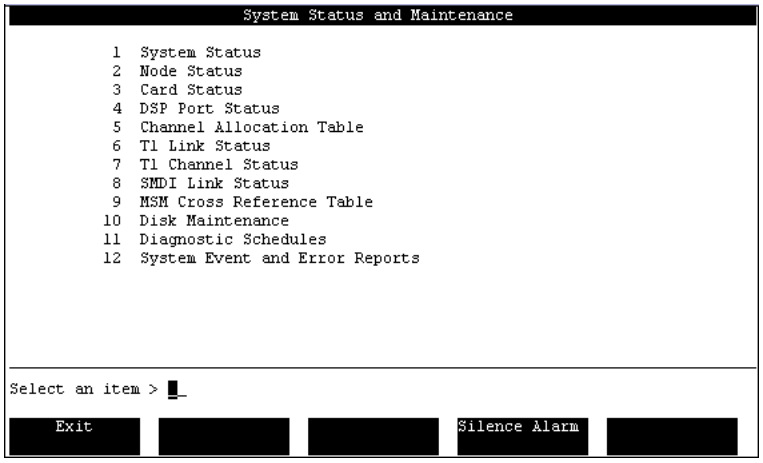
What is system status and maintenance?

System Status and Maintenance menu

When you select System Status and Maintenance from the Main Menu, this menu is displayed on Modular GP systems.



On MSM systems, the following menu is displayed.



Types of tasks

A variety of tasks can be performed from this menu. The types of tasks are as follows.

System courtesy down

Take this action for broad maintenance activities, such as reconfiguring the DMS family or SL-100, which requires powering down Meridian Mail.

Courtesy disable ports or (forced) disable nodes

Take this action to disable all ports on a node. This is necessary to put certain cards out of service (such as the MMP40 or SBC card) if they need to be replaced or if diagnostics need to be run.

Card disable

Take this action before performing diagnostics on an in-service card.

Courtesy disable or (forced) disable of DSP ports

Take this action before performing tests on a DSP port.

Channel Allocation Table modification

When you move agents from one queue to another (in order to dedicate them to a particular service), you must also modify the Channel Allocation Table to show this change.

Disable T1 links (for MSM only)

You must disable T1 links before modifying the T1 link setup.

Switch Links (for MSM only)

You must switch links as part of the procedure to implement changes to the Modify T1 Channel Configuration screen.

Disk maintenance

This selection allows you to disable or re-enable Disk Shadowing. You can also view the state of disks and run disk diagnostics.

Schedule diagnostic activities

This action provides a means of scheduling voice path and bus controller diagnostics for a Meridian Mail system.

System Events and Error Reports

This allows you to set various System Error and Event Reporting options. For details, see Chapter 30, “SEERs and Meridian Mail Alarms”.

Section A System Status

In this section

Overview

Introduction

The System Status screen allows you to view the operational status of the system and courtesy disable the system. On a Modular GP system, you can also disable nodes or courtesy disable ports from the System Status screen.

This screen is identical to the System Status screen displayed from the Logon screen, except that this screen provides softkeys for performing maintenance functions.

When to use this feature

The System Status functions can be used to

- check the status of your system if you suspect that your system is not performing properly
- disable the system to perform routine maintenance or diagnostics
- on a Modular GP system, you can also disable a node or DSP ports in order to put a faulty card out of service, or to perform routine maintenance or diagnostics

Note: On an MSM system, nodes and DSP ports are disabled through the Node Status screen. See “Disabling/enabling nodes” on page 29-26.

System not performing properly

You may suspect a problem in your system if

- callers are unable to get through to users’ mailboxes to leave a message
- users are unable to access Meridian Mail (phone rings, but Meridian Mail never picks up)
- the call must ring several times before the call is transferred to Meridian Mail

The above scenarios suggest that one of the following may be true:

- not enough channels are idle to handle the current demand
- parts of the system are faulty (the SMDI link, a node, or DSP port, for example)

Checking system status

Check the System Status screen to determine if callers or users are unable to get through to Meridian Mail because all channels are busy (active), or because parts of the system are faulty or disabled.

The System Status screen (for GP systems)

Introduction

This section describes the System Status screen.

The System Status screen that you access from the System Status and Maintenance menu provides the following functions:

- Enable Node (see “Disabling/enabling nodes” on page 29-26)
- Disable Node (see “Disabling/enabling nodes” on page 29-26)
- Courtesy Disable Ports (see “Courtesy disabling/enabling ports” on page 29-28)
- Courtesy Down System/Activate System (see “Disabling/activating the system (“Courtesy Down”)” on page 29-24)

Note: Enable Node, Disable Node, and Courtesy Disable Ports softkeys do not appear on single node systems.

How to reach the screen—two ways

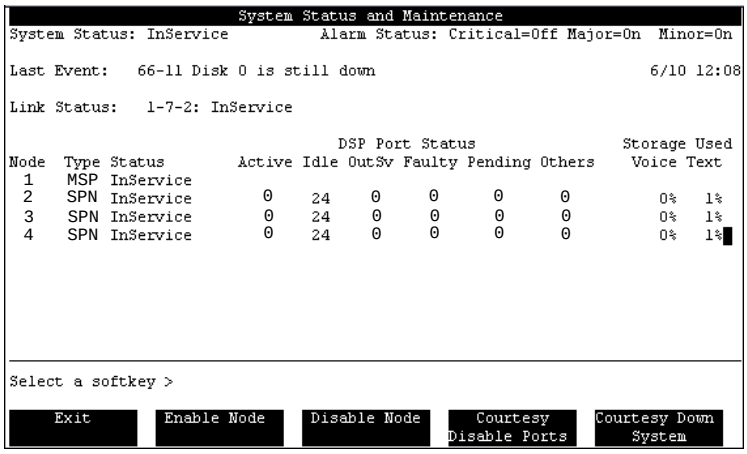
There are two ways to reach two different versions of the System Status screen: from the Main Menu and from the Logon/Status screen.

From the Main Menu

To reach the System Status screen from the Main Menu, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select System Status. ***Result:*** The System Status screen is displayed.

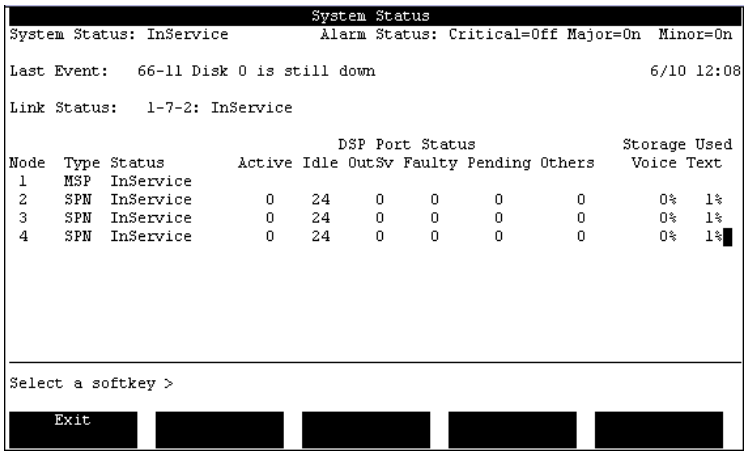


From the Logon/Status screen

To reach an abbreviated version of the System Status Screen from the Logon/Status screen, follow these steps.

Starting Point: The Logon/Status screen

Step	Action
1	Press the [System Status] softkey. ***Result:*** The System Status screen is displayed.



Note: You will not be able to access the maintenance softkeys from this version of the screen.

Field descriptions

The following fields appear on the System Status screen.

System Status	
Description	This field displays the current system status.
Possible status types	There are four possible status types. **InService** This indicates the system is running. **CourtesyPending** This indicates that the system is in the process of shutting down. This appears after using the [Courtesy Down System] softkey. Incoming calls are directed to an attendant. Calls in progress are not interrupted. Each DSP port is courtesy disabled as it becomes idle. The software remains loaded. **CourtesyDown** This indicates that the system has shut down and is no longer operational or accepting calls, but the software remains loaded. When the system is down, the [Courtesy Down System] softkey becomes [Activate System]. When the [Activate System] softkey is used, the system restarts. **Loading** This indicates the system is loading software during bootup.

Alarm Status	
Description	This indicates the state of each of the types of alarms described below.
Alarm types	There are three possible alarm types. **Critical** These alarms indicate a service-affecting problem that requires immediate attention. **Major** These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. **Minor** These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 30, “SEERs and Meridian Mail Alarms”.
Alarm states	Each alarm type can be in one of the following states. **Off** This state indicates that there are no new alarms. This does not necessarily mean that there are no error conditions. **On** This status indicates that one or more alarm situations were detected. **Unk** This indicates that the status is unknown.
Last Event	
Description	This is the most recent system event or error report (SEER) logged.
Link Status	
Description	This is the state of the SMDI link to the DMS family or SL-100.
Link states	The link can be in one of the following states: **InService** This indicates that the link is operational. **Faulty** This state indicates that a hardware problem exists but that the data port remains operational.

Node	
Description	This is the node number.
Type	
Description	This is the type of node.
Status	
Description	This is the status of the nodes in your system. ***Note:*** The status at this level does not indicate the status of a given card on the node. For information on cards, see "The Card Status screen" on page 29-33.
Node states	**InService** This state indicates that the node is operational. **Unequipped** This indicates that the node has not been defined in the hardware database. Refer to *System Administration Tools* (NTP 555-7001-305) for instructions on modifying the hardware database. **Faulty** This indicates that a hardware problem was detected or a critical program on the node is not operational. **OutOfService** This indicates that the node is no longer operational as a result of a forced disable. **Loading** This state indicates that the node is currently starting up and loading software into memory. **ShuttingDown** This state indicates that the node is being put out of service. **Booting** This indicates that the operating system is being loaded on the node.

DSP Port Status	
Description	These fields reflect the state of each DSP port on the associated node. For each DSP port that is in a particular state, an entry is made in the appropriate column.
DSP States	A DSP port may be in one of the following states. **Active** This indicates that the DSP port is operational and is currently in use. **Idle** This indicates that the DSP port is operational but not in use at the moment. The DSP port is ready to accept calls. **OutSv** This state indicates that the associated DSP port is not operational, as a result of a courtesy disable or forced disable. **Faulty** This state indicates that an error has been detected in the DSP port. **Pending** This state indicates that there has been a request to either shut down or restart the DSP port. The port is in the process of either shutting down or restarting. **Others** This state indicates that the DSP port is temporarily unavailable. This usually occurs while the system is booting up. The status remains as "Others" while the software is loading. Once fully loaded, the status becomes "Active" or "Idle." The status may also appear as "Others" when you reenable a port (for as long as the necessary software is loading). The status returns to "Idle" once the port has been enabled.

Storage Used	
Description	These fields indicate the amount of voice and text storage used as a percentage of available storage on the user volume of this node. (If the disk on a node is bad, percentages are not displayed.)

The System Status screen (for MSM systems)

Introduction

This section describes the System Status screen.

For the Courtesy Down procedure, see “Disabling/activating the system (“Courtesy Down”)” on page 29-24.

How to reach the screen—two ways

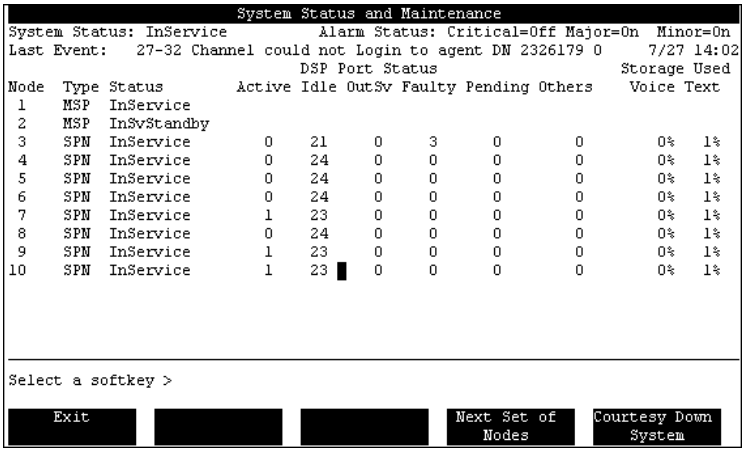
There are two ways to reach two different versions of the System Status screen: from the Main Menu and from the Logon/Status screen.

From the Main Menu

To reach the System Status screen from the Main Menu, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select System Status. ***Result:*** The System Status screen is displayed.



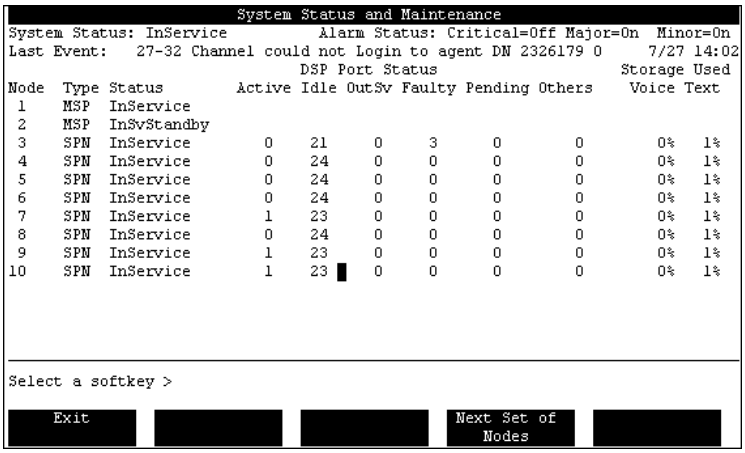
Note: Press the [Next Set of Nodes] softkey to view the next screen.

From the Logon/Status screen

To reach an abbreviated version of the System Status Screen from the Logon/Status screen, follow these steps.

Starting Point: The Logon/Status screen

Step	Action
1	Press the [System Status] softkey. ***Result:*** The System Status screen is displayed.



Note: Press the [Next Set of Nodes] softkey to view the next screen.

Field descriptions

The following fields appear on the System Status screen.

System Status	
Description	This field displays the current system status.
Possible status types	There are four possible status types. **InService** This indicates the system is running. **CourtesyPending** This indicates that the system is in the process of shutting down. This appears after using the [Courtesy Down System] softkey. Incoming calls are directed to an attendant. Calls in progress are not interrupted. Each DSP port is courtesy disabled as it becomes idle. The software remains loaded. **CourtesyDown** This indicates that the system has shut down and is no longer operational or accepting calls, but the software remains loaded. When the system is down, the [Courtesy Down System] softkey becomes [Activate System]. When the [Activate System] softkey is used, the system restarts. **Loading** This indicates the system is loading software during bootup.

Alarm Status	
Description	This indicates the state of each of the types of alarms described below.
Alarm types	There are three possible alarm types. **Critical** These alarms indicate a service-affecting problem that requires immediate attention. **Major** These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. **Minor** These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 30, “SEERs and Meridian Mail Alarms”.
Alarm states	Each alarm type can be in one of the following states. **Off** This state indicates that there are no new alarms. This does not necessarily mean that there are no error conditions. **On** This status indicates that one or more alarm situations were detected. **Unk** This indicates that the status is unknown.
Last Event	
Description	This is the most recent system event or error report (SEER) logged.
Node	
Description	This is the node number.
Type	
Description	This is the type of node.

Status	
Description	This is the status of the nodes in your system. ***Note:*** The status at this level does not indicate the status of a given card on the node. For information on cards, see "The Card Status screen" on page 29-33.
Node states	**InService** This state indicates that the node is operational. **Unequipped** This indicates that the node has not been defined in the hardware database. Refer to *System Administration Tools* (NTP 555-7001-305) for instructions on modifying the hardware database. **Faulty** This indicates that a hardware problem was detected or a critical program on the node is not operational. **OutOfService** This indicates that the node is no longer operational as a result of a forced disable. **Loading** This state indicates that the node is currently starting up and loading software into memory. **ShuttingDown** This state indicates that the node is being put out of service. **Booting** This indicates that the operating system is being loaded on the node.

DSP Port Status	
Description	These fields reflect the state of each DSP port on the associated node. For each DSP port that is in a particular state, an entry is made in the appropriate column.
DSP States	A DSP port may be in one of the following states. **Active** This indicates that the DSP port is operational and is currently in use. **Idle** This indicates that the DSP port is operational but not in use at the moment. The DSP port is ready to accept calls. **OutSv** This state indicates that the associated DSP port is not operational, as a result of a courtesy disable or forced disable. **Faulty** This state indicates that an error has been detected in the DSP port. **Pending** This state indicates that there has been a request to either shut down or restart the DSP port. The port is in the process of either shutting down or restarting. **Others** This state indicates that the DSP port is temporarily unavailable. This usually occurs while the system is booting up. The status remains as "Others" while the software is loading. Once fully loaded, the status becomes "Active" or "Idle." The status may also appear as "Others" when you reenable a port (for as long as the necessary software is loading). The status returns to "Idle" once the port has been enabled.
Storage Used	
Description	These fields indicate the amount of voice and text storage used as a percentage of available storage on the user volume of this node. (If the disk on a node is bad, percentages are not displayed.)

Disabling/activating the system (“Courtesy Down”)

Introduction

Use Courtesy Down for broad maintenance activities, such as reconfiguring the DMS family or SL-100, which requires powering down Meridian Mail.

During a Courtesy Down, incoming calls are directed to an attendant. Calls in progress are not interrupted. Each DSP port is courtesy disabled as it becomes idle. The software remains loaded. This prevents Meridian Mail users from being suddenly disconnected from their voicemail session.

Procedure

These steps describe how to Courtesy Down the Meridian Mail system, and reenable the system after a Courtesy Down.

Starting Point: The System Status screen

Step	Action
1	Press [Courtesy Down System]. ***Result:*** You are prompted as to whether you want to Courtesy Down the system.
2	Press the up arrow until **Yes** appears as the response and press return. ***Result:*** The [Activate System] softkey replaces the [Courtesy Down System] softkey. It may take some time to disable the system since all active DSP ports on all nodes must first become idle.
3	After the system reaches CourtesyDown state, are all DSP ports now in the “OutSv” or “Others” columns? • If yes, go to step 4. • If no, disable the DSP ports manually according to the steps in “Disabling/enabling DSP ports in single mode” on page 29-53 or “Disabling/enabling DSP ports in range mode” on page 29-55, then go to step 4.

Step	Action
4	Perform the required maintenance activities.
5	Reenable the system by pressing [Activate System]. ***Note:*** The system can be reenabled at any time during the Courtesy Down process.
6	After the system returns to “InService” status, are all DSP ports either Idle or Active? • If all DSP ports are Idle or Active, press [Exit]. • If some DSP ports are in the OutSv or Others columns, reenable the DSP ports manually according to the steps in “Disabling/enabling DSP ports in single mode” on page 29-53 or “Disabling/enabling DSP ports in range mode” on page 29-55, then press [Exit].

Disabling/enabling nodes

Introduction

Take this action to disable all ports on a node. This is necessary in order to put certain cards out of service (such as the MMP40 or SBC card) if they need to be replaced or if diagnostics need to be run.

Note 1: You cannot disable an MSP node.

Note 2: This function is not available on single node systems.

Tip

Once the node is disabled, you can reactivate the system while the node is disabled. This will allow Meridian Mail to remain operational for users on the other nodes while you are working on the disabled node.

Procedure

Starting Point: The System Status screen

Step	Action
1	Is the node currently disabled? • If no, go to step 2. • If yes, go to step 6.
2	Courtesy Down the system. See “Disabling/activating the system (“Courtesy Down”)” on page 29-24.
3	If you are on an MSM system, return to the System Status and Maintenance menu and select Node Status. If you are on a Modular GP system, stay at the System Status screen and go to step 4. ***Result:*** If you are on an MSM system and you selected Node Status, the following screen is displayed.

```
                        System Status and Maintenance
Node Status

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

Type     Node  Status              Paired Node  Status
 MSP        1  InService                     2  InSvStandby
 SPN        3  InService                     4  InService
 SPN        5  InService                     6  InService
 SPN        7  InService                     8  InService
 SPN        9  InService                    10  InService
 TIFN      13  InService                    14  InSvStandby
 TIFN      15  InService                    16  InSvStandby

Select a softkey > _

 Exit | Enable Node | Disable Node | Courtesy Disable Ports |
```

4	Press the [Disable Node] softkey. ***Result:*** You are prompted for the node number.
5	Enter the node number followed by <Return>. ***Result:*** The node status changes to “OutOfService.”
6	Perform any required maintenance activities.
7	Press [Enable Node]. ***Result:*** You are prompted for the node number.
8	Enter the node number followed by <Return>. ***Result:*** The node status changes to “InService.”

Courtesy disabling/enabling ports

Introduction

On a Modular GP system, the [Courtesy Disable Ports] softkey is accessible from the System Status screen. On an MSM system, the [Courtesy Disable Ports] softkey is accessible from the Node Status screen.

When you courtesy disable ports, incoming calls on a particular node are directed to an attendant. Calls in progress are not interrupted. Each DSP port is courtesy disabled as it becomes idle. The software remains loaded. This prevents Meridian Mail users from being suddenly disconnected from their voicemail session.

Take this action to courtesy disable all ports on a node. This is necessary in order to put certain cards out of service if they need to be replaced or if diagnostics need to be run.

Note: This function is not available on single node systems.

Procedure

Starting Point: The System Status screen for GP systems, or the Node Status screen for MSM systems

Step	Action
1	Is the node currently disabled? • If no, go to step 2. • If yes, go to step 4.
2	Press [Courtesy Disable Ports]. ***Result:*** You are prompted for the number of an in-service node.
3	Enter the node number followed by <Return>. ***Result:*** (GP systems) As the DSP ports for the node become free, the System Status screen will show the DSP ports for that node as being in “Pending” then in “OutSv” state. ***Result:*** (MSM systems) After all the ports on the node are courtesy-disabled, the node status changes to “OutOfService.” This may take a few minutes. You can monitor the progress by observing the DSP Port Status screen for this node (accessed from the System Status and Maintenance menu).
4	Perform any required maintenance activities.

Step	Action
5	Press [Enable Node]. ***Result:*** You are prompted for the number of an out-of-service node.
6	Enter the node number followed by <Return>. ***Result:*** (GP systems) The status of the DSP ports for the node changes to “Others” and then to “Idle.” ***Result:*** (MSM systems) The node status changes to “InService.” This may take a few minutes.

Section B Card Status

In this section

Overview

Introduction

The Card Status option on the System Status and Maintenance menu allows you to check the status of the cards on your system, enable or disable voice processor or T1 cards as required, and run out-of-service diagnostics on a disabled or faulty card.

To disable cards that are not voice processor or T1 cards (for example, an MMP40 or SBC card), you must use the disable-node function (see “Disabling/enabling nodes” on page 29-26).

Note: T1 cards are found on MSM systems only.

When to use this feature

The Card Status screen can be used to

- check the status of the cards in your system if you suspect that your system is not performing properly (see “The Card Status screen” on page 29-33)

  The Card Status screen will show you if any of the cards are faulty or disabled. If a card is faulty or disabled, perform a diagnostic check on the card (see “Running out-of-service diagnostics” on page 29-40).
- disable a voice processor card or a T1 card to perform a diagnostic check, or to replace the card (see “Enabling/disabling cards” on page 29-39)

Note: Only voice processor cards and T1 cards can be disabled through the Card Status screen. To disable other cards, you must use the disable-node function (see “Disabling/enabling nodes” on page 29-26).

- perform a diagnostic check on a card that you suspect is not working properly, or on a new card that has just been installed in your system (see “Running out-of-service diagnostics” on page 29-40)

The Card Status screen

Introduction

The Card Status screen displays the operational status of the cards in your system. The enable/disable softkeys displayed on this screen are used to enable and disable voice processor cards or T1 cards only.

If you suspect a problem with your system hardware, you can use this screen to check that all the cards on a node are functioning properly. You can also run diagnostics on a card from the Card Status screen.

Before running diagnostics on a card, you must first disable it. See “Enabling/disabling cards” on page 29-39.

How to reach the screen

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Card Status
3	Do you have a multinode system? • If yes, you are prompted for the node number. Enter the node number followed by <Return>. ***Result:*** The Card Status screen for the node you requested is displayed. • If no, you are immediately taken to the Card Status screen.

Card status screen

The screen has the same appearance for all Meridian Mail platforms, but the types of cards listed under the Description field will vary. The types of cards available are described in the section“Field descriptions” on page 29-35.

The following example is taken from a GP system.

```
                    System Status and Maintenance
Card Status for Node 2

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

Card#    Location   Description                              Status

  1       2-1-0     16 Megabyte Meridian Mail Processor      InService
  2       2-2-0     Voice Processor                          InService
  3       2-3-0     Voice Processor                          InService
  4       2-4-0     Voice Processor                          InService

Select a softkey >

 Exit | Enable Card | Disable Card |  | OutOfService Diagnostics
```

The following example is taken from an MSM system.

```
                    System Status and Maintenance
Card Status for Node 3

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

Card#    Location   Description                              Status

  1       3-1-0     Enhanced Single Board Computer           InService
  2       3-2-0     Voice Processor                          InService
  3       3-3-0     Voice Processor                          InService

Select a softkey >

 Exit | Enable Card | Disable Card |  | OutOfService Diagnostics
```

Field descriptions

The following fields appear on the Card Status screen.

System Status	
Description	This field displays the current system status.
Possible status types	There are four possible status types. **InService** This indicates the system is running. **CourtesyPending** This indicates that the system is in the process of shutting down. **CourtesyDown** This indicates that the system has shut down and is no longer operational or accepting calls. **Loading** This indicates the system is loading software during bootup.

Alarm Status	
Description	This indicates the state of each of the types of alarms described below.
Alarm types	There are three possible alarm types. **Critical** These alarms indicate a service-affecting problem that requires immediate attention. **Major** These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. **Minor** These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 30, “SEERs and Meridian Mail Alarms”.
Alarm states	Each alarm type can be in one of the following states. **Off** This state indicates that there are no new alarms. This does not necessary mean that there are no error conditions. **On** This status indicates that one or more alarm situations were detected. **Unk** This indicates that the status is unknown.

Card #	
Description	This is the number of each card in the selected node.

Location	
Description	This is the physical location (Node-Card-Port) of each card in the selected node.

Description	
Description	This is the type of card at that location.
Valid entries	The possible card types are listed here. Depending on your system type, you will not see all of these cards on your system.

16 Megabyte Meridian Mail processor (MMP40)
This is the Meridian Mail processor (CPU) card which includes a 24 MHz 68040 processor, 16 Mbytes of memory, up to two RS-232 serial ports, and a SCSI interface processor. It is displayed for MMP40 systems.

RS232 Service Module (RSM)
This is an RS-232 card.

Enhanced Single Board Computer (SBC)
This is the Meridian Mail processor (CPU) card (also known as the 68K card).

High Speed Bus
This is the high-speed bus (also called HABC for High Availability Bus Controller).

Network Voice Processor (NVP)
This is the 16-kbyte network voice processor.

32K Network Voice Processor (NVP32)
This is the 32-kbyte network voice processor.

Voice Processor (GSP)
(General-purpose signal processor) This is the voice processor card on Modular GP systems.

Voice Processor (VP12)
This is the voice processor card on MSM systems. It provides twelve channels.

T1
This is the T1 Link card.

Empty
The card slot is empty.

Status	
Description	This is the current state of each card on the selected node.
Card states	**InService** This state indicates that the card is operational. **Faulty** This state indicates that a hardware problem has been detected for the card. **Unequipped** This state may indicate one of two conditions: (a) the card slot is empty but a card is defined as being in that location in the hardware database or (b) the card is in the slot but is not defined in the hardware database. **OutOfService** This state indicates that the card has been disabled.

Enabling/disabling cards

Introduction

Only voice processor cards and T1 cards can be disabled from the Card Status screen. To disable other cards (such as the MMP40 or SBC card), you must use the disable-node function (see “Disabling/enabling nodes” on page 29-26).

Procedure

Starting Point: The Card Status screen

Step	Action
1	Press [Disable Card]. ***Result:*** You are prompted for the number of the card you wish to disable. ***Note:*** You can only disable voice processor cards and T1 cards from this screen.
2	Enter the number of the card followed by <Return>. ***Result:*** The system may take some time disabling the card. The message “WORKING...” will be displayed during this interval. The card is disabled when its status changes to “OutOfService”.
3	Perform diagnostics on the card as described in “Running out-of-service diagnostics” on page 29-40.
4	Press [Enable Card]. ***Result:*** You are prompted for the number of an out-of-service card.
5	Enter the number of an out-of-service card followed by <Return>. ***Result:*** The system may take some time enabling the card. The message “WORKING...” will be displayed during this interval. The card is enabled when its status changes to “InService”.

Running out-of-service diagnostics

Introduction

If you suspect a card is faulty, run out-of-service diagnostics on the card. If the test shows the card is faulty, it is assigned a "Faulty" status which can be observed on the Card Status screen.

Procedure

Starting Point: The Card Status screen

Step	Action
1	Are you running out-of-service diagnostics on a voice processor card? • If yes, disable the voice processor card according to the instructions in "Enabling/disabling cards" on page 29-39. • If no, disable the node according to the instructions in "Disabling/enabling nodes" on page 29-26.
2	Press [OutOfService Diagnostics]. ***Result:*** You are prompted for the number of an out-of-service card.
3	Enter the card number followed by <Return>. ***Result:*** The message "WORKING..." will be displayed while diagnostics are running. When diagnostics are completed, the result is displayed in a screen message.

IF diagnostics	THEN
fail	the card status will be "Faulty." There is a hardware problem with the card and it should be replaced. Refer to the *Installation and Maintenance Guide* for your platform.
pass	the card can be reenabled.
pass on a card that was already in a "Faulty" state	the card is put in "OutOfService" state.

Section C DSP Port Status

In this section

Overview

Introduction

The DSP Port Status screen allows you to view the operational status of the DSP ports in the system and enable or disable individual ports when necessary.

Definition: DSP

A DSP is a Digital Signal Processor which is located on a voice processor card. Each DSP supports two physical port locations. As a result, each DSP can support two voice processing ports or one multimedia port (for multimedia services, both physical ports of a DSP are used to configure one multimedia port). The configured port (voice or multimedia) is referred to as a DSP port or just as a port.

When to use this feature

You would use this feature to

- check the status of DSP ports (are any ports Faulty or OutOfService?)
- disable a port (on a GP system) prior to modifying information relating to the port on the Channel Allocation Table

  If you are dedicating a port, or assigning a specific outbound service to a port, you must show this on the Channel Allocation Table. A port must be disabled before any information relating to it can be modified on the Channel Allocation Table.
- reenable a port that was taken out of service

The DSP Port Status screen

Introduction

This section describes the DSP Port Status screen.

The DSP Port Status screen that you access from the System Status and Maintenance menu provides the following functions:

- Enable Port (see pages 29-53 to 29-55)
- Disable Port (see pages 29-53 to 29-55)
- Courtesy Disable Port (see pages 29-53 to 29-55)
- Change to Range Mode/Change to Single Mode (see “Single mode and range mode” on page 29-52)

How to reach the screen—two ways

There are two ways to reach two different versions of the System Status screen.

From the Main Menu

To reach the DSP Port Status screen from the Main Menu, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select DSP Port Status.
3	Do you have a multinode system? • If yes, you are prompted for the node number. Enter the number followed by <Return>. • If no, the DSP Port Status screen is displayed immediately. ***Result:*** The DSP Port Status screen is displayed. Note that this example is taken from an MSM system. On a Modular GP system, the ports are listed in 2 columns instead of 3.

```
                        System Status and Maintenance
DSP Port Status for Node 5 (C=Card D=DSP P=Port)

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

C-D-P        DSP Port Status

1-1-*         1-Idle          2-Idle          3-Idle
1-2-*         4-Idle          5-Idle          6-Idle
1-3-*         7-Idle          8-Idle          9-Idle
1-4-*        10-Idle         11-Idle         12-Idle

2-1-*        13-Idle         14-Idle         15-Idle
2-2-*        16-Idle         17-Idle         18-Idle
2-3-*        19-Idle         20-Idle         21-Idle
2-4-*        22-Idle         23-Idle         24-Idle




Select a softkey >

 Exit | Enable Port | Disable Port | Courtesy Disable Port | Change to Range Mode
```

From the Logon screen

To reach an abbreviated version of the DSP Port Status Screen from the Logon screen, follow these steps.

Starting Point: The Logon/Status screen

Step	Action
1	Press the [DSP Port Status] softkey. ***Result:*** The DSP Port Status screen is displayed. Note that this example is taken from an MSM system. The display for a Modular GP system would not have more than five nodes.

```
                                DSP Port Status
DSP Port Status

      Ports
Node  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

  3   F  F  F  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  4   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  5   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  6   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  7   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  8   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  9   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
 10   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .


a = Active/In Use     . = Idle              0 = Out of Service     ? = Unknown
F = Faulty            P = Pending           U = Unequipped         R = NoResource
L = Loading

Select a softkey >

    Exit                                                Detailed
```

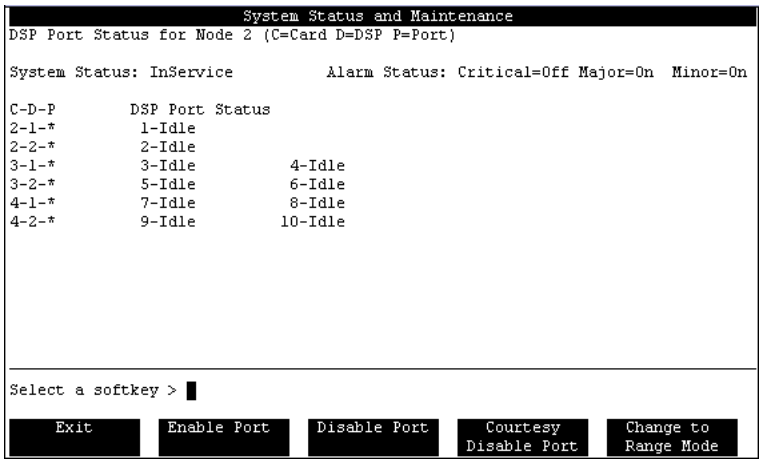
Note: You will not be able to access the maintenance softkeys from this version of the menu.

See Also

For a description of the Detailed view of this screen, see “Detailed view of the DSP Port Status screen” on page 29-51.

DSP port status screen (for GP)

The following is an example of the DSP Port Status screen displayed when you select DSP Port Status from the System Status and Maintenance menu.



When the status for a port is not displayed, this means that both ports from the DSP were used to configure one multimedia port, so only one configured port is present instead of two.

In the screen example, the first two ports on card 2 have been configured into one multimedia port (port 1). And the next two ports on card 2 have also been configured into one multimedia port (port 2).

The port numbering on this screen is also adjusted so that no number is skipped, even if a port is blocked for a multimedia port. As a result, the port numbers reflect the total number of configured ports on the node. The port numbers shown here match the port numbers shown in the DSP Port Status screen accessed from the Logon screen.

DSP port status screen (for MSM)

The following is an example of the DSP Port Status screen displayed when you select DSP Port Status from the System Status and Maintenance menu.

```
                    System Status and Maintenance
DSP Port Status for Node 5 (C=Card D=DSP P=Port)

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

C-D-P        DSP Port Status

1-1-*         1-Idle          2-Idle          3-Idle
1-2-*         4-Idle          5-Idle          6-Idle
1-3-*         7-Idle          8-Idle          9-Idle
1-4-*        10-Idle         11-Idle

2-1-*        12-Idle         13-Idle         14-Idle
2-2-*        15-Idle         16-Idle         17-Idle
2-3-*        18-Idle         19-Idle         20-Idle
2-4-*        21-Idle         22-Idle         23-Idle


Select a softkey >

 Exit | Enable Port | Disable Port | Courtesy Disable Port | Change to Range Mode
```

When the status for a port is not displayed (a field is blank), this means that the card contains a multimedia port. On an MSM system, 3 ports are used to configure 2 multimedia ports. As a result, the card does not show the normal full complement of voice ports.

For example, if 3 ports on a card are used to configure 2 multimedia ports, that leaves 9 voice ports. The card would show a total of 11 ports (9 voice plus 2 multimedia). The blank fields are placed at the end of the card that contains the multimedia port.

The port numbering on this screen is adjusted so that no number is skipped, even if a card contains multimedia ports. As a result, the port numbers reflect the total number of configured ports on the node. The port numbers shown here match the port numbers shown in the DSP Port Status screen accessed from the Logon screen.

Field descriptions

The following fields appear on the DSP Port Status screen.

System Status	
Description	This field displays the current system status.
Possible status types	There are four possible status types. **InService** This indicates the system is running. **CourtesyPending** This indicates that the system is in the process of shutting down. **CourtesyDown** This indicates that the system has shut down and is no longer operational or accepting calls. **Loading** This indicates the system is loading software during bootup.

Alarm Status	
Description	This indicates the state of each of the types of alarms described below.
Alarm types	There are three possible alarm types. **Critical** These alarms indicate a service-affecting problem that requires immediate attention. **Major** These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. **Minor** These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 30, “SEERs and Meridian Mail Alarms”.
Alarm states	Each alarm type can be in one of the following states. **Off** This state indicates that there are no new alarms. This does not necessarily mean that there are no error conditions. **On** This status indicates that one or more alarm situations were detected. **Unk** This indicates that the status is unknown.

C-D-P (location)	
Description	This is the physical location of each DSP port on the selected node (card number–DSP–port).

DSP Port Status	
Description	This is the current state of each DSP port. The status can be one of the following.
DSP states	**Active** This status indicates that the DSP port is operational and in use. **Idle** This status indicates that the DSP port is operational but not currently in use. **Faulty** This status indicates that the system has detected an error in the DSP port. **UnEquipped** This status indicates that the DSP port is not defined in the hardware database. For more information about modifying the hardware database, refer to *System Administration Tools* (NTP 555-7001-305). **POutService** This status indicates that the DSP port is in the process of shutting down. If [Courtesy Disable Port] was used, the DSP port is still active while in this state. Once the active call is disconnected, the port status will be OutOfService. **OutOfService** This status indicates that the DSP port is no longer operational as a result of a courtesy disable or forced disable. **NoResources** This status indicates a transition state that occurs during the initial stages of software loading (after a request to enable a port). When software begins to load, the port is initially in this state, followed by Loading and then Idle, once the software has finished loading.

DSP states (continued)	**Loading** This status indicates that the DSP port is currently starting up after a request to enable and that the necessary software is loading. **CtsyDown** This status indicates that the DSP port is down as a result of a Courtesy Down System. **PCtsyDown** This status indicates that the DSP port is in the process of shutting down as a result of a Courtesy Down System, pending the disconnection of any active calls. The DSP port is still active while in this state. Once the active call is disconnected, the port status will be CtsyDown.

Detailed view of the DSP Port Status screen

Introduction

When you access the DSP Port Status screen from the Logon screen, you can get a detailed view by pressing the [Detailed] softkey.

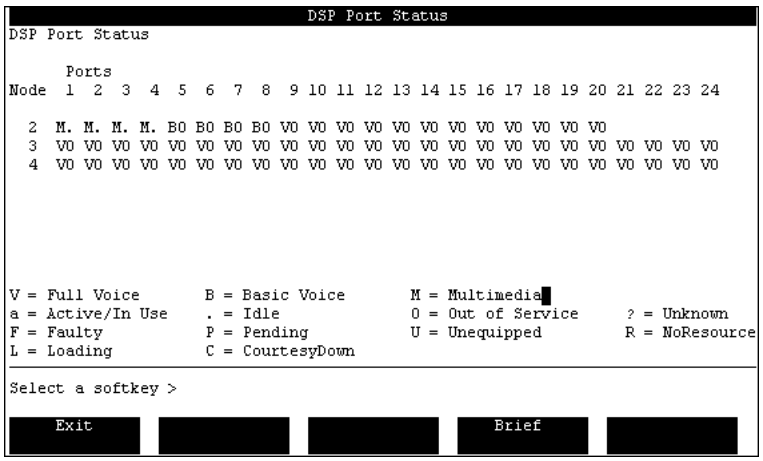
For each port, you are told the port type (basic-voice, full-voice, or multimedia) and the port status (for example, Idle, Active, or OutOfService).

When to use this feature

If you have a mixture of port types (basic-voice, full-voice, multimedia), the detailed view presents a clear picture of what types of ports are installed in your system, how many, and where.

The screen

The following is an example of the DSP Port Status screen—Detailed view. This example is taken from a non-MSM system. The display is the same on an MSM system, except that you would not have DSP ports on Node 2.



In this example, node 2 has four idle multimedia ports (M.). Node 2 also has four basic-voice ports that are out of service (BO). All other ports are full-voice ports that are out of service (VO).

Single mode and range mode

Description

Single mode allows you to enable, disable, or courtesy disable individual DSP ports one at a time.

Range mode allows you to enable, disable, or courtesy disable a contiguous range of DSP ports at once. For example, it will work if you need to disable ports 3 to 7, but not if you need to disable ports 1, 3, and 7.

Disabling/enabling DSP ports in single mode

Introduction

This section describes how to disable ports in single mode (one port at a time).

Note: If a port is faulty and you attempt to disable it, the screen message will be the same as if you are disabling an idle port. However, the port will not be disabled. A faulty port cannot be disabled or enabled.

Guidelines for disabling DSP ports

On an MSM system, you should have the same number of DSP ports in service as there are T1 channels in service. Otherwise, some calls may not be able to get through to Meridian Mail. See "Rules for disabling T1 channels and DSP ports (for MSM)" on page 29-85.

Disable Port versus Courtesy Disable Port

The procedure in this section asks you to check if a port is idle or active before disabling it. If a port is idle, you can use the Disable Port softkey. If a port is active (it is processing a call to Meridian Mail), you can use the Courtesy Disable Port softkey.

The courtesy disable method waits until the call is disconnected before disabling the port. This prevents users from being disconnected suddenly from Meridian Mail.

If you use the Disable Port softkey to disable an active port, the caller is abruptly disconnected.

Procedure

Starting Point: The System Status and Maintenance menu

Step	Action
1	Select DSP Port Status. • If you have a single node system, the DSP Port Status screen is displayed. Go to step 3. • If you have a multinode system, go to step 2.
2	For multinode systems, enter the number of the node on which the DSP port resides, followed by <Return>. ***Result:*** The DSP Port Status screen is displayed.
3	Is the DSP port active? • If yes, press [Courtesy Disable Port]. • If no, press [Disable Port]. ***Result:*** You are prompted for the number of a DSP port.
4	Enter the DSP port number followed by <Return>. ***Result:*** The system may take some time to disable the port. In the case of a courtesy disable, the system waits until the active call has been disconnected. The system displays a message informing you that the port is being disabled. The message “WORKING...” may also be displayed. While the port is being disabled, its status will change to POutService and then to OutOfService.
5	Perform any required maintenance activities.
6	Press [Enable Port]. ***Result:*** You are prompted for the number of a DSP port.
7	Enter the DSP port number followed by <Return>. ***Result:*** The system may take some time to enable the port. The system displays a message informing you that the port is being enabled. The message “WORKING...” may also be displayed. While the port is being enabled, its status will change to “Loading” and then to “Idle.”
8	Press [Exit] to return to the System Status and Maintenance menu.

Disabling/enabling DSP ports in range mode

Introduction

Range mode allows you to disable or enable a contiguous range of DSP ports at once. This saves time over disabling or enabling ports one at a time.

Note: If a port is faulty and you attempt to disable it, the screen message will be the same as if you are disabling an idle port. However, the port will not be disabled. A faulty port cannot be disabled or enabled.

Guidelines for disabling DSP ports

On an MSM system, you should have the same number of DSP ports in service as there are T1 channels in service. Otherwise, some calls may not be able to get through to Meridian Mail. See “Rules for disabling T1 channels and DSP ports (for MSM)” on page 29-85.

Disable Port versus Courtesy Disable Port

The procedure in this section asks you to check if the ports are idle or active before disabling them. If the ports are idle, you can use the Disable Port softkey. If some of the ports are active (they are processing calls to Meridian Mail), you can use the Courtesy Disable Port softkey.

The courtesy disable method waits until the call is disconnected before disabling the port. This prevents users from being disconnected suddenly from Meridian Mail.

If you use the Disable Port softkey to disable an active port, the caller is abruptly disconnected.

Procedure

Starting Point: The System Status and Maintenance menu

Step	Action
1	Select DSP Port Status. • If you have a single node system, the DSP Port Status screen is displayed. Go to step 3. • If you have a multinode system, go to step 2.
2	For multinode systems, enter the number of the node on which the DSP port resides, followed by <Return>. ***Result:*** The DSP Port Status screen is displayed.
3	Press [Change to Range Mode]. ***Result:*** The softkey now shows [Change to Single Mode].
4	Are DSP ports active? • If yes, press [Courtesy Disable Port]. • If no, press [Disable Port]. ***Result:*** You are prompted for the number of the first DSP port in the range you want to force disable or courtesy disable.
5	Enter the number of the first DSP port in the range followed by <Return>. ***Result:*** You are prompted for the number of the last DSP port in the range.
6	Enter the number of the last DSP port in the range followed by <Return>. ***Result:*** The system will begin to disable the DSP ports. This may take some time. If you are courtesy disabling the ports, the system will wait for each port to become idle before it disables them. While the ports are being disabled, their status will change to “POutService” and then to “OutOfService.” The message “WORKING...” may also be displayed at this time. After the disabling is completed, the system displays a message indicating the number of ports that were successfully disabled, and the number of ports that could not be disabled.
7	Perform any required maintenance activities.
8	Press [Enable Port]. ***Result:*** You are prompted for the number of the first DSP port in the range of ports you wish to enable.

Step	Action
9	Enter the number of the first DSP port followed by <Return>. ***Result:*** You are prompted for the number of the last DSP port in the range.
10	Enter the number of the last DSP port followed by <Return>. ***Result:*** The system may take some time enabling the ports. The system displays a message to inform you that the DSP ports are being enabled. While the ports are being enabled, their status will change to “Loading” and then to “Idle.” After the enabling is completed, the system displays a message indicating the number of ports that were successfully enabled, and the number of ports that could not be enabled.
11	Press [Exit] to return to the System Status and Maintenance menu.

Section D Channel Allocation Table

In this section

Overview

Introduction

The Channel Allocation Table (CAT) allows you to

- view how channels are currently allocated across different queues and services
- see what the distribution of port types (GP) or T1 channels (MSM) is on your system
- move agents from one queue to another as part of the procedure to dedicate a port (GP) or T1 channel (MSM)

When to use this feature?

Normally you will not have to configure this table. When the Meridian Mail software is installed, the installation technician configures the switch to match the Channel Allocation Table.

This is also true when you perform a channel expansion (to add new agents). You generally do not have to modify the CAT because it is updated with the information that was provided during the expansion.

However, when you move agents from one queue to another (in order to dedicate them to a particular service), you will have to modify the CAT to show that the agent is now associated with a different queue and that the agent is dedicated to a particular service.

When to dedicate ports

Dedicating ports to a particular service reduces the overall efficiency of your port usage, so you should consider whether it is necessary to dedicate ports. Note that even when you have separate queues set up for basic, full-voice, and multimedia ports, these ports can be shared for outbound services (such as Remote Notification and Fax Outcalling).

Similarly, dedicating ports to particular customer groups reduces the overall efficiency of your port usage. However, depending on circumstances, you may find it necessary to partition ports by customer group.

For more information about port types and dedicating ports, see the section "Planning your configuration" on page 24-11.

When to dedicate ports (cont'd)

Note: On MSM systems, T1 channels are dedicated, not DSP ports. But the concepts are the same as described here.

The Channel Allocation Table (for GP)

Introduction

The Channel Allocation Table (CAT) determines how agents on the switch are associated with DSP ports on Meridian Mail.

Agents are identified by a Routing Address, Primary DN, and Channel DN. Each DSP port must be associated with an existing UCD agent in the switch. This is to handle the queuing of calls coming into Meridian Mail and to handle dial-out features such as Remote Notification and Delivery to Non-Users.

ATTENTION

The Channel Allocation Table (CAT) should only be configured by those who know how to program the switch.

When to use

When you move agents from one queue to another (in order to dedicate them to a particular service), you will have to modify the CAT to indicate the Primary DN with which the agent is now associated as well as the service to which it is dedicated.

Note that even when you have separate queues set up for basic, full-voice, and multimedia ports, these ports can be shared for outbound services (such as Remote Notification and Fax Outcalling).

For a complete explanation of how to dedicate ports, and how to decide if you need to dedicate ports, see the section "Planning your configuration" on page 24-11.

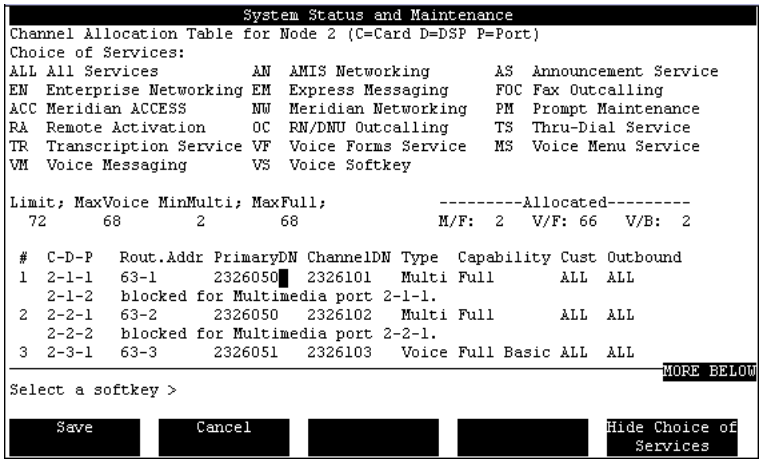
How to reach the screen

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Channel Allocation Table.
3	Do you have a multinode system? • If yes, you are prompted for the node number. Enter the node number followed by <Return>. ***Result:*** The Channel Allocation Table for the node you requested is displayed. • If no, you are immediately taken to the Channel Allocation Table.

The CAT screen

The Channel Allocation Table also lists the maximum number of voice ports and minimum number of multimedia ports that you can configure, and how the different port types are currently allocated. The Choice of Services list at the top of the screen lists all the services that can be dedicated to a port. To hide this list, press the [Hide Choice of Services] softkey.



How port information is presented

Ports that are configured to support multimedia services (multimedia ports) require the use of both DSP ports supported by a DSP. The location of the first port supported by the DSP is considered the location of the multimedia port. The second physical port location supported by the DSP is considered to be blocked for the multimedia port. This is reflected in the CAT by a row following the multimedia port with the message "blocked for Multimedia port C–D–P," where C–D–P is the "Card–DSP–Port" number of the multimedia port.

The number of DSP ports on a system may be very large. Therefore, when you choose to view the CAT on a multinode system, you are prompted for a node number to limit the scope to one node at a time. The CAT screen then displays information for that node.

Field descriptions

The following items appear on the Channel Allocation Table screen.

Choice of Services	
Description	This is a list of voice or fax services and their associated acronyms.
Service restrictions	The following services are available only if voice menus are installed: • AS (Announcement Service) • PM (Prompt Maintenance) • RA (Remote Activation) • TS (Thru-Dial Service) • MS (Voice Menu Service) Greeting Change Service (GS) is available only if Voice Messaging (VMUIF) is installed. Express Messaging (EM) is available only if Voice Messaging (MMUI) is installed. Transcription Service (TR) and Voice Forms Service (VF) are available only if the Voice Forms feature is installed. Meridian Networking (NW), Meridian ACCESS (ACC), AMIS Networking (AN), RN/DNU Outcalling (OC), and Fax Outcalling (FOC) appear only if the feature is installed.

Limit	
Description	This is the number of physical port locations on the system from which voice and multimedia ports are derived.
MaxVoice	
Description	This is the maximum number of voice ports (basic and full) allowed on the system according to your system's keycode. This number plus the MinMulti number is the maximum number of ports allowed on the system.
MinMulti	
Description	This is the minimum number of multimedia ports required on the system according to your system's keycode. The system will not allow you to reduce the number of multimedia ports on the system to below the MinMulti value.
MaxFull	
Description	This is the maximum number of full service ports (full service voice or multimedia) allowed on the system according to your system's keycode.
Allocated	
Description	This field shows how the ports are currently allocated between full service multimedia, full service voice, and basic service voice.
Allocations	• **M/F** The number of full service multimedia ports on the system. • **V/F** The number of full service voice ports on the system. • **V/B** The number of basic service voice ports on the system. Basic service ports must also be voice ports. ***Note:*** Multimedia ports require full service capability, so basic service multimedia ports are not available.

C-D-P	
Description	This is the physical location of the DSP port in the Meridian Mail system.
Numbering scheme	This number represents the card–DSP–port number. The node number is shown in the title at the top of the screen for multinode systems. This is a read-only field. The number to the left of the C–D–P field counts the ports and corresponds to the port numbers shown in the DSP Port Status screen.

Rout.Addr	
Description	This is the routing address (also referred to as the Message Desk Number). This is a read-only field specifying the location of the corresponding agent in the switch. The elements in this address are in the format xxx-yyyy, where xxx is the message desk number and yyyy is the terminal number.

Primary DN	
Description	This is the primary DN. This is the directory number assigned to the UCD agent queue that contains this port. ***Note:*** Before changing the Primary DN, the DSP port must be disabled (use the DSP Port Status screen). If the port is not disabled, this is a read-only field.
AT&T and ROLM	For AT&T and ROLM configurations, the Primary DN should be the DN of the VoiceBridge.
Multiple queues	If you have more than one agent queue in your configuration (to service different types of ports or dedicated services) ensure that you enter the Primary DN of the queue that contains this port. The Primary DN is configured in Overlay 23 on the switch.

Channel DN	
Description	This is the DN of the corresponding UCD agent. This DN is typically 7 digits, although this field will hold 8 digits. ***Note:*** Before changing the Channel DN, the DSP port must be disabled (use the DSP Port Status screen). If the port is not disabled, this is a read-only field.
AT&T and ROLM	For AT&T and ROLM configurations, the Channel DN should be the analog DN of the VoiceBridge.
Maximum length	The maximum length is 8 digits, even if the SMDI link is set to 10-digit messaging.
Type	
Description	This field could show “Voice” or “Multi.”
Values	**Voice** This indicates a port that can provide voice services (such as Voice menus, Announcements, RN/DNU Outcalling, and so on). **Multi** This indicates a port that can provide multimedia-related services (such as Fax Outcalling), as well as voice services. A “Multi” port is configured from two port locations. As a result, the next port location is labeled as “blocked.”

Capability	
Description	This field indicates the range of services supported on this port. The two ranges are “Basic” and “Full.” Note that all basic services can also run on full service ports.
Basic services	The following “Basic” services are available: • ACC—Meridian ACCESS • AS—Announcement Service • MS—Voice Menu Service • PM—Prompt Maintenance • RA—Remote Activation • TS—Thru-Dial Service • VS—Voice Softkey
Full services	“Full” services include all basic services plus the following: • VM—Voice Messaging • EM—Express Messaging • AN—AMIS Networking Agent • OC—RN/DNU Outcalling • CO—Post Checkout Mailbox • VF—Voice Forms Service • TR—Transcription Service • NW—Meridian Networking • FOC—Fax Outcalling ***Note:*** RN/DNU Outcalling supports Remote Notification and Delivery to Non-User features. Fax Outcalling supports Fax-on-Demand same-call delivery and fax call-back delivery, Fax Information (FI), and Fax Item Maintenance (FIM).

Cust	
Description	This column indicates if a port is shared by all customer groups or dedicated to one particular customer group. “ALL” indicates the port is shared by all customer groups. If you are dedicating a port to a particular customer, enter the customer number in this column. ***Note:*** You must disable the DSP port (see the DSP Port Status screen) before changing the value in the Cust field.
Considerations	Sharing ports usually produces the most efficient system. If you dedicate any ports to a customer group, then only those dedicated ports can be used by that customer group. For a complete discussion on dedicating ports, see the section "Planning your configuration" on page 24-11.
Defaults	The default is “ALL,” which indicates a shared DSP port.

Outbound	
Description	When Meridian Mail makes an outbound call, it checks this column to see what ports can be used. "ALL" indicates the port can be used for any outbound service (the port is shared for outbound calls). If you are dedicating the port to a particular service (outbound or inbound service), enter the service acronym in this column. This will prevent Meridian Mail from using that port for another outbound service.
Example	If you enter "OC" in this column for a particular port, the only outbound calls that can be made through this port are OC (RN/DNU) calls. At the same time, OC can use only this port to make outbound calls. ***Note:*** You must disable the DSP port (see the DSP Port Status screen) before changing the service associated with it.
Defaults	The default is "ALL," which indicates a shared DSP port.
Fax Outcalling considerations	A multimedia port can be shared for outbound services (enter "ALL" in the Outbound column). You can achieve optimum traffic capacity for fax calls on a multimedia port by dedicating the port to Fax Outcalling and then using only the Fax Call Back method of delivery. For details, refer to the *Site and Installation Planning Guide* (NTP 555-7051-200).
Meridian ACCESS considerations	If you enter ACC (Meridian ACCESS) in the Outbound column, a second field, Class, is displayed. For information and examples on how to configure ACCESS applications (for example, Meridian IVR), refer to the "Configuration examples" chapter in the *Meridian ACCESS Configuration Guide* (NTP 555-7001-315).

The Channel Allocation Table (for MSM)

Introduction

The Channel Allocation Table (CAT) determines how agents on the switch are associated with T1 channels on Meridian Mail.

Agents are identified by a Routing Address, Primary DN, and Channel DN. Each T1 channel must be associated with an existing UCD agent in the switch. This is to handle the queuing of calls coming into Meridian Mail and to handle dial-out features such as Remote Notification and Delivery to Non-Users.

ATTENTION

The Channel Allocation Table (CAT) should only be configured by those who know how to program the switch.

When to use

When you move agents from one queue to another (in order to dedicate them to a particular service), you will have to modify the CAT to indicate the Primary DN with which the agent is now associated as well as the service to which it is dedicated.

Note that even when you have separate queues set up for basic, full-voice, and multimedia channels, these channels can be shared for outbound services (such as Remote Notification and Fax Outcalling).

For a complete explanation of how to dedicate channels, and how to decide if you need to dedicate channels, see the section "Planning your configuration" on page 24-11.

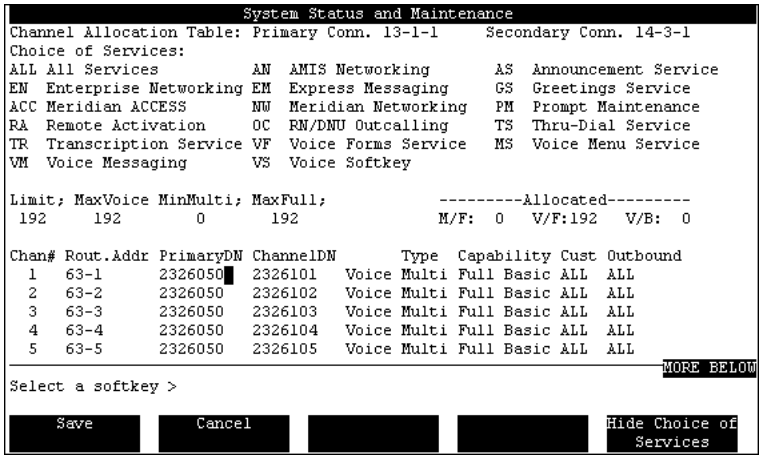
How to reach the screen

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Channel Allocation Table. ***Result:*** A list of the T1 links is displayed.
3	Move the cursor to the T1 link that contains the T1 channel you want to view and press the space bar. ***Result:*** The T1 link you selected is highlighted.
4	While the T1 link is highlighted, press the [View/Modify] softkey. ***Result:*** The Channel Allocation Table is displayed.

The CAT screen

The Channel Allocation Table also lists the maximum number of voice T1channels and minimum number of multimedia T1 channels that you can configure, and how the different T1 channel types are currently allocated. The Choice of Services list at the top of the screen lists all the services that can be dedicated to a T1 channel. To hide this list, press the [Hide Choice of Services] softkey.



When a channel is disabled, the channel Type (Voice or Multi) and Capability (Full or Basic) are highlighted.

Field descriptions

The following items appear on the Channel Allocation Table screen.

Primary Connection	
Description	This is the location (node-card-span) of the primary connection for the selected T1 link.
Secondary Connection	
Description	This is the location (node-card-span) of the secondary connection for the selected T1 link.
Choice of Services	
Description	This is a list of voice or fax services and their associated acronyms.
Service restrictions	The following services are available only if voice menus are installed: • AS (Announcement Service) • PM (Prompt Maintenance) • RA (Remote Activation) • TS (Thru-Dial Service) • MS (Voice Menu Service) Greeting Change Service (GS) is available only if Voice Messaging (VMUIF) is installed. Express Messaging (EM) is available only if Voice Messaging (MMUI) is installed. Transcription Service (TR) and Voice Forms Service (VF) are available only if the Voice Forms feature is installed. Meridian Networking (NW), Meridian ACCESS (ACC), AMIS Networking (AN), RN/DNU Outcalling (OC), and Fax Outcalling (FOC) appear only if the feature is installed.
Limit	
Description	This is the number of physical port locations on the system from which voice and multimedia ports are derived.

MaxVoice	
Description	This is the maximum number of voice T1 channels (basic and full) allowed on the system according to your system's keycode. This number plus the MinMulti number is the maximum number of ports allowed on the system.
MinMulti	
Description	This is the minimum number of multimedia T1 channels required on the system according to your system's keycode. The system will not allow you to reduce the number of multimedia T1 channels on the system to below the MinMulti value.
MaxFull	
Description	This is the maximum number of full service T1 channels (full service voice or multimedia) allowed on the system according to your system's keycode.
Allocated	
Description	This field shows how the T1 channels are currently allocated between full service multimedia, full service voice, and basic service voice.
Allocations	• **M/F** The number of full service multimedia T1 channels on the system. • **V/F** The number of full service voice T1 channels on the system. • **V/B** The number of basic service voice T1 channels on the system. Basic service T1 channels must also be voice T1 channels. ***Note:*** Multimedia T1 channels require full service capability, so basic service multimedia T1 channels are not available.

Chan#	
Description	This is the number of the channel on the T1 link you selected. This is a read-only field.
Rout.Addr	
Description	This is the routing address (also referred to as the Message Desk Number). This is a read-only field specifying the location of the corresponding agent in the switch. The elements in this address are in the format xxx-yyyy, where xxx is the message desk number and yyyy is the terminal number.
Primary DN	
Description	This is the primary DN. This is the directory number assigned to the UCD agent queue that contains this T1 channel. ***Note:*** Before changing the Primary DN, the T1 channel must be disabled (use the T1 Channel Status screen). If the T1 channel is not disabled, this is a read-only field.
AT&T and ROLM	For AT&T and ROLM configurations, the Primary DN should be the DN of the VoiceBridge.
Multiple queues	If you have more than one agent queue in your configuration (to service different types of T1 channels or dedicated services) ensure that you enter the Primary DN of the queue that contains this T1 channel. The Primary DN is configured in Overlay 23 on the switch.

Channel DN	
Description	This is the DN of the corresponding UCD agent. This DN is typically 7 digits, although this field will hold 8 digits. ***Note:*** Before changing the Channel DN, the T1 channel must be disabled (use the T1 Channel Status screen). If the T1 channel is not disabled, this is a read-only field.
AT&T and ROLM	For AT&T and ROLM configurations, the Channel DN should be the analog DN of the VoiceBridge.
Maximum length	The maximum length is 8 digits, even if the SMDI link is set to 10-digit messaging.
Type	
Description	This is the type of T1 channel (voice or multimedia). If it is a voice T1 channel, “Voice” is highlighted. If it is a multimedia T1 channel, “Multi” is highlighted. Voice T1 channels can provide voice services (such as Voice menus, Announcements, RN/DNU Outcalling, and so on). Multimedia T1 channels can provide multimedia-related services (such as Fax Outcalling), as well as voice services.

Capability	
Description	This field indicates the range of services supported on this T1 channel. The two ranges are “Basic” and “Full.” Note that all basic services can also run on full service T1 channels.
Basic services	The following “Basic” services are available: • ACC—Meridian ACCESS • AS—Announcement Service • MS—Voice Menu Service • PM—Prompt Maintenance • RA—Remote Activation • TS—Thru-Dial Service • VS—Voice Softkey
Full services	“Full” services include all basic services plus the following: • VM—Voice Messaging • EM—Express Messaging • AN—AMIS Networking Agent • OC—RN/DNU Outcalling • CO—Post Checkout Mailbox • VF—Voice Forms Service • TR—Transcription Service • NW—Meridian Networking • FOC—Fax Outcalling ***Note:*** RN/DNU Outcalling supports Remote Notification and Delivery to Non-User features. Fax Outcalling supports Fax-on-Demand same-call delivery and fax call-back delivery, Fax Information (FI), and Fax Item Maintenance (FIM).

Cust	
Description	This column indicates if a channel is shared by all customer groups or dedicated to one particular customer group. “ALL” indicates the channel is shared by all customer groups. If you are dedicating a channel to a particular customer, enter the customer number in this column. ***Note:*** You must disable the T1 channel (see the T1 Channel Status screen) before changing the value in the Cust field.
Considerations	Sharing channels usually produces the most efficient system. If you dedicate any channels to a customer group, then only those dedicated channels can be used by that customer group. For a complete discussion on dedicating channels, see the section "Planning your configuration" on page 24-11.
Defaults	The default is “ALL,” which indicates a shared channel.

Outbound	
Description	When Meridian Mail makes an outbound call, it checks this column to see what T1 channels can be used. “ALL” indicates the T1 channel can be used for any outbound service (the T1 channel is shared for outbound calls). If you are dedicating the T1 channel to a particular service (outbound or inbound service), enter the service acronym in this column. This will prevent Meridian Mail from using that T1 channel for another outbound service.
Example	If you enter “OC” in this column for a particular T1 channel, the only outbound calls that can be made through this T1 channel are OC (RN/DNU) calls. At the same time, OC can use only this T1 channel to make outbound calls. ***Note:*** Before changing the value in this field, the T1 channel must be disabled (use the T1 Channel Status screen). If the T1 channel is not disabled, this is a read-only field.
Defaults	The default is “ALL,” which indicates a shared T1 channel.
Fax Outcalling considerations	A multimedia T1 channel can be shared for outbound services (enter “ALL” in the Outbound column). You can achieve optimum traffic capacity for fax calls on a multimedia T1 channel by dedicating the T1 channel to Fax Outcalling and then using only the Fax Call Back method of delivery. For details, refer to the *Installation Methods for MSM*.
Meridian ACCESS considerations	If you enter ACC (Meridian ACCESS) in the Outbound column, a second field, Class, is displayed. For information and examples on how to configure ACCESS applications (for example, Meridian IVR), refer to the “Configuration examples” chapter in the *Meridian ACCESS Configuration Guide* (NTP 555-7001-315).

Modifying the Channel Allocation Table

Channel allocation and dedication

Consider whether or not it is beneficial or necessary to dedicate ports (channels). For a complete explanation of dedicated ports and channels, see the section "Planning your configuration" on page 24-11.

ATTENTION

- Update the Channel Allocation Table only when the system is idle or during low traffic periods.
- The Channel Allocation Table should only be configured by those who are knowledgeable about programming the switch.

If you are on a Modular GP system, see “Procedure (for GP)” on page 29-81.

If you are on an MSM system, see “Procedure (for MSM)” on page 29-83.

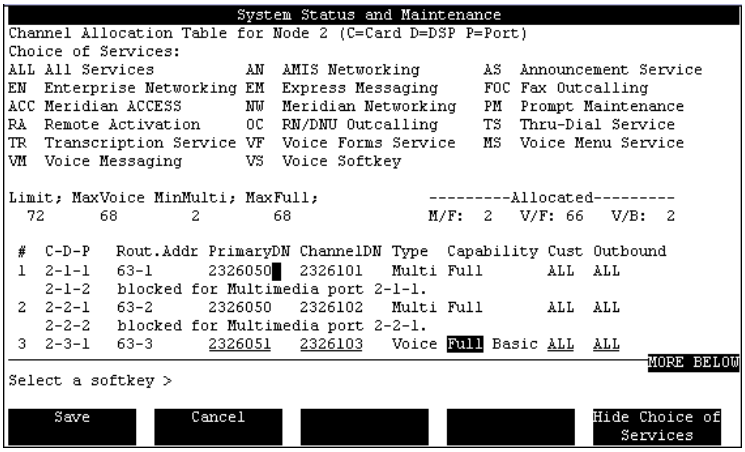
Procedure (for GP)

Starting Point: The System Status and Maintenance menu

Step	Action
1	Disable the DSP port(s) you wish to reconfigure. • To disable a single port see “Disabling/enabling DSP ports in single mode” on page 29-53. • To disable a range of ports see “Disabling/enabling DSP ports in range mode” on page 29-55.
2	Select Channel Allocation Table from the System Status and Maintenance menu. • If you have a single node system, the Channel Allocation Table is displayed. Go to step 4. • If you have a multinode system, go to step 3.
3	Enter the number of the node on which the port resides, followed by <Return>.
4	Modify the ports. For each disabled port, you can change the values in the following fields: • Primary DN • Channel DN • Capability (for voice ports) • Cust • Outbound (Service)

Step Action

Note: Ports that are not disabled can only be viewed. For the ports that are disabled, the port capability (Full or Basic) is highlighted and the Primary DN, Channel DN, Cust, and Outbound fields are underlined.



5 Are you satisfied with the changes?

- If yes, press [Save].
- If no, press [Cancel].

Result: On a single node system, you are returned to the System Status and Maintenance menu.

On a multinode system, you are prompted for another node. If you have to reallocate ports on another node, return to step 3. Otherwise, press [Cancel] to return to the System Status and Maintenance menu.

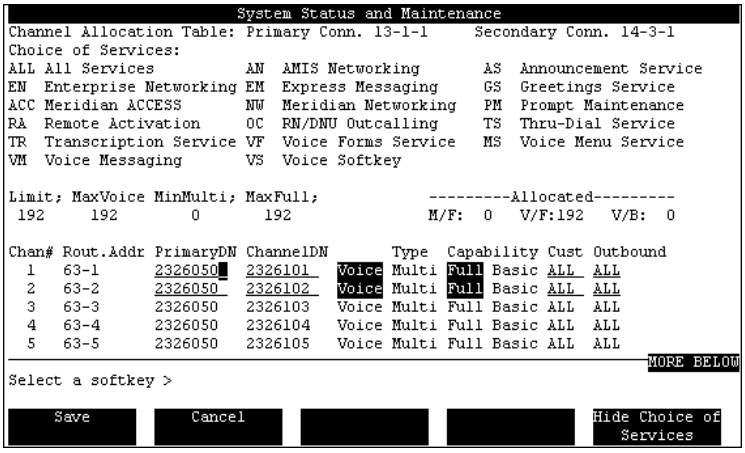
6 Reenable any DSP ports you have put out of service.

- To enable a single port see “Disabling/enabling DSP ports in single mode” on page 29-53.
- To enable a range of ports see “Disabling/enabling DSP ports in range mode” on page 29-55.

Procedure (for MSM)

Starting Point: The System Status and Maintenance menu

Step	Action
1	Disable the T1 channel(s) you wish to reconfigure. For instructions on disabling channels, see “Disabling/enabling T1 channels in single mode” on page 29-99 or “Disabling/ enabling T1 channels in range mode” on page 29-101.
2	Select Channel Allocation Table. ***Result:*** A list of the T1 links is displayed.
3	Move the cursor to the T1 link that contains the T1 channel you want to modify and press the space bar. ***Result:*** The T1 link you selected is highlighted.
4	While the T1 link is highlighted, press the [View/Modify] softkey. ***Result:*** The Channel Allocation Table is displayed.



Step	Action
5	Modify the T1 channels. For each disabled T1 channel, you can change the values in the following fields: • Primary DN • Channel DN • Type • Capability (for voice T1 channels) • Cust • Outbound (Service) ***Note:*** T1 channels that are not disabled can only be viewed. For the T1 channels that are disabled, the Type (Voice or Multi) and Capability (Full or Basic) are highlighted and the Primary DN, Channel DN, Cust, and Outbound fields are underlined.
6	Are you satisfied with the changes? • If yes, press [Save]. • If no, press [Cancel]. ***Result:*** You are prompted for another node. If you have to reallocate T1 channels on another node, return to step 3. Otherwise, press [Cancel] to exit from this screen.
7	Reenable any T1 channels you have put out of service. For instructions on enabling channels, see “Disabling/enabling T1 channels in single mode” on page 29-99 or “Disabling/ enabling T1 channels in range mode” on page 29-101.

Rules for disabling T1 channels and DSP ports (for MSM)

Introduction

Modular GP systems do not have T1channels.

On MSM systems, the number of InService T1 channels should match the number of InService DSP ports. As a result, when you disable a T1 channel and it is going to be disabled for some time, you should also disable a DSP port. Similarly, if you are going to disable a DSP port and it is going to be disabled for some time, you should also disable a T1 channel.

Guidelines

- If you disable a multimedia T1 channel, disable a multimedia DSP port.
- If you disable a full-voice T1 channel, disable a full-voice DSP port.
- If you disable a basic-voice T1 channel, disable a basic-voice DSP port.

When the number of T1 channels of a certain type (for example, full-voice) does not match the number DSP ports of the same type, then an “Out of synchronization” SEER is issued.

You are allowed to have more DSP ports InService than T1 channels InService. However, this results in an inefficient system because the excess DSP ports will have no corresponding T1 channels to deliver calls to them.

If you have more InService T1 channels than InService DSP ports, some calls may not get through to Meridian Mail. You could have a situation where a call on a T1 channel has no place to go because all the DSP ports are already busy and there are not enough InService DSP ports to receive calls from all the InService T1 channels.

Temporarily disabling ports or channels

If you are disabling a DSP port or T1 channel to perform routine maintenance and it will be for a short time only, then it is not necessary to keep the number of DSP ports and T1 channels matching. Just be aware that if the system becomes busy, you may encounter some of the call handling problems described in this section.

Section E T1 links, T1 channels, SMDI links, and MSM cross reference (MSM)

In this section

Overview

Introduction

This section discusses the following MSM-specific screens and functions:

- T1 Link Status
- T1 Channel Status
- SMDI Link Status
- MSM Cross Reference Table

When would you use these feature?

- Prior to modifying a T1 Link Setup (see "Viewing or modifying a T1 link setup" on page 28-30), you must first disable the T1 link. This is done through the T1 Link Status screen.
- To view the operational state of all T1 links, use the T1 Link Status screen. You can also switch T1 links if required.
- Prior to modifying the Channel Allocation Table (as part of the process of dedicating channels), you must disable the T1 channels you wish to modify. This is done through the T1 Channel Status screen.
- To view the operational state of all T1 channels, use the T1 Channel Status screen.
- To view the operational state of all SMDI links and enable or disable SMDI links as required, use the SMDI Link Status screen. You can also switch SMDI links if required.
- To look up the card number, shelf, and slot for each card in the system, use the MSM Cross Reference table.

The T1 Link Status screen

Introduction

The T1 Link Status screen allows you to view the operational state of the T1 links in your system. You can also enable or disable a link, activate one of the clock reference candidates, and switch a link to its alternate connection when required.

How to reach the screen

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select T1 Link Status. ***Result:*** The T1 Link Status screen is displayed.

The screen

The following is an example of the T1 Link Status screen.

```
                        System Status and Maintenance
T1 Link Status

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

                    Primary Connection            Redundant Connection
Link      Clocking    T1      T1                    T1       T1
 ID  Cand   Mode    Number  Location  Status      Number  Location  Status

  A                   1     13-1-1   InService      5     14-3-1   InSvStandBy
  B                   2     13-1-2   InService      6     14-3-2   InSvStandBy
  C                   3     13-1-3   InService      7     14-3-3   InSvStandBy
  D                   4     13-1-4   InService      8     14-3-4   InSvStandBy
  E                   9     15-1-1   InService     13     16-3-1   InSvStandBy
  F                  10     15-1-2   InService     14     16-3-2   InSvStandBy
  G                  11     15-1-3   InService     15     16-3-3   InSvStandBy
  H                  12     15-1-4   InService     16     16-3-4   InSvStandBy


Select a softkey >

 Exit | Enable T1 | Disable T1 | Change T1 Clocking Mode | Switch Link
```

Field descriptions

The following fields appear on the T1 Link Status screen.

System Status	
Description	This field displays the current system status. For details, see “The System Status screen (for MSM systems)” on page 29-17.
Alarm Status	
Description	This indicates the state of each of the types of alarms described below. For details, see “The System Status screen (for MSM systems)” on page 29-17.
T1 Link ID	
Description	This is a unique identifier for the T1 link. This corresponds to the T1 Link ID in the T1 Link Configuration screen accessed through Hardware Administration.
Cand	
Description	This is a read-only field. A “Y” indicates that the link has been nominated as a candidate for clock referencing. An “N” means that the link was a candidate but was disqualified. A candidate is nominated or disqualified from the T1 Link Setup screen (see “Viewing or modifying a T1 link setup” on page 28-30).
Clocking Mode	
Description	The currently activated clock reference is indicated with an R. A new clock reference is activated using the [Change T1 Clocking Mode] softkey.
Primary Connection-T1 Number	
Description	This is the number of the primary connection.
Primary Connection-T1 Location	
Description	This is the location (node-card-span) of the primary connection.

Primary Connection-Status	
Description	The current state of the primary connection.
Possible states	**InService** This state indicates that the link is operational and is accepting calls. **InSvStandby** This state indicates that the link is operational but is not currently accepting calls. **OutOfService** This indicates that the link is no longer operational as a result of a forced disable. **Unequipped** This indicates that the link has not been defined in the hardware database. Refer to *System Administration Tools* (NTP 555-7001-305) for instructions on modifying the hardware database. **Faulty** This indicates that a hardware problem was detected or a critical program on the link is not operational. **Loading** This state indicates that the link is currently starting up and loading software into memory. **Pending** This state indicates that the link is in the process of either shutting down or restarting. **InSvYelAlarm** This indicates that the link is in service, but has lost signalling with the far end. **InSvRedAlarm** This indicates that the link is in service, but has lost signalling with the local end.

Redundant Connection-T1 Number	
Description	This is the number of the redundant (secondary) connection.

Redundant Connection-T1 Location	
Description	This is the location (node-card-span) of the redundant (secondary) connection.

Redundant Connection-Status	
Description	The current state of the redundant (secondary) connection. See the description for “Primary Connection-Status”.

T1 Clock Reference Candidacy	
Description	This field shows whether the link has been configured as a candidate for clock referencing. Use the [Modify T1 Link Setup] softkey to nominate a link or disqualify a current candidate.
See Also	See “Viewing or modifying a T1 link setup” on page 28-30.

Disabling/enabling T1 links

Introduction

This section provides a procedure for disabling and then reenabling a T1 link. To completely disable a link (for example, prior to modify the T1 link setup as described in "Viewing or modifying a T1 link setup" on page 28-30), you must disable both the primary and secondary connection of the T1 link.

Note: You cannot disable a T1 connection if its status is either Faulty or Unequipped.

Platform

T1 links are applicable to MSM systems only.

Procedure

Starting Point: System Status and Maintenance screen

Step	Action
1	Select T1 Link Status. ***Result:*** The T1 Link Status screen is displayed.
2	Press the [Disable T1] softkey. ***Result:*** You are prompted for the T1 number of the connection you want to disable.
3	Enter the T1 number for the primary connection. ***Result:*** The primary T1 connection is disabled. This may take a few minutes. ***Note:*** If the maintenance task you are performing requires you to disable only one connection (either primary or redundant) and leave the other connection in service, then enter the T1 number of the connection that you need to disable. The remainder of this procedure applies to a situation where you need to completely disable the T1 link.
4	Press the [Disable T1] softkey. ***Result:*** You are prompted for the T1 number of the connection you want to disable.

Step	Action
5	Enter the T1 number for the redundant connection. ***Result:*** The redundant T1 connection is disabled. This may take a few minutes. When both the primary and redundant connections are disabled, the T1 link is completely out of service.
6	Perform any required maintenance tasks on the T1 link.
7	Use the [Enable T1] softkey to reenable any T1 connections that you disabled.

Activating a new clock reference

Introduction

This section provides a procedure for activating a new clock reference.

See Also

See “Viewing or modifying a T1 link setup” on page 28-30 for a discussion on clock reference.

Procedure

Starting Point: System Status and Maintenance screen

Step	Action
1	Select T1 Link Status. ***Result:*** The T1 Link Status screen is displayed.
2	Press the [Change T1 Clocking Mode] softkey. ***Result:*** You are prompted for a T1 link ID.
3	Enter the ID for the T1 link that you want to make the new clock reference. This must be a T1 link that is already nominated (a “Y” in the Cand field). To nominate a T1 link, see the steps in “Viewing or modifying a T1 link setup” on page 28-30. ***Result:*** An “R” appears in the Clocking Mode field for the T1 link you selected. ***Note:*** If you need to put the system in free run mode, enter Z when you are prompted for a T1 link ID. See “Private customer installation” on page 28-30 for a discussion on free run mode.

Switching T1 connections

Introduction

This section provides a procedure for switching from an InService T1 connection to its paired InSvStandby T1 connection.

This procedure is allowed only if one T1 connection for the link is InService and its partner is InSvStandby.

Note: Active calls on a T1 link are dropped when a Switch Link is performed on the link.

Platform

T1 connections are applicable to MSM systems only.

Procedure

Starting Point: System Status and Maintenance screen

Step	Action
1	Select T1 Link Status. ***Result:*** The T1 Link Status screen is displayed.
2	Press the [Switch Link] softkey. ***Result:*** You are prompted for a T1 link ID.
3	Enter the T1 link ID. ***Result:*** The InService connection changes status to InSvStandby, and the InSvStandby connection changes status to InService.

The T1 Channel Status screen

Introduction

The T1 Channel Status screen allows you to view the operational state of the T1 channels in your system. You can also enable or disable a T1 channel if required.

You must disable a T1 channel before changing any information relating to it on the Channel Allocation Table.

Platform

T1 channels are applicable to MSM systems only.

How to reach the screen

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select T1 Channel Status. ***Result:*** The T1 Channel Status screen is displayed.

The screen

The following is an example of the T1 Channel Status screen.

```
                        System Status and Maintenance
T1 Channel Status

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On
      Channels
Link  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  A   .  .  .  .  .  .  .  .  .  .  a  .  .  .  .  .  .  .  .  .  .  .  .  .
  B   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  C   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  D   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  E   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  F   .  a  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  a  .  .  .  .  .  .
  G   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
  H   .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .


a = Active/in use    . = Idle              O = Out of Service    R = No Resource
F = Faulty           P = Pending       space = Unequipped        L = Loading
C = Courtesy Down    M = MakeBusy

Select a softkey > _

 Exit | Enable Channel | Disable Channel | Courtesy Disable Chan | Change to Range Mode
```

Field descriptions

The following fields appear on the T1 Channel Status screen.

System Status	
Description	This field displays the current system status. For details, see “The System Status screen (for MSM systems)” on page 29-17.
Alarm Status	
Description	This indicates the state of each of the types of alarms described below. For details, see “The System Status screen (for MSM systems)” on page 29-17.
Link	
Description	This is a unique identifier for the T1 link. This corresponds to the T1 Link ID in the T1 Link Configuration screen accessed through Hardware Administration.
Channels	
Description	The current state of each T1 channel, as indicated by a single-character code. A legend describing the meaning of each code appears at the bottom of the screen.

Disabling/enabling T1 channels in single mode

Introduction

This section describes how to disable T1 channels in single mode (one channel at a time).

Platform

T1 channels are applicable to MSM systems only.

Guidelines for disabling T1 channels

On an MSM system, you should have the same number of DSP ports in service as there are T1 channels in service. See “Rules for disabling T1 channels and DSP ports (for MSM)” on page 29-85.

Disable Channel versus Courtesy Disable Channel

The procedure in this section asks you to check if a T1 channel is idle or active before disabling it. If a T1 channel is idle, you can use the [Disable Channel] softkey. If a T1 channel is active (it is processing a call to Meridian Mail), it is recommended that you use the [Courtesy Disable Chan] softkey.

The courtesy disable method waits until the call is disconnected before disabling the T1 channel. This prevents users from being disconnected suddenly from Meridian Mail.

If you use the [Disable Channel] softkey to disable an active T1 channel, the caller is abruptly disconnected.

Procedure

Starting Point: The System Status and Maintenance menu

Step	Action
1	Select T1 channel Status. ***Result:*** The T1 channel Status screen is displayed.
2	Is the T1 channel active? • If yes, press [Courtesy Disable Chan]. • If no, press [Disable Channel]. ***Result:*** You are prompted for a Link ID.
3	Enter the ID for the link that contains the channel you want to disable. ***Result:*** You are prompted for the number of an in-service channel.

Step	Action
4	Enter the number of the channel you want to disable, followed by <Return>. ***Result:*** The system may take some time to disable the channel. In the case of a courtesy disable, the system waits until the active call has been disconnected. When the channel is disabled, its status will change to Pending (“P”), and then to out-of-service (“O”).
5	Perform any required maintenance activities.
6	Press [Enable Channel]. ***Result:*** You are prompted for a Link ID.
7	Enter the ID for the link that contains the channel you want to enable. ***Result:*** You are prompted for the number of an out-of-service channel.
8	Enter the T1 channel number, followed by <Return>. ***Result:*** The system may take some time to enable the channel. While the channel is being enabled, its status will change to Loading (“L”), and then to Idle (“.”).
9	Press [Exit] to return to the System Status and Maintenance menu.

Disabling/enabling T1 channels in range mode

Introduction

Range mode allows you to disable or enable a contiguous range of T1 channels at once. This saves time over disabling or enabling T1 channels one at a time.

Platform

T1 channels are applicable to MSM systems only.

Guidelines for disabling T1 channels

On an MSM system, you should have the same number of DSP ports in service as there are T1 channels in service. See "Rules for disabling T1 channels and DSP ports (for MSM)" on page 29-85.

Disable Channel versus Courtesy Disable Channel

The procedure in this section asks you to check if the T1 channels are idle or active before disabling them. If the T1 channels are idle, you can use the [Disable Channel] softkey. If some of the T1 channels are active (they are processing calls to Meridian Mail), it is recommended that you use the [Courtesy Disable Chan] softkey.

The courtesy disable method waits until the call is disconnected before disabling the T1 channel. This prevents users from being disconnected suddenly from Meridian Mail.

If you use the [Disable Channel] softkey to disable an active T1 channel, the caller is abruptly disconnected.

Procedure

Starting Point: The System Status and Maintenance menu

Step	Action
1	Select T1 channel Status. ***Result:*** The T1 channel Status screen is displayed.
2	Press [Change to Range Mode]. ***Result:*** The softkey now shows [Change to Single Mode].
3	Are the T1 channels active? • If yes, press [Courtesy Disable Chan]. • If no, press [Disable Channel]. ***Result:*** You are prompted for a Link ID.

Step	Action
4	Enter the ID for the link that contains the channels you want to disable. ***Result:*** You are prompted for the number of the first channel in the range you want to disable.
5	Enter the number of the first channel in the range, followed by <Return>. ***Result:*** You are prompted for the number of the last channel in the range you want to disable.
6	Enter the number of the last channel you want to disable, followed by <Return>. ***Result:*** The system may take some time to disable the channels. In the case of a courtesy disable, the system waits until the active call has been disconnected. While channels are being disabled, their status will change to Pending (“P”), and then to out-of-service (“O”). The message “WORKING...” may also be displayed at this time. After the disabling is completed, the system displays a message indicating the number of channels that were successfully disabled, and the number of channels that could not be disabled.
7	Perform any required maintenance activities.
8	Press [Enable Channel]. ***Result:*** You are prompted for a Link ID.
9	Enter the ID for the link that contains the channels you want to enable. ***Result:*** You are prompted for the number of the first channel in the range you want to enable.

Step	Action
10	Enter the number of the first channel in the range, followed by <Return>. ***Result:*** You are prompted for the number of the last channel in the range you want to enable.
11	Enter the number of the last channel you want to enable, followed by <Return>. ***Result:*** The system may take some time to enable the channels. While channels are being enabled, their status will change to Loading (“L”), and then to Idle (“.”). The message “WORKING...” may also be displayed at this time. After the enabling is completed, the system displays a message indicating the number of channels that were successfully enabled, and the number of channels that could not be enabled.
12	Press [Exit] to return to the System Status and Maintenance menu.

Viewing T1 link and channel status from Logon screen

Introduction

This section describes the T1 Link Status and T1 Channel Status screens that you can access from the Logon screen without logging in to the system.

These screens present the same information as described in "The T1 Link Status screen" on page 29-89 and "The T1 Channel Status screen" on page 29-97. However, these screens do not provide the maintenance softkeys (enable, disable, and so on) provided in the screens when they are accessed from the System Status and Maintenance menu.

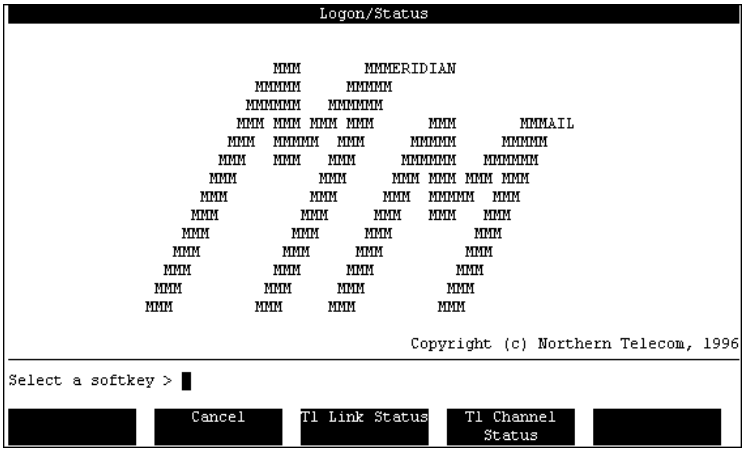
Platform

T1 links and channels are applicable to MSM systems only.

Procedure

Starting Point: The Logon screen

Step	Action
1	Press the [T1 Status] softkey. ***Result:*** The softkeys change as shown in this example.



2	To view the T1 Link Status screen, press the [T1 Link Status] softkey. ***Result:*** The T1 Link Status screen is displayed with only an [Exit] softkey. For a screen example and field descriptions, see “The T1 Link Status screen” on page 29-89.
3	To view the T1 Channel Status screen, press the [T1 Channel Status] softkey. ***Result:*** The T1 Channel Status screen is displayed with only an [Exit] and [Detailed] softkey. If you press the [Detailed] softkey, the system displays a more-detailed view of this screen. See “Detailed view of the T1 Channel Status screen” on page 29-106. For an example of the normal T1 Channel Status screen and field descriptions, see “The T1 Channel Status screen” on page 29-97.
4	To exit from either the T1 Link Status screen or the T1 Channel Status screen, press [Exit]. To return to the Logon screen, press [Cancel].

Detailed view of the T1 Channel Status screen

Introduction

When you access the T1 Channel Status screen from the Logon screen, you can get a detailed view by pressing the [Detailed] softkey.

For each T1 channel, you are told the T1 channel type (basic-voice, full-voice, or multimedia) and its status (for example, Idle, Active, or OutOfService).

Platform

T1 channels are applicable to MSM systems only.

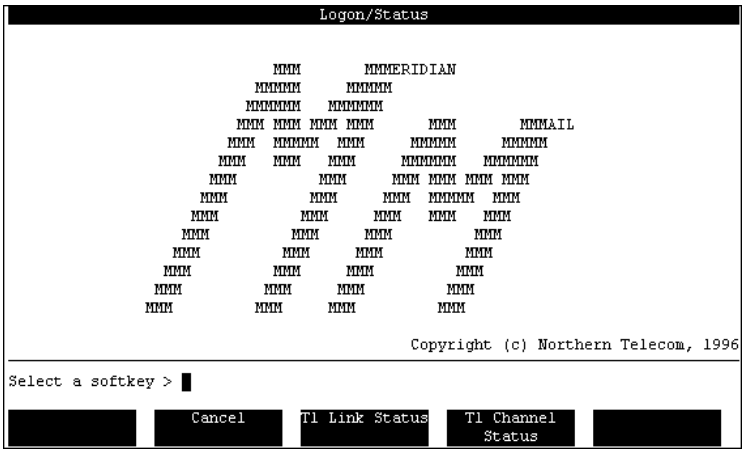
When to use this feature

If you have a mixture of T1 channel types (basic-voice, full-voice, multimedia), the detailed view presents a clear picture of what types of T1 channels are installed in your system, how many, and where.

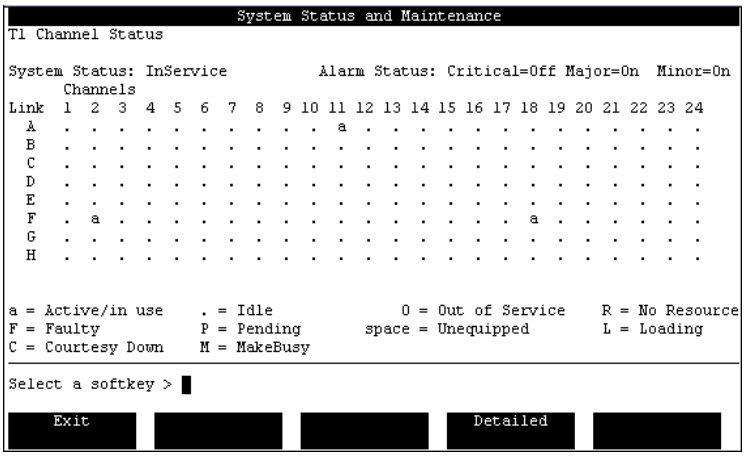
How to access the Detailed screen

Starting Point: The Logon/Status screen

Step	Action
1	Press the [T1 Status] softkey. ***Result:*** The softkeys change as shown in this example.



Step	Action
2	Press the [T1 Channel Status] softkey. ***Result:*** The T1 Channel Status screen is displayed with only an [Exit] and [Detailed] softkey. For field descriptions, see “The T1 Channel Status screen” on page 29-97.



Step	Action
3	Press the [Detailed] softkey. ***Result:*** The detailed view of the T1 Channel Status screen is displayed and the [Detailed] softkey changes to [Brief].

```
                        System Status and Maintenance
T1 Channel Status

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On
      Channels
Link  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  A  V. V. V. V. V. V. V. V. V. V. Va V. V. V. V. V. V. V. V. V. V. V. V. V.
  B  V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V.
  C  V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V.
  D  V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V.
  E  V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V.
  F  V. Va V. V. V. V. V. V. V. V. V. V. V. V. V. V. Va V. V. V. V. V. V.
  G  V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V.
  H  V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V. V.

V = Full Voice       B = Basic Voice       M = Multimedia
a = Active/in use    . = Idle              O = Out of Service    R = No Resource
F = Faulty           P = Pending       space = Unequipped        L = Loading
C = Courtesy Down    M = MakeBusy

Select a softkey >

   Exit                                                  Brief
```

Notice that a combination of two single-letter codes are used to describe the channel. For example, “V.” means a full voice channel that is Idle. “VO” would mean a full voice channel that is Out of Service.

The SMDI Link Status screen

Introduction

The SMDI Link Status screen allows you to view the operational state of the SMDI links in your system. You can also enable or disable a link, activate one of the clock reference candidates, and switch a link to its alternate connection when required.

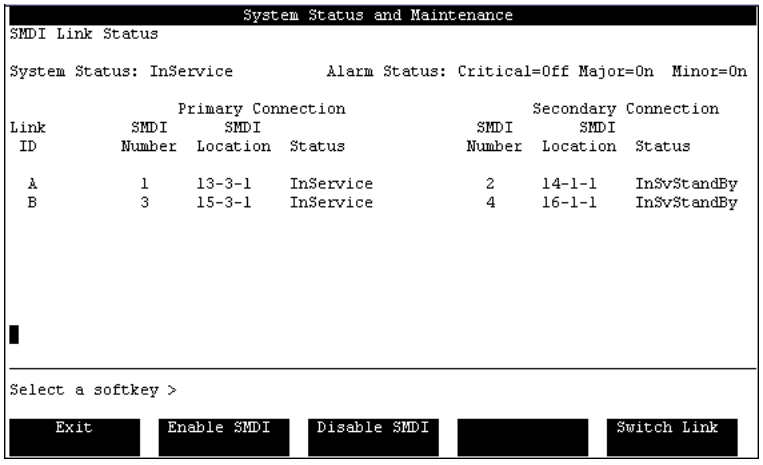
How to reach the screen

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select SMDI Link Status. ***Result:*** The SMDI Link Status screen is displayed.

The screen

The following is an example of the SMDI Link Status screen.



Field descriptions

The following fields appear on the SMDI Link Status screen.

System Status	
Description	This field displays the current system status. For details, see “The System Status screen (for MSM systems)” on page 29-17.
Alarm Status	
Description	This indicates the state of each of the types of alarms described below. For details, see “The System Status screen (for MSM systems)” on page 29-17.
Link ID	
Description	This is a unique identifier for the SMDI link.
Primary Connection-SMDI Number	
Description	This is the number of the primary connection.
Primary Connection-SMDI Location	
Description	This is the location (node-card-span) of the primary connection.
Primary Connection-Status	
Description	The current state of the primary connection.

Possible states	**InService** This state indicates that the link is operational and is accepting calls. **InSvStandby** This state indicates that the link is operational but is not currently accepting calls. **OutOfService** This indicates that the link is no longer operational as a result of a forced disable. **Unequipped** This indicates that the link has not been defined in the hardware database. Refer to *System Administration Tools* (NTP 555-7001-305) for instructions on modifying the hardware database. **Faulty** This indicates that a hardware problem was detected or a critical program on the link is not operational. **Loading** This state indicates that the link is currently starting up and loading software into memory. **Pending** This state indicates that the link is in the process of either shutting down or restarting. **InSvYelAlarm** This indicates that the link is in service, but has lost the modem connection. **InSvRedAlarm** This indicates that the link is in service, but has lost signalling with the MSM host.

Redundant Connection-SMDI Number

Description	This is the number of the redundant (secondary) connection.

Redundant Connection-SMDI Location

Description	This is the location (node-card-span) of the redundant (secondary) connection.

Redundant Connection-Status

Description	The current state of the redundant (secondary) connection. See the description for “Primary Connection-Status”.

Disabling/enabling SMDI links

Introduction

This section provides a procedure for disabling and then reenabling an SMDI link. To completely disable an SMDI link, you must disable both the primary and secondary connection of the SMDI link.

Effect on active calls

When an SMDI link is disabled, calls that are already in the queue are routed to the Meridian Mail default service (this is usually the voice messaging service). If this is not acceptable, then disable the T1 links on the same node before disabling the SMDI link. This will prevent calls from being caught in the SMDI link when it is disabled.

Procedure

Starting Point: System Status and Maintenance screen

Step	Action
1	Select SMDI Link Status. ***Result:*** The SMDI Link Status screen is displayed.
2	Press the [Disable SMDI] softkey. ***Result:*** You are prompted for the SMDI number of the connection you want to disable.
3	Enter the SMDI number for the primary connection. ***Result:*** The primary SMDI connection is disabled. This may take a few minutes. ***Note:*** If the maintenance task you are performing requires you to disable only one connection (either primary or redundant) and leave the other connection in service, then enter the SMDI number of the connection that you need to disable. The remainder of this procedure applies to a situation where you need to completely disable the SMDI link.
4	Press the [Disable SMDI] softkey. ***Result:*** You are prompted for the SMDI number of the connection you want to disable.

Step	Action
5	Enter the SMDI number for the redundant connection. ***Result:*** The redundant SMDI connection is disabled. This may take a few minutes. When both the primary and redundant connections are disabled, the SMDI link is completely out of service.
6	Perform any required maintenance tasks on the SMDI link.
7	Use the [Enable SMDI] softkey to reenable any SMDI connections that you disabled.

Switching SMDI connections

Introduction

This section provides a procedure for switching from an InService SMDI connection to its paired InSvStandby SMDI connection.

This procedure is allowed only if one SMDI connection for the link is InService and its partner is InSvStandby.

Note: Active calls on an SMDI link are dropped when a Switch Link is performed on the link.

Procedure

Starting Point: System Status and Maintenance screen

Step	Action
1	Select SMDI Link Status. ***Result:*** The SMDI Link Status screen is displayed.
2	Press the [Switch Link] softkey. ***Result:*** You are prompted for an SMDI link ID.
3	Enter the SMDI link ID. ***Result:*** The InService connection changes status to InSvStandby, and the InSvStandby connection changes status to InService.

MSM Cross Reference Table

Introduction

The MSM Cross Reference Table allows you to look up the card number, shelf, and slot for any card in the system.

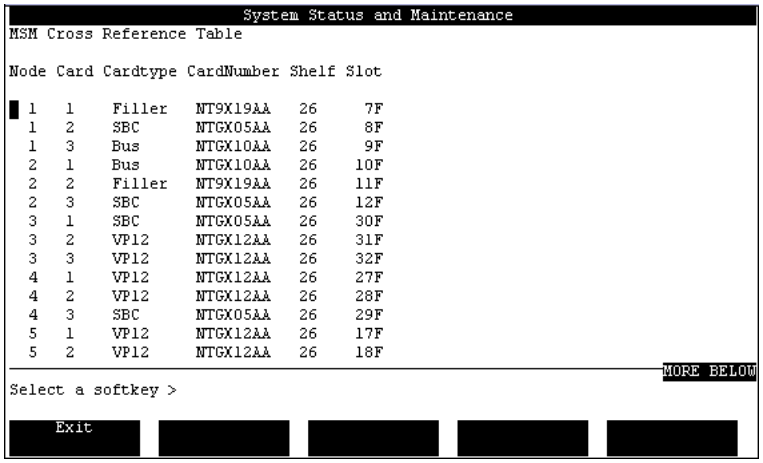
How to reach the screen

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select MSM Cross Reference Table. ***Result:*** The MSM Cross Reference Table is displayed.

The screen

The following is an example of the MSM Cross Reference Table.



Field descriptions

The following fields appear on the MSM Cross Reference Table screen.

Node	
Description	This is the node number.
Card	
Description	This is the card number on the node identified in the first column.
Card type	
Description	This is the type of card. For a description of card types, see the Card_Type description in “Field descriptions” on page 28-16.
Card Number	
Description	This is the part number for the card.
Shelf	
Description	This is the shelf on which the card is located.
Slot	
Description	This is the slot in which the card is located. “F” indicates front access to the card. “R” indicates rear access to the card.

Section F Disk Maintenance

In this section

Overview

Introduction

The Disk Maintenance screen allows you to view the operational state of the disks on your system. If your system is a shadowed system, you can also synch or unsynch a disk pair using the functions available through this screen.

When to use this feature

Shadowed or Unshadowed system

If you suspect that your disks are not functioning properly, use the Disk Maintenance screen to check the status of the disks on your system. See “Checking disk status” on page 29-119.

If you suspect a particular disk or disk pair is not functioning properly, you can run a diagnostic check using the [Diagnostics] softkey on the Disk Maintenance screen. See “Running diagnostics on a disk or a disk pair” on page 29-130.

Shadowed system

If you need to replace or repair one of the disks in a disk pair, you must first disable disk shadowing for the disk pair (unsynch the disk pair). The Disk Maintenance screen provides a softkey for unsynching a disk pair. See “Disabling disk shadowing (unsynching)” on page 29-126.

After a disk has been replaced or repaired, you need to synchronize the disk pair. The Disk Maintenance screen provides a softkey for synching a disk pair. See “Re-enabling disk shadowing (synching a disk pair)” on page 29-128.

MSM versus GP

MSM systems always have disk shadowing. A Modular GP system can be unshadowed or shadowed.

Checking disk status

Introduction

The Disk Maintenance screen lists the disks on your system and displays their current states.

Disk status

A disk can be in one of the following states:

- ***ReadWrite*** The disk is in service (functioning properly according to Meridian Mail).
- ***NoAccess*** The disk is disabled. Check your SEERs for more information.
- ***Faulty*** The disk has failed a diagnostics check that was performed using the [Diagnostics] softkey from the Disk Maintenance screen.

Shadowed systems only

- ***Write*** The disk is being written to. A disk may have this status during a disk synchronization.

Procedure

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Disk Maintenance. ***Result:*** The Disk Maintenance screen is displayed.

Disk Maintenance screen: Unshadowed system (GP)

The following is an example of the Disk Maintenance screen on an unshadowed system.

```
                    System Status and Maintenance
Disk Maintenance

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

Disk Node  HWLOC   Prime
     Type (N-C-ID) Status
1    MSP   1-7-0   ReadWrite
2    SPN   2-1-0   ReadWrite
3    SPN   3-7-0   NoAccess
4    SPN   4-1-0   ReadWrite

Select a softkey >

    Exit                                                    Diagnostics
```

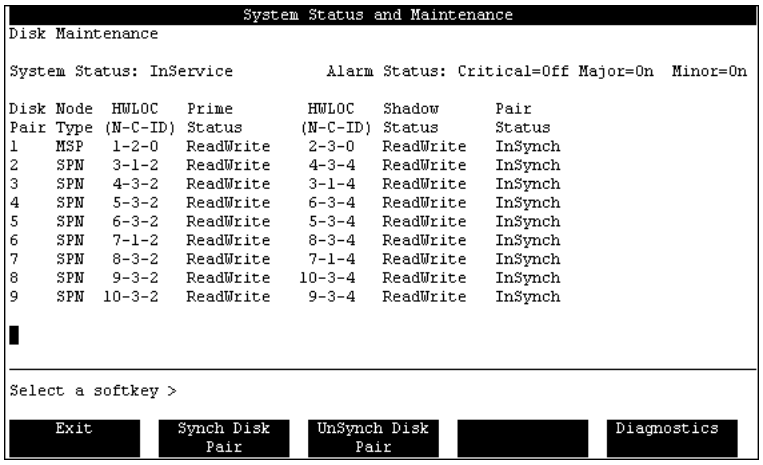
Disk Maintenance screen: Shadowed system (GP)

The following is an example of the Disk Maintenance screen on a shadowed system.

```
                    System Status and Maintenance
Disk Maintenance

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

Disk Node  HWLOC   Prime        HWLOC   Shadow      Pair
Pair Type (N-C-ID) Status      (N-C-ID) Status      Status
1    MSP   1-7-0   ReadWrite    1-7-2   ReadWrite   InSynch
2    SPN   2-1-0   ReadWrite    2-1-2   NoAccess    OutofSynch
3    SPN   3-7-0   NoAccess     3-7-2   ReadWrite   OutofSynch
4    SPN   4-1-0   ReadWrite    4-1-2   ReadWrite   InSynch

Select a softkey >

    Exit          Synch Disk    UnSynch Disk                Diagnostics
                    Pair          Pair
```

Disk Maintenance screen: Shadowed system (MSM)

The following is an example of the Disk Maintenance screen on an MSM system.



```
                        System Status and Maintenance
Disk Maintenance

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

Disk Node  HWLOC   Prime        HWLOC   Shadow      Pair
Pair Type (N-C-ID) Status      (N-C-ID) Status      Status
1    MSP   1-2-0   ReadWrite    2-3-0   ReadWrite   InSynch
2    SPN   3-1-2   ReadWrite    4-3-4   ReadWrite   InSynch
3    SPN   4-3-2   ReadWrite    3-1-4   ReadWrite   InSynch
4    SPN   5-3-2   ReadWrite    6-3-4   ReadWrite   InSynch
5    SPN   6-3-2   ReadWrite    5-3-4   ReadWrite   InSynch
6    SPN   7-1-2   ReadWrite    8-3-4   ReadWrite   InSynch
7    SPN   8-3-2   ReadWrite    7-1-4   ReadWrite   InSynch
8    SPN   9-3-2   ReadWrite   10-3-4   ReadWrite   InSynch
9    SPN  10-3-2   ReadWrite    9-3-4   ReadWrite   InSynch

Select a softkey >

 Exit | Synch Disk Pair | UnSynch Disk Pair |  | Diagnostics
```

Field descriptions

The following fields appear on the Disk Maintenance screen.

System Status	
Description	This field displays the current system status.
Possible status types	The possible status types are as follows. **InService** This indicates the system is running. **CourtesyPending** This indicates that the system is in the process of shutting down. **CourtesyDown** This indicates that the system has shut down and is no longer operational or accepting calls. **Loading** This indicates the system is loading software during bootup.

Alarm Status	
Description	This indicates the state of each of the types of alarms described below.
Alarm types	There are three possible alarm types. **Critical** These alarms indicate a service-affecting problem that requires immediate attention. **Major** These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. **Minor** These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 30, “SEERs and Meridian Mail Alarms”.
Alarm states	Each alarm type can be in one of the following states. **Off** This state indicates that there are no new alarms. This does not necessary mean that there are no error conditions. **On** This status indicates that one or more alarm situations were detected. **Unk** This indicates that the status is unknown.

Disk Pair (appears only on Shadowed systems)	
Description	This is the number assigned to the disk pair.
When used	You are prompted for the disk pair number when performing the Synch Disk Pair, Unsynch Disk Pair, or Diagnostics functions.

Disk (appears only on Unshadowed systems)	
Description	This is the number assigned to the disk.

Node Type	
Description	This is the type of node (for example, an MSP node or SPN node).
HWLOC	
Description	The hardware location of the disk (node number–card number–disk ID).
Example	The numbers 1–7–0 refer to: Node number (1) Card number (7) Disk id (0)
Prime Status	
Description	This is the status of the disk on the node in an unshadowed system, or the status of the prime disk of a disk pair in a shadowed system.
Possible states	A disk can be in one of the following states: **ReadWrite** The disk is operating properly. **NoAccess** The disk is disabled. **Write** The disk is being written to (during a disk synchronization in a shadowed system). **Faulty** The disk failed a diagnostic check that was performed using the [Diagnostics] softkey on the Disk Maintenance screen.
Shadow Status	
Description	This is the status of the shadow disk of a disk pair in a shadowed system.
Possible states	A disk can be in one of the following states: **ReadWrite** The disk is operating properly. **NoAccess** The disk is disabled. **Write** The disk is being written to (during a disk synchronization). **Faulty** The disk failed a diagnostic check that was performed using the [Diagnostics] softkey on the Disk Maintenance screen.

Pair Status	
Description	This is the status of the disk pair. This field appears only on a shadowed system.
Possible states	A disk pair can be in one of the following states: **InSynch** Both disks are functioning properly and the disk pair is in synch. **OutofSynch** One of the disks has been disabled, so the disk pair is out of synch. **Synching** The disk pair is currently being synchronized. When this is happening, the screen also displays the progress of the synchronization in terms of percentage completed. **NoAccess** Both disks in the disk pair are in NoAccess state.

Disabling disk shadowing (unsynching)

Introduction

Disk shadowing is disabled for a disk pair by unsynching the disk pair. It is necessary to disable disk shadowing if you need to repair or replace one of the disks in a disk pair.

Procedure

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Disk Maintenance. ***Result:*** The Disk Maintenance screen is displayed.
3	Press the [Unsynch Disk Pair] softkey. ***Result:*** You are prompted to enter a disk pair number.
4	Enter the disk pair number for the disk pair that you need to disable. ***Result:*** The system asks you which disk should be disabled (the Primary Disk or the Shadow Disk).
5	Select the disk that you plan to repair or replace (Primary disk or Shadow Disk). ***Result:*** The disk is placed in NoAccess state (it is disabled). ***Note:*** If the other disk is in NoAccess state, the request to disable the disk is denied. One of the disks in a disk pair must be in ReadWrite state to keep the node operational.

Replacing a failed disk

Where to find information

The procedures for replacing a failed disk are provided in the *Installation and Maintenance Guide* (NTP 555-7051-250) for Mod Op GP systems, or in the *MSM Hardware Replacement and Maintenance Guide* (NTP 557-7001-502) for the MSM.

Re-enabling disk shadowing (synching a disk pair)

Introduction

After a disk has been replaced or repaired, you need to synchronize the disk pair to reenable disk shadowing. The Disk Maintenance screen provides a softkey for synching a disk pair.

Tip

If you need to synch more than one disk pair, you can begin synching subsequent disk pairs as soon as the first disk pair has started synching. You do not have to wait for one disk pair to finish synching before synching another disk pair.

Timing

This procedure takes at least thirty minutes. The actual time depends on the size of the source disk.

Procedure

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Disk Maintenance. ***Result:*** The Disk Maintenance screen is displayed.
3	Press the [Synch Disk Pair] softkey. ***Result:*** You are prompted to enter a disk pair number.
4	Enter the number of the disk pair that you need to synch (to re-enable disk shadowing for the disk pair) and press Return. ***Result:*** On MSM systems, you are prompted for the node on which to run the synchronization program. On Modular Option GP systems, the synching begins.
5	If yours is an MSM system, enter the appropriate node number and press Return. ***Note:*** If one of the nodes in the disk pair is under a heavy load, choose the other node. ***Result:*** The synching begins.

What happens during synchronization

The screen displays the progress of the synchronization. It displays the percentage of synchronization that is complete.

The status of the disk that is being written to changes to “Write” until the synching is complete. When complete, the status of both disks is set to ReadWrite if both disks are functioning properly. If one of the disks in the disk pair is faulty, the synching will fail and you are notified by a screen message.

Screen showing disk synchronization (GP)

The following is an example of a Disk Maintenance screen with a disk synchronization in progress.

```
                    System Status and Maintenance
Disk Maintenance

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

Disk Node  HWLOC   Prime        HWLOC   Shadow      Pair
Pair Type (N-C-ID) Status      (N-C-ID) Status      Status
1    MSP   1-7-0   ReadWrite    1-7-2   ReadWrite   InSynch
2    SPN   2-1-0   ReadWrite    2-1-2   Write       Synching on Node  2   3%done
3    SPN   3-7-0   NoAccess     3-7-2   ReadWrite   OutofSynch
4    SPN   4-1-0   ReadWrite    4-1-2   ReadWrite   InSynch

Select a softkey >
Disk Pair 2 disk synchronization started.
 Exit | Synch Disk Pair | UnSynch Disk Pair |  | Diagnostics ]
```

Screen showing disk synchronization (MSM)

The following is an example of a Disk Maintenance screen with a disk synchronization in progress.

```
                    System Status and Maintenance
Disk Maintenance

System Status: InService          Alarm Status: Critical=Off Major=On  Minor=On

Disk Node  HWLOC   Prime        HWLOC   Shadow      Pair
Pair Type (N-C-ID) Status      (N-C-ID) Status      Status
1    MSP   1-2-0   ReadWrite    2-3-0   ReadWrite   InSynch
2    SPN   3-1-2   ReadWrite    4-3-4   Write       Synching on Node  3   3%done
3    SPN   4-3-2   ReadWrite    3-1-4   ReadWrite   InSynch
4    SPN   5-3-2   ReadWrite    6-3-4   ReadWrite   InSynch
5    SPN   6-3-2   ReadWrite    5-3-4   ReadWrite   InSynch
6    SPN   7-1-2   ReadWrite    8-3-4   ReadWrite   InSynch
7    SPN   8-3-2   ReadWrite    7-1-4   ReadWrite   InSynch
8    SPN   9-3-2   ReadWrite   10-3-4   ReadWrite   InSynch
9    SPN  10-3-2   ReadWrite    9-3-4   ReadWrite   InSynch

Select a softkey >
Disk Pair 2 disk synchronization started.
 Exit | Synch Disk Pair | UnSynch Disk Pair |  | Diagnostics
```

Running diagnostics on a disk or a disk pair

Introduction

If you suspect a problem with a disk, run the diagnostic function on the disk. The system responds with a message indicating if the disk is ok (passed) or faulty (failed).

Procedure

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Disk Maintenance. ***Result:*** The Disk Maintenance screen is displayed.
3	Press the [Diagnostics] softkey. ***Result:*** You are prompted to enter a disk number (or a disk pair number on a shadowed system).
4	Enter the number of the disk or disk pair you want to check. ***Result (on a shadowed system):*** The system asks you which disk you want to check (the Primary Disk or the Shadow Disk). Select one of the disks. After a few moments, the system responds with the results of the diagnostic check. ***Result (on an unshadowed system):*** After a few moments, the system responds with the results of the diagnostic check.

Possible results

The system will respond with one of the following messages:

Message	Meaning
Disk diagnostics passed.	The disk is functioning normally.
Disk diagnostics failed. xxxx (where “xxxx” is the error code)	The disk is not functioning properly. A SEER is generated which will provide more details on what the problem is and what action you should take.

Message	Meaning
Invalid component state to do disk diagnostics.	If the disk is not in a valid state (InService, OutOfService, Faulty, or Unconfigured), then the diagnostics routine will not run. Contact your regional support centre.
Cannot perform diagnostics. Disk Synchronization in progress.	The disk pair you have selected is currently being synched. You must wait for the synching to complete before you can run diagnostics on one of the disks in the disk pair.
Invalid node state to run diagnostics on this disk.	The node must be InService, OutOfService, or in Standby state for the diagnostics routine to run.

Section G Diagnostic Schedules

In this section

Overview

Introduction

The Diagnostics Schedules screen allows you to schedule a diagnostic check on the voice channels in your system. On an MSM system, you can also enable Bus Controller Diagnostics. You can control what time the diagnostics take place (to avoid peak traffic periods).

Start time for diagnostics

On a Modular GP system, the start time is for the voice path diagnostics only. On an MSM system, the start time is for both voice path and bus controller diagnostics. The bus controller diagnostics are run first (it should take about five minutes). Then the voice path diagnostics are run immediately afterward.

When to use this feature

If you have not enabled diagnostics yet, you would use this feature to

- schedule when you want diagnostics to take place

If the voice path diagnostic tests are causing a traffic problem, you can use this feature to

- change the voice path diagnostics schedule to a less-busy time
- disable voice path diagnostic testing
- change what happens when voice path diagnostics fail (whether channels taken offline or left InService)
- change the duration of the voice path diagnostics
- change the minimum number of channels that must be idle before voice path diagnostics will run

What are Voice Path Diagnostics?

Definition: Voice Path Diagnostics

Voice Path Diagnostics is a feature that tests the operational state of the voice channels.

How the test is done

The system sets up calls which go from Meridian Mail to the switch and back. Two channels are tested at a time (one to make the call to the switch, one to receive the call from the switch). Only InService channels are tested.

The test continues until either

- all InService channels are tested, or
- the maximum duration allowed for the tests runs out

Definition: Originator and Destination

The Originator is the port used to make the call from Meridian Mail to the switch. The Destination is the port used to receive the call back from the switch to Meridian Mail.

Possible test results

A channel can pass, fail, or be left untested. For more details, see “Analyzing the results of the diagnostics” on page 29-141.

What are Bus Controller Diagnostics?

Definition: Bus Controller Diagnostics

Bus Controller Diagnostics is a feature that tests the ability of an MSM system to switch over from the active MSP node to the standby MSP node.

How the test is done

The ability to switch over is tested by temporarily switching the roles of the bus controller cards. The standby card becomes the active card, and the active card becomes the standby card. The MSP nodes themselves are never switched over as part of this test.

This test should take about five minutes. This test is run until completion.

SEER class

To see how the test progressed, look for Class 75 SEERs.

If the test fails

If a test fails, one of the following may occur:

- A critical SEER is generated to indicate the failure.
- If the bus controller cards cannot return to their original state, an MSP switchover may occur.
- The bus controller card which is in the standby state after the failure is marked as Faulty in the hardware database.

Changing the parameters and schedule for diagnostics

Introduction

The parameters and schedule for diagnostics are defined on the Diagnostic Schedules screen. For bus controller diagnostics, there are no parameters to set, except to enable the diagnostics and to define the schedule. The schedule you define here is for both voice path and bus controller diagnostics.

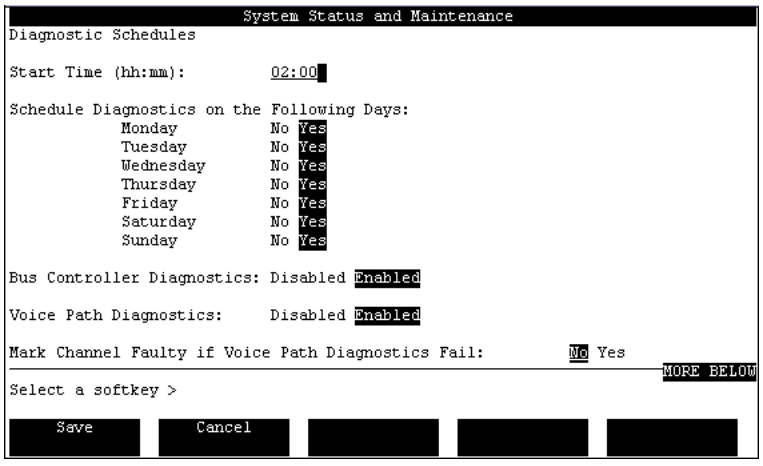
On this screen you can

- enable or disable diagnostics
- change the time or days that diagnostics are run
- change the maximum duration for voice path diagnostics
- determine if a faulty channel is automatically taken out of service
- determine the minimum number of idle channels that must be present before voice path diagnostics are run

Note: Changes to the schedule or parameters while diagnostics are running will not take effect until the current diagnostics session is completed.

The Diagnostic Schedules screen

The following is an example of the Diagnostic Schedules screen.



All the fields do not fit on the first screen. Scroll down or press <Next Screen> to see the remaining fields.

Field descriptions

The following fields appear on the Diagnostic Schedules screen.

Start Time (hh:mm)	
Description	This is the time that diagnostics begin.
Tip	Set the start time to a low-traffic part of the day.
Default	3:00 am (03:00)

Schedule Diagnostics on the Following Days	
Description	For each day listed, select Yes to allow diagnostics to run on that day, or select No to disable diagnostics for that day.
Default	For each day, the default is Yes.

Bus Controller Diagnostics (MSM only)	
Description	This field determines if bus controller diagnostics are enabled or disabled.
Default	Enabled

Voice Path Diagnostics	
Description	This field determines if voice path diagnostics are enabled or disabled.
Default	Enabled

Mark Channel Faulty if Voice Path Diagnostics Fail	
Description	Set this field to Yes if you want a faulty channel to be taken out of service. If you set this field to No, the channel remains InService. In either case, a SEER is issued indicating the channel is faulty.
Considerations	If channels are taken out of service by the diagnostics routine, system performance may be affected as the number of channels InService decreases. Keep in mind that even if faulty channels are left InService, you still need to investigate why the channel is being tagged as faulty by the diagnostics routine.

Default	No
Maximum Duration of Voice Path Diagnostics (hh:mm)	
Description	This is the maximum length of time voice path diagnostics are allowed to run during one session.
Considerations	While diagnostics are running, two channels are unavailable for use. This may impact system performance if the diagnostics continue into a high-traffic time period.
Default	2 hours (02:00)
Minimum Number of Idle Channels for Voice Path Diagnostics	
Description	This is the number of channels that must be idle in addition to the two channels required for the diagnostic tests. If this field is set to 2, then 4 channels must be idle before voice path diagnostics will begin. After voice path diagnostics finishes testing a pair of channels, it checks again to make sure there are enough idle channels in addition to the two channels required for testing, as specified in this field, before continuing.
Considerations	If the diagnostics are causing a traffic problem, you may wish to increase the number of idle channels that must be present.
Example	If this field is set to 2, then 4 channels must be idle before each diagnostic test. After voice path diagnostics finishes testing a pair of channels, it checks that at least 4 channels are idle before acquiring 2 of those idle channels for the next test. In this manner, voice path diagnostics continues until all channels have been tested, or until the Maximum Duration value is exceeded.
Default	2

Procedure

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select Diagnostic Schedules. ***Result:*** The Diagnostic Schedules screen is displayed.
3	Fill in the fields as required. See “Field descriptions” on page 29-138.
4	Are you satisfied with the changes? • If yes, press [Save]. ***Result:*** The changes are saved and you are returned to the System Status and Maintenance menu. • If no, press [Cancel]. ***Result:*** The changes are not saved and you are returned to the System Status and Maintenance menu.

Analyzing the results of the diagnostics

Introduction The results of the diagnostics are provided through SEERs.

Possible test results The following possible results are presented in the SEERs.

Test result	Originator's state	Destination's state	Meaning/Action taken
Passed	n/a	n/a	Both the originator and destination ports are tagged as passed.
Failed (after testing)	Untested	Passed	The originator port is faulty. A major alarm SEER is generated to inform you of the failure. If the Mark Channel Faulty if Voice Path Diagnostics Fail field on the Diagnostic Schedules screen is set to Yes, the originator port's status is changed to OutOfService.
Failed (after testing)	Passed	Untested	The destination port is faulty. A major alarm SEER is generated to inform you of the failure. If the Mark Channel Faulty if Voice Path Diagnostics Fail field on the Diagnostic Schedules screen is set to Yes, the destination port's status is changed to OutOfService.
Failed (due to inability to test)	Untested	Untested	The status of the ports remain unchanged because the ports were not tested. The maximum duration for diagnostics ran out before these ports were tested.

Summary SEER (number 7400)

When a diagnostics session is completed (all InService channels are tested, or the maximum duration allowed expires), a summary SEER is generated.

The SEER number is 7400, with severity level "Info," and type "Admin."

This SEER provides the following information:

- the total number of InService channels found on the system
- the total number of channels tested
- the total number of channels failed
- the total number of channels untested
- a list of failed channels

Other SEERs (class 74)

Scan the SEERs generated during the diagnostic session for class 74 SEERs. Class 74 SEERs include SEERs related to failed or untested channels.

Impact on Operational Measurement reports

On the Services Summary report, the count for the Voice Path Diagnostics service will be greater than or equal to the number of channels tested.

The count for the default voice service (usually Voice Menus) will also show some additional calls in the time period in which voice path diagnostics was running. This is because the default voice service is used to assist in establishing the call loop between Meridian Mail and the switch.

Chapter 30

SEERs and Meridian Mail Alarms

In this chapter

Overview

Introduction

This chapter describes System Event and Error Reports (SEERs) and Meridian Mail alarms in the following sections.

Section A: SEERs and Alarms provides conceptual information about SEERs and Alarms. Procedures for SEER retrieval and alarm silencing are described in this section.

Section B: Customizing SEER processing provides information regarding SEER remapping, SEER throttling, and SEER escalation.

Section C: Notification options for SEERs and alarms describes the SEER and alarm processing path in the Meridian Mail system. Also, the procedures for setting up SEERs printing, filtering, and triggering are described.

Administration level

SEER administration is done at the system administration level. SEER retrieval is available also at the customer administration level.

Section A SEERs and Alarms

In this section

What is a SEER?

Concept

System Event and Error Reports (SEERs), which are generated by the Meridian Mail system software components, identify every significant system event and error that occurs.

An event is a minor glitch or an announcement of normal system activities (for example, the start of an automatic tape backup). Events documented in a SEER do not usually indicate a problem with the Meridian Mail functionality.

An error is a hardware or software fault that may prevent Meridian Mail from functioning properly (for example, a hardware component that failed diagnostics, or a failure to find a system file). An error creates one or more SEERs.

You must be able to read, interpret, and assess the severity of events and errors to determine if they are regular system events (such as a system audit) or system errors. An understanding of SEERs is also essential for diagnosing problems. Before asking for help in dealing with a major system problem, the system administrator must be ready to provide a collection of SEER reports from which the Northern Telecom support staff can determine the history of the problem. From these reports, maintenance personnel will be able to diagnose the problem effectively.

SEER components

Each SEER is identified by a number consisting of two parts:

- SEER class, which classifies a particular software component
- SEER number, which identifies a particular report for a class

SEER components, cont'd

Example

SEER 6603 is SEER number 03 from class 66.

Note: Due to ongoing improvements in the software, there may be instances where the information on the SEER itself is different from the information presented in the *Maintenance Messages (SEERs) Reference Manual* (NTP 555-7001-510). Should this occur, the information in the SEER printed out by your system should take precedence.

How SEERs are accessed

SEERs can be displayed on a terminal or printed out on a printer. The reports provide information about the SEER class, SEER number, the severity level of errors, the date and time the SEER was generated, and a description of the event or error that occurred at that time. This information is used primarily by system administrators and maintenance personnel to confirm that a system is running correctly, to isolate a system fault, to diagnose a hardware or software problem, or to solve a problem.

SEERs are printed and stored in the SEER file on the system disk at the time of the error or event. The SEERs stored on disk can be viewed or printed at a later time. The SEER file holds up to 4000 records.

Retrieving SEERs

Introduction

This topic provides information required for retrieving SEERs from the SEER history file that resides on the system disk. SEERs are retrieved by class only.

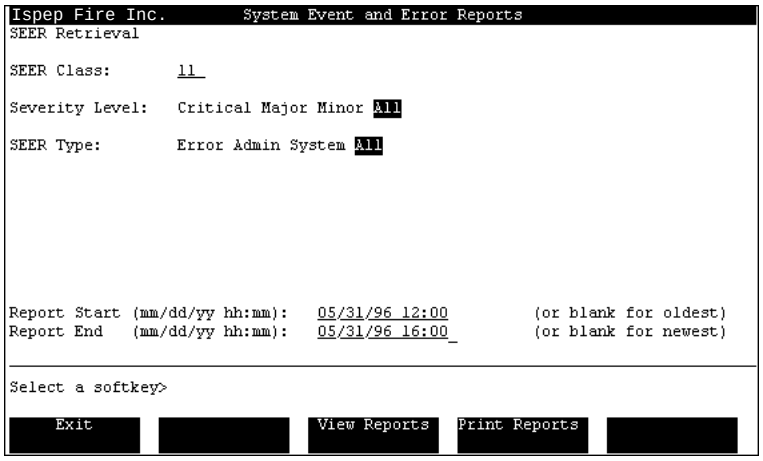
Administration level

SEER retrieval is available at the system and customer administration levels.

The SEER Retrieval screen

This is an example of the SEER Retrieval screen at the customer administration level.

Note: At the system administration level, the customer group does not appear on the title bar.



Field descriptions

This table describes the fields in the SEER Retrieval screen.

SEER Class	
Description	The class of SEERs that you want to retrieve. If you leave the field blank, all classes will be retrieved.
Classes	For a list of supported SEERs classes, refer to the *Maintenance Messages (SEERs) Reference Manual* (NTP 555-7001-510).
Default	The field is blank.
Severity Level	
Description	The severity level of the SEERs class.
Options	Critical, Major, Minor, All
Default	All
SEER Type	
Description	The SEER type required.
Options	Error, Admin, System, All
Default	All
Report Start/End	
Description	This field allows the administrator to specify the start and end date and time for the SEER retrieval. If left blank, the search provides all SEERs meeting the search criteria that are in the history file.
Default	The field is blank.

Procedure

To retrieve SEERs from the SEER file, follow these steps.

Starting Point: The Main Menu in system administration or The Customer Administration Menu in customer administration

Step	Action
1	Are you in customer administration? If YES, go to step 4. If No, go to step 2.
2	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance screen is displayed.
3	Select System Event and Error Reports from the menu. ***Result:*** The System Event and Error Reports screen is displayed.
4	Select SEER Retrieval. ***Result:*** The SEER Retrieval screen is displayed.
5	Complete the SEER Class, Severity Level, and SEER Type fields for the SEERs that you want to retrieve. ***Note:*** If the SEER Class field is left blank, all classes of SEERs are retrieved.
6	Enter the Report Start and Report End criteria to narrow the search to a specific date and time interval. Otherwise, leave these fields blank.
7	Use this table to determine the next step.

IF you want to	THEN press the
view the SEERs retrieved by the search	[View Reports] softkey.
print the SEERs retrieved by the search	[Print Reports] softkey.

Result: For View Reports, the reports are displayed. For Print Reports, press the [Continue Printing] softkey to print the report. Press the [Cancel Printing] softkey to cancel printing and return to the SEER Retrieval screen.

8	Press the [Exit] softkey to return to the previous screen.

What is an alarm?

Introduction

An alarm is an audible notification that something is not right with the Meridian Mail system. Alarms are sounded if a corresponding severity level SEER is issued to indicate a system problem.

Alarm types

There are three types of alarms: critical, major, and minor.

Critical alarm

These alarms indicate a service-affecting problem that requires immediate attention.

Major alarm

This type of alarm indicates a service-threatening problem that may be allowed to persist (for up to 24 hours). If not attended to, the alarm could become critical.

Minor alarm

This type of alarm indicates a problem that has no impact on the system or users.

How to check alarm status

Introduction

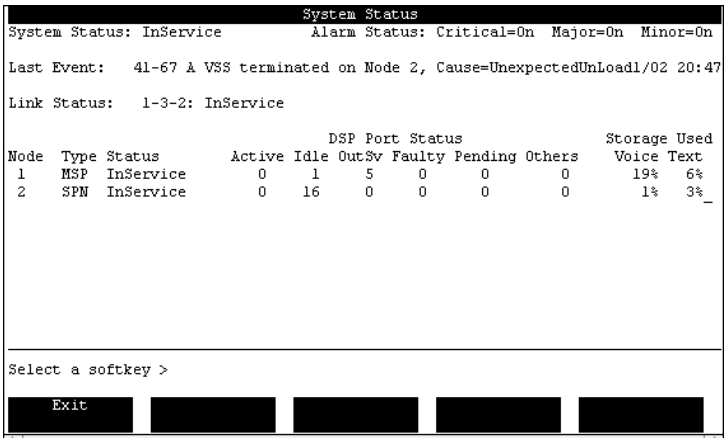
This procedure explains how to check for the status of alarms.

Procedure from outside Meridian Mail

To check which alarms are on (or off) if you are not currently logged in to Meridian Mail, follow these steps.

Starting Point: Meridian Mail Logon/Status screen

Step	Action
1	Press the [System Status] softkey. ***Result:*** The System Status screen is displayed.



2	View the Alarm Status field in the upper right-hand corner for the alarms status.

Procedure from within Meridian Mail

To check which alarms are on (or off) if you are logged in to Meridian Mail, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance screen is displayed.
2	Select System Status from the menu. ***Result:*** The System Status screen is displayed.

```
                        System Status and Maintenance
System Status: InService          Alarm Status: Critical=Off Major=Off Minor=On

Last Event:   91-5  MWIAUDIT VS202: The Audit is Finished.          12/20 11:46

Link Status:   1-2-2: InService

                                    DSP Port Status                Storage Used
Node  Type Status        Active Idle OutSv Faulty Pending Others    Voice Text
 1    MSP  InService        0    19     1     0       0       0       4%   1%
 2    SPN  InService        0    23     1     0       0       0       0%   1%_




Select a softkey >

 Exit | Enable Node | Disable Node | Courtesy Disable Ports | Courtesy Down System
```

3	View the Alarm Status field in the upper right-hand corner for the alarms status.

Silencing an alarm

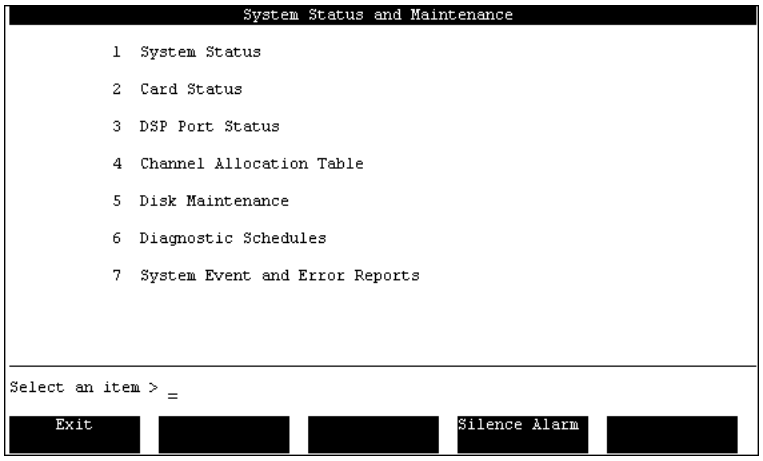
Introduction

The Meridian Mail system will sound an alarm if the corresponding severity level SEER is issued indicating that a problem exists. Alarms are silenced from the Logon/Status or the System Status and Maintenance screen.

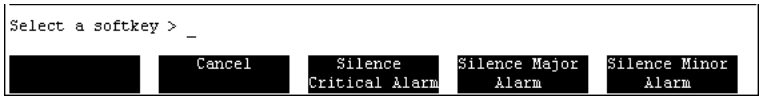
Alarms persist until you silence them. (There is no timeout period after which they are turned off by the system.)

System Status and Maintenance screen

This is an example of the [Silence Alarm] softkey on the System Status and Maintenance screen.



When the [Silence Alarm] softkey is pressed, the softkeys change to include [Silence Critical Alarm], [Silence Major Alarm], and [Silence Minor Alarm] as shown below.



Procedure

To silence an alarm when logged in to Meridian Mail, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance screen is displayed.
2	Press the [Silence Alarms] softkey. ***Result:*** The [Silence Critical], [Silence Major], and [Silence Minor Alarm] softkeys are displayed.
3	Press the appropriate softkey to cancel the type of alarm that is sounding. ***Result:*** The alarm is silenced. Press [Cancel] to return to the System Status and Maintenance screen.

To silence an alarm from the Meridian Mail Logon/Status screen, follow these steps.

Starting Point: The Meridian Mail Logon/Status screen

Step	Action
1	Press the [Silence Alarms] softkey. ***Result:*** The [Silence Critical], [Silence Major], and [Silence Minor Alarm] softkeys are displayed.
2	Press the appropriate softkey to cancel the type of alarm that is sounding. ***Result:*** The alarm is silenced. Press [Cancel] to return to the Meridian Mail Logon/Status screen.

Section B Customizing SEER processing

In this section

Overview

Introduction

This section includes descriptions of three SEERs features: remapping, throttling, and escalation, as well as procedures for setting up these features on the Meridian Mail system.

Using SEER remapping

Description

SEERs remapping allows the system administrator to remap or reassign the severity level of up to 60 SEERs to a higher or lower severity level. The remapping can be applied to individual SEERs only, and the revised configuration is stored in the System Profile on disk. This means that the parameters do not have to be reentered after a system reboot.

Note: SEER remapping is not the same as memory remapping. Memory remapping is done using the special utility, SE_UTIL function, with the aid of your distributor. For information on memory remapping, refer to the *Maintenance Messages (SEERs) Reference Manual* (NTP 555-7001-510).

The SEER remapping changes are made using the SEER Remap Table. Changes are effective immediately upon saving the table. No validation is performed on the revised SEERs to determine if the entered SEER actually exists, if the severity level is different from the existing severity level, or if the SEER has already been remapped using memory remapping.

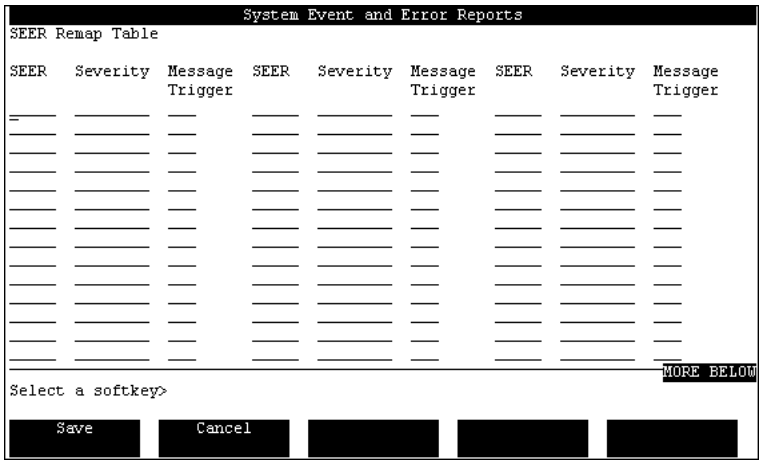
If the altered severity level is no longer required, delete the entry from the SEER Remap Table instead of resetting the severity level back to the original.

Administration level

SEER remapping is done only at the system administration level.

The SEER Remap Table

This is an example of the SEER Remap Table.



Field descriptions

The following table describes the fields in the SEER Remap Table.

SEER	
Description	The four- or five-digit number of the SEER to be remapped.
Default	None
Severity	
Description	The new severity for the SEER.
Options	Info, Minor, Major, or Critical (Only the first two letters of the option need to be entered into the field.)
Default	Blank
Message Trigger	
Description	This field is used to set the message trigger on.
Options	Enter Yes to set the message trigger; if you leave the field blank, the message trigger remains off.
Default	Blank

Procedure

To remap SEERs, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance menu is displayed.
2	Select System Event and Error Reports. ***Result:*** The System Event and Error Reports menu is displayed.
3	Select SEER Remap Table. ***Result:*** The SEER Remap Table is displayed.
4	Enter the SEER number in the SEER field.
5	Use the tab key to move the cursor to the Severity field. Enter the new severity.
6	Use the tab key to move the cursor to the Message Trigger field. To set the message trigger, enter Yes in this field.
7	Use this table to determine the next step. **IF** / **THEN** you have more SEERs to remap — repeat steps 4 through 6. you have entered all SEERs in the table that require remapping — go to step 8.
8	Press the [Save] softkey to save the remapping table. ***Result:*** The table is saved and the SEERs are remapped. Press the [Cancel] softkey to cancel changes to the remap table. ***Result:*** The changes are cancelled and you are returned to the System Event and Error Reports menu.

Using SEER throttling

Introduction

To reduce SEER proliferation, the customer administrator can control the flow of duplicate messages for a specified period of time. SEER throttling monitors SEERs and stops printing a specific SEER type if too many of that type are generated within a given interval.

If the parameters for throttling are exceeded, the throttled SEER will not be sent to the Message Trigger Mailbox or the SEER printer. The configuration for SEER throttling is stored in the System Profile; therefore, the throttling data does not have to be reentered after a system reboot.

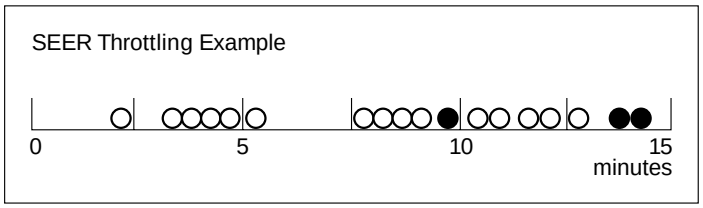
When SEER throttling is invoked, a SEER is generated to alert users. SEER throttling will "timeout" after an interval and allow the system to continue to print the prohibited SEER type. If the original error condition still exists, another spurt of SEERs will be displayed until SEER throttling is triggered again. This provides you with ongoing monitoring of the error situation.

Administration level

Setting SEER throttling is done only at the system administration level.

Example

In this example, the throttling threshold count is set to 5, and the throttling threshold interval is set to 5 minutes. The circles in the following diagram represent occurrences of the same SEER. Note that the sixth occurrence of the SEER is not throttled, even though it occurs within five minutes of the first occurrence of the SEER, because throttling of an individual SEER is reset at the end of the throttling threshold period (for example, 5 minutes, 10 minutes, and so on).

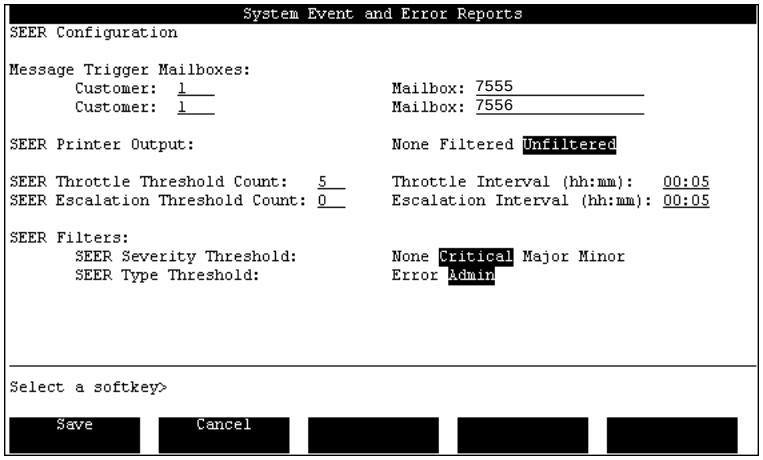


Example, cont'd

The black circles indicate instances when the SEER has been throttled. The throttled SEER will not be sent either to the Message Trigger Mailbox or the SEER printer (if filtered printing was chosen).

SEER Configuration screen

This is an example of the SEER Configuration screen.



Field descriptions

The following table describes the fields used for SEER throttling in the SEER Configuration screen.

SEER Throttle Threshold Count	
Description	This field is used to indicate the number of duplicate SEERs that must occur within the SEER Throttle Threshold Interval at which time the duplicate SEER will be throttled for the reminder of the SEER throttle threshold interval.
Range	0 to 100. The 0 indicates that SEER Throttling is not activated.
Default	5

SEER Throttle Interval	
Description	This field is used to specify the time period in hours and minutes (hh:mm) where the number of duplicate SEERs must exceed the SEER Throttle Threshold Count value at which time the SEER Throttling is to occur.
Range	00:01 to 24:00 (1 minute to 24 hours)
Default	00:05

Setting SEER throttling

To set throttling for SEERs, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance screen is displayed.
2	Select System Event and Error Reports from the menu. ***Result:*** The System Event and Error Reports screen is displayed.
3	Select SEER Configuration. ***Result:*** The SEER Configuration screen is displayed.
4	In the SEER Throttle Threshold Count field, enter the threshold count.
5	In the SEER Throttle Interval field, enter the interval that you want to use for throttling the SEERs.
6	Press the [Save] softkey to save your choices. ***Result:*** The changes are saved and you are returned to the System Event and Error Reports menu. Press the [Cancel] softkey to cancel changes to the SEER configuration. ***Result:*** The changes are cancelled and you are returned to the System Event and Error Reports menu.

Using SEER escalation

Introduction

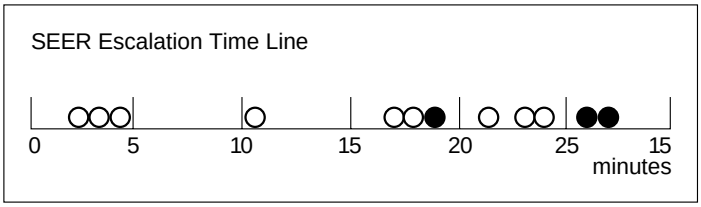
The administrator can escalate the severity level of frequently issued minor and major SEERs to the next level. If the same SEER is issued a specified number of times during a specified period of time, the severity level of the SEER is escalated to the next highest severity level. This applies to Minor and Major SEERs only. Info SEERS cannot be escalated.

Administration level

Setting SEER escalation is done only at the system administration level.

Example

The escalation threshold count is set to 4, and the escalation threshold interval is set to 10 minutes for this example. The occurrence of a Major SEER is represented by a circle.



The black circles indicate occurrences of the major SEER that will be escalated to a critical severity level. The occurrence of the SEER at 11 minutes will not be escalated because the fourth occurrence of the SEER is outside the 10-minute interval; however, in the 10 to 20 minute range four SEERs occur, causing the fourth SEER to be escalated to the critical severity level.

SEER Configuration screen

This is an example of the SEER configuration screen.

```
                    System Event and Error Reports
SEER Configuration

Message Trigger Mailboxes:
       Mailbox:   7555
       Mailbox:   7556

SEER Printer Output:                    None Filtered Unfiltered

SEER Throttle Threshold Count:   5      Throttle Interval (hh:mm):   00:05
SEER Escalation Threshold Count: 0      Escalation Interval (hh:mm): 00:05

SEER Filters:
       SEER Severity Threshold:         None Critical Major Minor
       SEER Type Threshold:             Error Admin

Select a softkey>

   Save      Cancel
```

Field descriptions

The following table describes the fields used for SEER escalation in the SEER Configuration screen.

SEER Escalation Threshold Count	
Description	This field is used to indicate the number of duplicate SEERs that must occur within the SEER Escalation Threshold Interval before the SEER severity is raised to the next highest level.
Range	0 to 100. The 0 indicates that SEER Escalation is not activated.
Default	0

SEER Escalation Interval	
Description	This field is used to specify the time period in hours and minutes (hh:mm) where the number of duplicate SEERs must exceed the SEER Escalation Threshold Count value before the SEER severity is raised to the next highest level.
Range	00:01 to 24:00 (1 minute to 24 hours)
Default	00:05

Setting SEER escalation

To set SEERs escalation, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance screen is displayed.
2	Select System Event and Error Reports from the menu. ***Result:*** The System Event and Error Reports screen is displayed.
3	Select SEER Configuration. ***Result:*** The SEER Configuration screen is displayed.
4	In the SEER Escalation Threshold Count field, enter the threshold count.
5	In the Escalation Interval field, enter the interval that you want to use for SEERs escalation.
6	Press the [Save] softkey to save your choices. ***Result:*** The changes are saved and you are returned to the System Event and Error Reports Menu. Press the [Cancel] softkey to cancel changes to the SEER configuration. ***Result:*** The changes are cancelled and you are returned to the System Event and Error Reports menu.

Section C Notification options for SEERs and alarms

In this section

Overview

Introduction

This section describes

- the route that a SEER takes after it is issued by the Meridian Mail system
- using the SEER filtering and triggering features
- setting up printing for SEERs

Notification options for SEERs and alarms

Introduction

This section describes the route that a SEER follows after it has been issued by the Meridian Mail system.

How the Meridian Mail system processes a SEER

The following provides an overview of how the Meridian Mail system processes a SEER.

1. The SEER is issued by the Meridian Mail system. An audible alarm sounds if the severity level is critical, major, or minor and the alarm feature has been wired on your system.
2. The system scans the memory remap table for the SEER that has been issued. If the SEER matches an entry in the memory remap table, the SEER's severity and type is changed to that of the table entry.
3. If the SEER does not match an entry in the memory remap table, the system scans the SEER remap table. If the SEER matches an entry in the SEER remap table, the SEER's severity is changed to that of the table entry.
4. Next, the remapped SEER severity is escalated if the escalation thresholds are exceeded. The SEER is sent to the SEER history file.

5. The next step in the SEER path is determined by the following.

IF the SEER configuration is set to	THEN
Unfiltered	printer filtering and throttling is applied to the SEER and the output is sent to the printer. The processing ends.
Message Trigger is set to YES in the Remap Table	SEER filtering is bypassed and the SEER is sent to the Message Trigger mailbox after passing through SEER throttling. The processing continues with step 6.
Filtered and Message Trigger is not set to Yes	SEER filtering is applied to the SEER. If the SEER passes through the filter, processing continues with step 6.

6. SEER throttling checks the SEER to see if it is a duplicate that exceeds the throttling threshold.

7. If the SEER passes SEER Throttling and the Message Trigger is set to Yes, a trigger message is composed and deposited in the Message Trigger mailbox. Also, the SEER is printed on the console printer.

Using SEER filtering

Introduction

SEER filtering parameters allow the administrator to limit the number of SEERs sent to the Message Trigger Mailbox. Only the SEERs required for proper system operation, maintenance, or hacker tracking activity should be sent to the Message Trigger Mailbox.

The administrator may choose to filter the SEERs based on the severity or type of SEER, or both. The filtering parameters can also be used to limit the SEERs that are sent to the SEER printer if the appropriate SEER Printer Output option is selected. You cannot filter individual SEERs or SEER classes.

Filtering by severity level

The following table describes the filtering possibilities if SEER filtering is set using the severity level only.

Minimum Severity Level	SEERs sent to Message Trigger Mailbox
None	Only those SEERs which have the Message Trigger Field set to YES in the SEER Remap Table.
Critical	Only critical SEERs. This is the default value.
Major	Only major and critical SEERs.
Minor	Minor, major, and critical SEERs. ***Note:*** An appropriate warning appears if Minor is selected, as there is a possibility of flooding the Message Trigger Mailbox at this level of SEER.

Filtering by SEER type

The following table describes the filtering possibilities if SEER filtering is set according to the SEER type only.

SEER type	SEERs sent to Message Trigger Mailbox
Error	Error SEERs only. Error level SEERs may indicate a system problem which can be corrected by the administrator, perhaps with the assistance of technical support.
Admin	Admin and Error SEERs only. The ADMIN level of filtering is designed to allow the administrator to concentrate on those SEERs which are important, and not overload the administrator with informational SEERs. This will eliminate the nightly audit SEERs, and others which do not require the attention of the typical system administrator.

Filtering by severity and SEER type

When multiple filtering parameters are set, only those SEERs which pass through both filters are sent to the Message Trigger Mailbox.

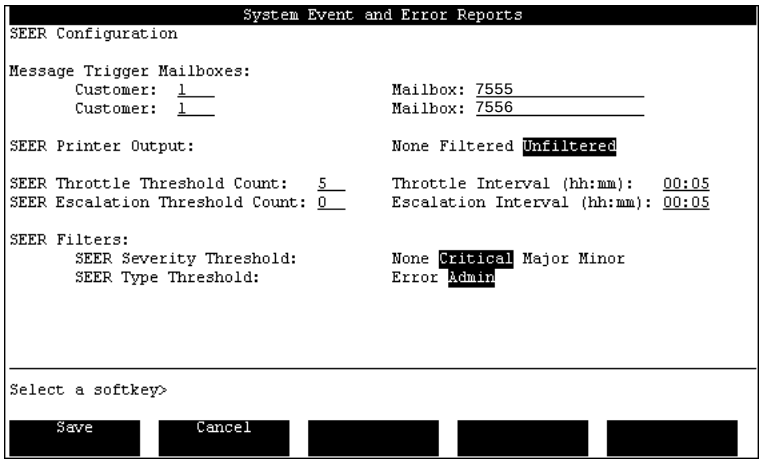
For example, if the severity level is set to Critical and the SEER type is set to Error only Critical Error type SEERs will be sent to the Message Trigger Mailbox.

Administration level

Setting SEER filtering is done only at the system administration level.

SEER Configuration screen

This is an example of the SEER Configuration screen.



Field descriptions

The following table describes the fields used for SEER filtering in the SEER Configuration screen.

SEER Filters	
Description	This read-only field indicates that the remaining fields in the screen are applicable to the filter which determines whether a SEER is sent to the Message Trigger Mailbox or to the printer, or both.

SEER Severity Threshold	
Description	This field is used to specify the minimum severity level a SEER must have to be sent to the Message Trigger Mailbox and/or the SEER printer. If None is selected, only SEERs that have the Message Trigger Field set to Yes in the SEER Remap Table are sent.
Options	None, Critical, Major, or Minor
Default	Critical

SEER Severity Threshold	
Description	This field is used to specify the SEER type a SEER must have to be sent to the Message Trigger Mailbox and/or the SEER printer.
Options	Error and Admin
Default	Admin

Setting SEER filtering

To set SEERs filtering, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance screen is displayed.
2	Select System Event and Error Reports from the menu. ***Result:*** The System Event and Error Reports screen is displayed.
3	Select SEER Configuration. ***Result:*** The SEER Configuration screen is displayed.
4	In the SEER Severity Threshold field, select the severity.
5	In the SEER Type Threshold field, select the type of SEER that you want filtered.
6	Press the [Save] softkey to save your choices. ***Result:*** The changes are saved and you are returned to the System Event and Error Reports menu. Press the [Cancel] softkey to cancel changes to the SEER configuration. ***Result:*** The changes are cancelled and you are returned to the System Event and Error Reports menu.

Using SEER triggering

Introduction

SEER triggering is used so that the system administrator can be paged when a SEER generated by Meridian Mail meets filtering and throttling criteria used for the Message Trigger Mailbox.

The administrator can specify up to two mailbox numbers that will receive a message if a SEER meets the requirements to be sent to the SEER printer when filtered output is selected. SEER filtering can be bypassed by specifying Yes for the Message Trigger field for the SEER in the SEER Remap Table. The message is tagged as urgent and includes the SEER number, severity, and type.

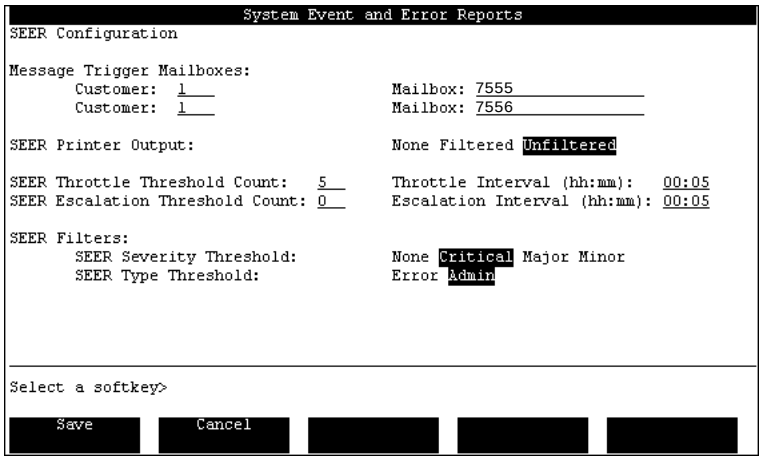
Remote Notification can be configured for the mailbox to allow a support person to be notified immediately of the occurrence of the SEER by page or phone.

Administration level

Setting SEER triggering is done only at the system administration level.

SEER Configuration screen

This is an example of the SEER Configuration screen.



Field descriptions

The following table describes the fields used for SEER triggering in the SEER Configuration screen.

Message Trigger Mailboxes	
Description	This read-only field indicates that the next pair of fields in the screen are applicable to the configuration of the Message Trigger Mailboxes. When a SEER occurs that meets the Trigger requirements (as set in the SEER Filters fields), a message containing the SEER number and severity is sent to the mailbox specified belonging to the corresponding customer group specified. (For SEERs related to the Hacker Tracker feature, the CLID and mailbox/dialed number are included.) These mailboxes can be configured with Remote Notification to page or phone a person when the message arrives in the mailbox.
Customer Number	
Description	The customer number that contains the mailbox that you want to set as the Message Trigger mailbox.
Default	1
Mailbox	
Description	This is the mailbox number to which the SEER trigger message is sent when the SEER triggering criteria are met. Validation is performed on the mailbox number to ensure its existence. This mailbox can be either a local voice user mailbox.
Default	The field is blank.

Procedure

To set SEERs triggering, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance screen is displayed.
2	Select System Event and Error Reports from the menu. ***Result:*** The System Event and Error Reports screen is displayed.
3	Select SEER Configuration. ***Result:*** The SEER Configuration screen is displayed.
4	In the Message Trigger Mailboxes field, enter the mailbox or mailboxes where the message is to be sent.
5	Check that the correct SEERs Filters have been set. (See “Setting SEER filtering” on page 30-34.)
6	Press the [Save] softkey to save your choices. ***Result:*** The changes are saved and you are returned to the System Event and Error Reports Menu. Press the [Cancel] softkey to cancel changes to the SEER configuration. ***Result:*** The changes are cancelled and you are returned to the System Event and Error Reports menu.

SEERs printing

Introduction

This section describes setting up SEERs printing in the SEERs configuration screen.

Administration level

Setting SEER printing is done only at the system administration level.

SEER Configuration screen

This is an example of the SEER Configuration screen.

```
                    System Event and Error Reports
SEER Configuration

Message Trigger Mailboxes:
       Customer:  1___                 Mailbox: 7555_____________
       Customer:  1___                 Mailbox: 7556_____________

SEER Printer Output:                   None Filtered Unfiltered

SEER Throttle Threshold Count:   5__   Throttle Interval (hh:mm):   00:05
SEER Escalation Threshold Count: 0__   Escalation Interval (hh:mm): 00:05

SEER Filters:
       SEER Severity Threshold:        None Critical Major Minor
       SEER Type Threshold:            Error Admin

Select a softkey>

   Save      Cancel
```

Field descriptions

The following table describes the field used for setting up SEER printing in the SEER Configuration screen.

SEER Printer Output	
Description	This field is used to indicate whether SEER printing should be turned on or off and whether unfiltered SEERs are printed or not.
Options	Filtered, Unfiltered, None
Default	Unfiltered

Setting SEERs printing

To set up SEERs printing, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. ***Result:*** The System Status and Maintenance screen is displayed.
2	Select System Event and Error Reports from the menu. ***Result:*** The System Event and Error Reports screen is displayed.
3	Select SEER Configuration. ***Result:*** The SEER Configuration screen is displayed.
4	In the SEER Printer Output field, select None, Filtered, or Unfiltered.
5	Press the [Save] softkey to save your choice. ***Result:*** The changes are saved and you are returned to the System Event and Error Report screen. Press the [Cancel] softkey to cancel changes to the SEER configuration. ***Result:*** The changes are cancelled and you are returned to the System Event and Error Reports menu.

Setting the SEER printer port name

Introduction

Use the SEER printer port name field in the General Options screen to allow SEER printing on a printer other than the SEER console printer.

Administration level

Setting the SEER printer port name is done only at the system administration level.

General Options screen

This is an example of the General Options screen.

```
                          General Administration                MORE ABOVE
General Options

                                  Integrated Mailbox Administration
                                  Voice Messaging (MMUI)
                                  Voice Messaging (VMUIF)
                                  Voice Menus & Announcements
                                  Voice Forms
                                  Meridian Mail Networking

Date Format for Administration
and Maintenance Reports:          mm/dd/yy yy/mm/dd dd/mm/yy

Valid printer port/device names can be viewed by selecting View/Modify for
each printer from Data Port Configuration in the Hardware Administration menu.

SEER Printer Port Name:           PRT0232_____   (Blank implies the console port)

Reports Printer Port Name:        _____________  (Blank implies the console port)

Select a softkey >

 Save    Cancel
```

Field description

This table describes the SEER Printer Port Name field.

SEER Printer Port Name	
Description	This is the printer port to which the SEER printer is connected. It requires additional data ports on an RSM card. The data ports must be defined as printer ports in the hardware database.
Default	The default is blank. If this field is left blank, the SEERs will print to the console printer port.
Maximum length	The printer port name may consist of a maximum of 12 alphanumeric characters.

Procedure

To set or change the SEER printer port name values, follow these steps.

Note: Remember that not specifying a printer port name implies sending the SEERS printing to the console.

Starting Point: The Main Menu

Step	Action
1	Select General Administration from the Main Menu. ***Result:*** The General Administration screen is displayed.
2	Select General Options from the General Administration menu. ***Result:*** The General Options screen is displayed.
3	Use the cursor keys to move to the SEER printer name field.
4	Enter a port name in the SEER Printer Port Name field. ***Note:*** If this field is left blank, SEERs printing is done on the console.
5	Use the softkeys to save or cancel the changes. • Press [Save]. ***Result:*** The changes are saved, and you are returned to the General Administration screen. • Press [Cancel]. ***Result:*** The changes are not saved, and you are returned to the General Administration screen.

Chapter 31

Operational Measurements

In this chapter

Overview

Introduction

This chapter describes Operational Measurement (OM) reports and the procedures required to gather, store, and analyze OM information.

Section A: Overview of Operational Measurements (OM) describes Operational Measurements and how they are useful.

Section B: Setting up Operational Measurements provides information required to set up Meridian Mail so that the Operational Measurements data is gathered and stored.

Section C: Interpreting Operational Measurements provides procedures and guidelines for interpreting Operational Measurement reports.

Section A Overview of Operational Measurements (OM)

In this section

Overview

Introduction

This section describes Operational Measurements and provides information about their use.

What are Operational Measurements?

Introduction

The Operational Measurement (OM) reports allow administrators and Northern Telecom (Nortel) support staff to study how a Meridian Mail system is being used. These reports may be used to determine if a change in the system is required to improve the level of service provided by Meridian Mail. For example, if overall traffic on the system is higher than was originally anticipated, a channel expansion may be necessary.

OM reports also show which features are being used a lot, and which features are not being used at all. OM reports can also reveal potential technical problems with the system, such as low disk space (the amount of disk space affects Meridian Mail's ability to store messages and perform its functions).

If changes to the Meridian Mail system are necessary, the system administrator makes the changes. A customer administrator may ask the system administrator to make these changes.

Traffic reports

To generate and view traffic reports, you must be logged on as the system administrator.

Traffic reports shows how much the system is being used. The reports identify the number of calls processed, and the number of times users log in to Meridian Mail or access particular features such as Voice Messaging, Voice Menu applications, and Outcalling. For detailed descriptions, examples, and analyses of available traffic reports, see Chapter 32, "Operational Measurements traffic reports".

User Usage reports

To generate and view User Usage reports, you must be logged on as the customer administrator.

User Usage reports monitor how specific users employ voice messaging, Meridian Networking (if installed), and AMIS Networking (if installed). Information is broken down to show user activity on a daily basis. For detailed descriptions, examples, and analyses of User Usage reports, see Chapter 33, "User Usage reports".

Outcalling Audit Trail reports

Outcalling Audit Trail reports provide you with statistics that allow you to monitor the use of Remote Notification (RN) and Delivery to Non-User (DNU) features. Two different reports can be generated: a summary report and a detail report. Each report provides statistics for a certain period of time (as specified by you) by user's name and mailbox. The information in the summary report helps in problem determination. The detail report provides call detail records that allow you to troubleshoot outcalling problems. For a detailed description of these reports, see Chapter 34, "Audit Trail reports".

Fax Audit Trail reports

Fax Audit Trail reports provide you with statistics that allow you to monitor how users are using the Fax on Demand features. Two different reports can be generated: a summary report and a detail report. Each report provides statistics for a certain time period (as specified by you). The information in the summary report helps in problem determination. The detail report provides call detail records that allow you to trouble shoot fax problems. For a detailed description of these reports, see Chapter 34, "Audit Trail reports".

How Operational Measurements are useful

Overview

The information that follows describes ways of using Operational Measurements (OM) report statistics.

Using OM to monitor system usage

You can use OM reports to monitor how the system is being used. For example, you can use these reports to determine which features are being used and which are not, and if the use of the system matches what the expectations were when the system size was being determined. If the system is busier than was anticipated, then you may need to expand the system.

Using OM to detect potential system problems

Similarly, OM reports can also be used to identify potential system problems, and possibly the cause of the problems. Although you should always use input from the users of the system to help determine if there is a problem, OM reports provide more definite data to work with.

Example

If callers or users complain that they cannot access the Meridian Mail system, channels may be tied up or disk space may be low. OM reports can help you determine if the problem is with system capacity or inefficient usage.

Potential problems that can be detected using OM

Some of the potential problems that can be detected through OM reports are discussed in the following examples.

Example 1: Disk space low

If the voice space used on a disk volume is consistently over your disk usage warning level, then disk space is getting low. Steps should be taken to reduce the voice space used. Check the Voice Space Used column of the Disk Usage Detail report and see “Analyzing the Disk Usage Detail report” on page 32-55 in Chapter 32.

Potential problems, cont'd

Example 2: Channels busy

The Channel Usage Detail report shows the number of calls and voice mail usage (in CCS) per channel. If the number of calls is high or the average message length is exceptionally long, the channels may be too busy to handle all incoming calls. As a result, users may not be able to access Meridian Mail. Several of the "Analyzing" sections that follow the sample reports refer to analyzing or dealing with high traffic problems.

Example 3: Inefficient usage

The Services Summary Traffic report provides an overview of how much your Meridian Mail features are being used. If you notice that some features are not being used at all, this may indicate that the users are not aware of the feature (or do not know how to use it), or that the feature is not required. The users may require more training. Use broadcast messages to give brief pointers or to inform users of available training courses or material.

Example 4: Unauthorized usage

If the Thru-Dial feature is being accessed more frequently during off-hours or if the average length of the Thru-Dial sessions is long, this may indicate that unauthorized users (hackers) are accessing your Meridian Mail system in order to use the Thru-Dial feature (for example, to make long distance calls). If you notice unusual use of the Thru-Dial feature, change the access password and continue to monitor the Thru-Dial usage. For more information, see "Services Summary report" in Chapter 32, "Operational Measurements traffic reports" for the number of Thru-Dial sessions and the average session lengths during specific time periods.

Using OM as a billing tool

As an accounting and billing tool, Operational Measurements are used to generate the daily user billing files (for local activity). Use the User Usage reports to compile data for billing. If you have the AdminPlus feature installed, use Meridian Mail Reporter (MMR) to compile data for billing.

If your organization does not bill users of Meridian Mail, you may not need to use the User Usage component of Operational Measurements. However, it can also be used for tracking problems or history or for security reasons (for example, who is logging on and receiving messages). This can be done only from the customer administration level.

Using OM as a capacity planning tool

As a capacity planning tool, Operational Measurements are used to generate traffic reports that you subsequently analyze to determine whether your system requires an upgrade either in disk storage, channel capacity, or perhaps in the number of nodes (should the number of users on your system approach one of the limits discussed in the *MSM Product Guide* [NTP 557-7001-010] or the *Messaging Overview* [NTP 555-7001-100] for Mod Op GP systems). If your organization's use of Meridian Mail is fairly stable, you need only use the traffic measurement component of Operational Measurements on an infrequent basis to verify that the system's resources are adequate for your needs. This can be done only by the system administrator.

Section B Setting up Operational Measurements

In this section

Overview

Introduction

This section describes the procedures for setting up Meridian Mail Operational Measurements. These procedures include the following:

- using the Operational Measurements menu
- calculating disk space required for OM data storage
- setting Meridian Mail to collect and receive data

Using the Operational Measurements menu

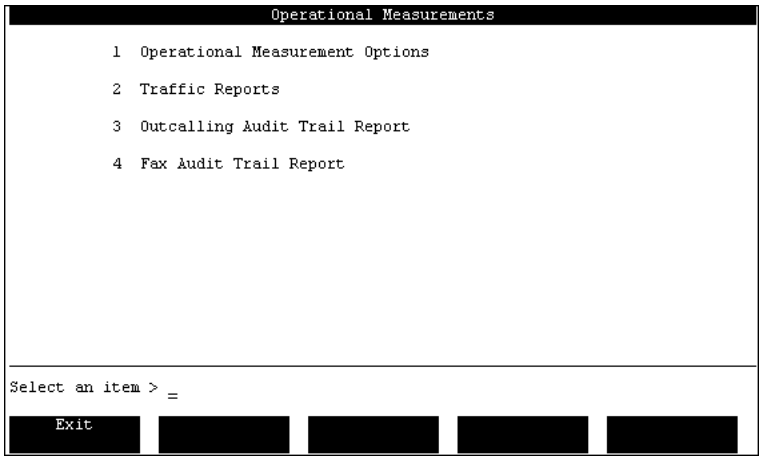
Introduction

The Operational Measurements menu is used to access the screens necessary for

- viewing or changing the parameters related to the collection and storage of OM data (changes to these parameters can be done only by the system administrator)
- viewing and printing the OM reports available on your system

Operational Measurements menu

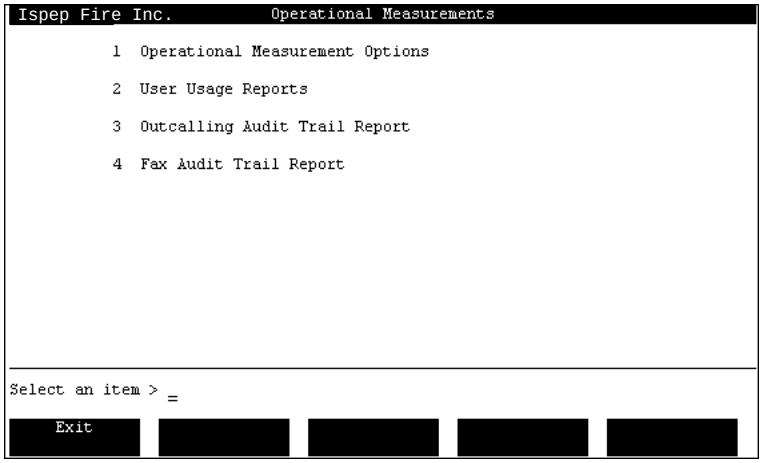
The following is an example of the Operational Measurements menu that is displayed when you are logged on as system administrator.



Note: The Outcalling and Fax Audit Trail report options appear only if these features are installed on your system.

Operational Measurements Menu

The following is an example of the Operational Measurements Menu screen that is displayed when you are logged on as customer administrator.



Note: The Outcalling and Fax Audit Trail report options appear only if these features are installed on your system.

Procedure

To use the Operational Measurements menu, follow these steps.

Starting Point: The Main Menu or the Customer Administration Menu

Step	Action
1	Select Operational Measurements. ***Result:*** The Operational Measurements menu is displayed.
2	To choose an item from the menu, enter the number and press <Return>. ***Result:*** The appropriate screen is displayed. ***Note:*** To return to the Main Menu at any time, press the [Exit] softkey twice.

Calculating disk space required for OM data storage

Introduction

Use this section to calculate the disk space required for Operational Measurement data storage.

Understanding system disk capacity requirements

Planning for system disk capacity for OM data is very important. Because OM data must be stored in a fixed amount of disk space, it is periodically overwritten by new data. You must ensure that you view or print any vital information before it is overwritten (the Operational Measurement Options screen defines how long data is stored). You must also ensure that OM data does not exceed the available storage capacity.

ATTENTION

If total storage exceeds 100 percent, you will run out of disk space. You should attempt to keep your disk usage for OM data below 60 percent to allow sufficient space for the rest of the system.

Should your calculations yield a result greater than 100 percent, reduce the number of days for which traffic and/or user usage data is stored, and repeat your calculations. The values presented in the “Storage requirement estimates” on page 31-18 are based on typical parameters for various Meridian Mail configurations. Should your system deviate markedly in any of these assumed traffic patterns, you will need to experiment to determine what your system can accommodate.

Procedure

To calculate the total disk storage required for OM data, follow these steps. As you follow these steps, refer to the "Storage requirement estimates" on page 31-18.

Step	Action
1	Determine the number of days that you wish to store the OM traffic data and user usage data before it is overwritten. Make a note of the number of days you decide on so that you can enter these values in the Operation Measurement Options screen (see "Operational Measurements Options screen" on page 31-20).
2	Use the table "Storage requirement estimates" on page 31-18 to determine the billing data cost and the user usage data cost. The "data cost" refers to the percentage of disk volume VS1 text space required. For example, a single-node, 24-port, 26-hour system would have a billing data cost of 2.89% and a user usage data cost of 0.36%.
3	Multiply the billing data cost by three (two days plus the current day's data are stored). For example, 3 x 2.89%
4	Multiply the number of traffic days by 1 percent to the result of step 3. For example, 8 x 1%
5	Multiply the number of user usage days by the user usage data cost. For example, 31 x 0.36%
6	Add the results from step 3, step 4, and step 5.

Example

For a single-node, 24-port, 26-hour system, and 31 user usage days, and 8 days of traffic stored:

number of days traffic data is stored = 8
number of days user usage data is stored = 31
billing data cost = 2.89%
user usage data cost = 0.36%

Total storage = (3 x 2.89%) + (8 x 1%) + (31 x 0.36%) = 27.83%

Storage requirement estimates

Use this table to estimate the amount of storage required for each operational measurement. Billing data cost and user usage data cost refer to the percentage of VS1 text space used.

System type	Number of ports	Billing data cost	User usage data cost
Card Option			
5, 10 hr	12	1.77%	0.22%
24 hr	12	1.56%	0.20%
54 hr	12	0.74%	0.09%
100 hr	12	0.44%	0.06%
Single node			
5, 11 hr	24	3.25%	0.41%
24, 26, 54 hr	24	2.89%	0.36%
100 hr	24	2.38%	0.30%
200 hr	24	2.09%	0.26%
2 node			
26 hr	48	6.06%	0.76%
54, 84, 114 hr	48	5.48%	0.69%
200 hr	48	5.31%	0.67%
400 hr	48	4.68%	0.59%
3 node			
30, 60, 90, 120, 200 hr	48	4.40%	0.55%
400 hr	48	4.00%	0.50%
4 node			
45, 90, 120, 180, 300 hr	72	5.85%	0.74%
600 hr	72	5.20%	0.65%
5 node			
60, 120, 180, 240, 400 hr	96	6.22%	0.78%
800 hr	96	5.50%	0.69%

Traffic assumptions

The preceding table is based on a typical system with an eight-hour business day, and the following traffic:

- 25 percent of the time at busy hour traffic (2 hours)
- 5 percent of the time at greater than busy hour traffic (25 minutes)
- 70 percent of the time at less than 75 percent of busy hour traffic (5 hours and 35 minutes)
- average call holding time of 40 seconds

Operational Measurements Options screen

Introduction

The Operational Measurement Options screen is used by the system administrator to define how system and user statistics are collected. This includes the time at which traffic data collection begins and ends every day, how often collected traffic statistics are written to disk, and whether or not traffic data, user usage data, or audit trail data is collected. Also included are the number of days of data that are stored for traffic, user usage data, and audit trail reports, and the percentage at which audit trail data collection will automatically be disabled.

Note: If the AdminPlus/Meridian Mail Reporter option is installed, it is important that a minimum set of OMs are collected. Refer to the *Meridian Mail Reporter 2.0 User's Guide* (P0847870).

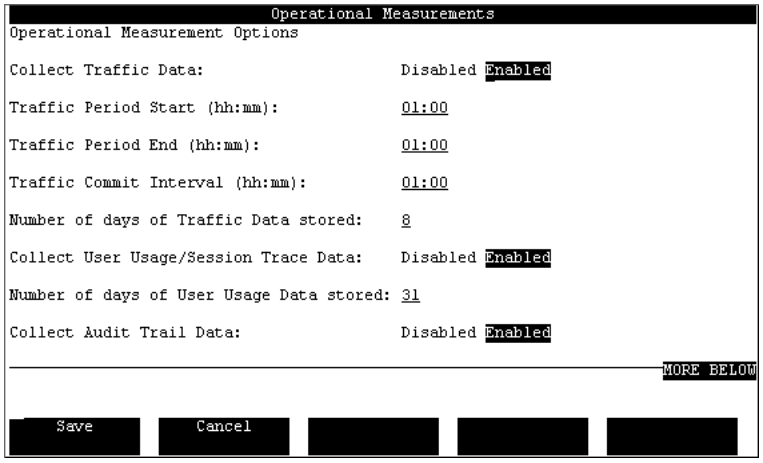
System administrator capabilities

The system administrator configures parameters for both traffic reports and user usage reports. The values configured in this screen apply to all customer groups.

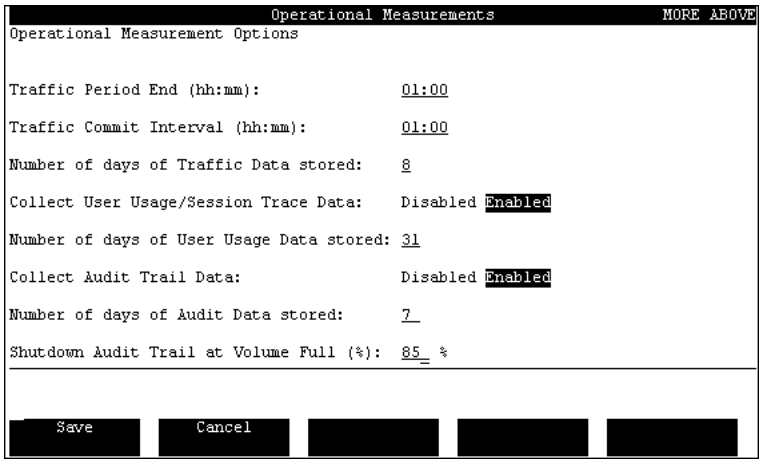
Operational Measurement Options screen

The following is an example of the Operational Measurement Options screen. Only the system administrator can view and change this screen.

Part 1



Part 2


Operational Measurements
MORE ABOVE
Operational Measurement Options
Traffic Period End (hh:mm): 01:00
Traffic Commit Interval (hh:mm): 01:00
Number of days of Traffic Data stored: 8
Collect User Usage/Session Trace Data: Disabled Enabled
Number of days of User Usage Data stored: 31
Collect Audit Trail Data: Disabled Enabled
Number of days of Audit Data stored: 7
Shutdown Audit Trail at Volume Full (%): 85 %
Save
Cancel

Fields in the Operational Measurement Options screen

Overview

The following section describes the fields on the Operational Measurement Options screen.

Collect Traffic Data

When this field is Enabled, a statistical record of voice messaging and other voice services, voice channel traffic, Meridian Networking and AMIS Networking message traffic, and disk space usage will be collected and stored on disk. The default is Enabled.

Traffic Period Start (hh:mm)

This is for the time at which data begins to be collected, based on the 24-hour clock. The valid range is from 00:00 to 23:30. You may enter values only in half-hour increments, for example, 01:00, 01:30; 02:00, 02:30, etc. The default is 01:00.

Traffic Period End (hh:mm)

This is for the time at which data stops being collected, based on the 24-hour clock. To continuously collect traffic data, set the Period Start field equal to the Period End field (that is, Period Start = 01:00 and Period End = 01:00). In this manner, data will be collected 24 hours a day. The valid range is 00:00 to 23:30. You may enter values only in half-hour increments, for example, 01:00, 01:30; 02:00, and 02:30. The default is 01:00.

Traffic Commit Interval (hh:mm)

The value in this field determines how often the collected traffic statistics are written to the hard disk within the defined traffic period. The default is 01:00. The valid range is from 00:00 to 23:30.

Commit intervals should be entered in half-hour increments and be equally divisible into the period range. The smallest allowed interval is 30 minutes. However, a one-hour interval will provide similar granularity of data and will require only half as many writes to disk (resulting in less disk usage) as the 30-minute interval.

Traffic commit interval, cont'd

Example
If the Collect Traffic Data field is set to Enabled and

Traffic Period Start = 08:00,
Traffic Period Stop = 17:00,
Traffic Commit Interval = 1:30,

traffic data is collected between 8:00 a.m. and 5:00 p.m. daily, and traffic reports are written to the hard disk every 1 hour and 30 minutes during this period. The first report is written out at 9:30 a.m. and the last one is written out at 5:00 p.m.

Note: The traffic commit interval can be set to 24 hours. However, an interval greater than two hours is not recommended because the accumulated numbers may be too large to be accommodated by the fields in the report screens. If a number is too large, >999 is displayed in the field to indicate overflow. Furthermore, any data that is not written to disk is lost if a system reboot occurs.

Number of days of Traffic Data stored

This field determines the number of days that traffic data is maintained before being overwritten by new traffic data.

Example
If this field is set to 8, on the 9th day you will not be able to view traffic data collected on the first day as it will have been overwritten, but you will be able to view the data from the remaining eight days. The old traffic data is removed from the disk at 1:20 a.m. each day. The data for the current day is not included in the number of days of traffic data stored. The valid range is 1 to 8 days. The default is 8 days.

Collect User Usage/ Session Trace Data

This field controls the collection of both user usage data and session trace data. Session trace data includes detailed voice messaging session statistics. The session statistics are kept for two days, regardless of how long you define user usage data to be stored. (For example, on Monday you can view Saturday's data, but not Friday's data.) Session reports can be accessed using the Session Trace tool (refer to *System Administration Tools* [NTP 555-7001-305]). The default is Enabled.

Number of days of User Usage Data stored

This field controls the number of days of user usage summary statistics data that is kept on the hard disk before it is overwritten. The range is from 1 to 63. The default is 31.

Collect Audit Trail Data

This field appears only if Outcalling or Fax On Demand is installed. When this field is set to Enabled, Outcalling or Fax Audit Trail reports are generated by the system. These reports can be used to obtain information about a specific outcalling or fax callback session. The reports give you either summary or detailed information about the number of calls, the start time and duration of calls, the numbers called, and details of the call status. The default is Enabled. See Chapter 34, "Audit Trail reports," in this guide for more information.

Number of Days of Audit Data stored

This field appears only if either Outcalling or Fax On Demand is installed. This field is used if the Collect Audit Trail Data field is set to Enabled. This field indicates the number of days the audit trail data will be stored on disk before being overwritten. The number of days can range from 1 to 63, with a default of 7.

Shutdown Audit Trail at Volume Full (%)

This field appears only if either Outcalling or Fax On Demand is installed.This field is used if the Collect Audit Trail Data field is set to Enabled. When the volume on which audit trail data is stored meets this percentage, collection of audit trail data is disabled. (Note that this is a percentage of text space, not voice space.) The range for this field is from 1 percent to 100 percent. The default is 85 percent.

OM Collection ACCESS Class

This field indicates the class number of the ACCESS application for which Operational Measurements should be collected. The valid range for this number is 0 to 8999. It is primarily intended to be used to collect messenger desktop access of Meridian Mail ports.

Note: This field is available only if ACCESS is installed.

Setting Meridian Mail to collect and receive data

Introduction

Use the Operational Measurement Options screen to define the parameters for collecting the OM information from your Meridian Mail system.

Administration level

You must be logged on as system administrator to define these parameters.

Procedure

To set the Operational Measurement parameters, follow these steps.

Starting Point: The Operational Measurements menu

Step	Action
1	Select Operational Measurements. ***Result:*** The Operational Measurement Options screen appears.
2	Set the parameters as required. For information on setting these parameters, see “Fields in the Operational Measurement Options screen” on page 31-22.
3	Choose step 4 to save the changes or step 5 to cancel.
4	Press [Save]. ***Result:*** The changes are saved and the Operational Measurements menu is redisplayed. ***Note:*** Any saved changes force all traffic data to be committed at the time of the save, regardless of the interval and period specified. This action will also create an irregular time period (the time up to the save) that will appear on the traffic reports. Also, a SEER is issued to indicate that the changes have taken effect.
5	Press [Cancel]. ***Result:*** Any changes you have made are discarded; the Operational Measurements menu is redisplayed.

Section C Interpreting Operational Measurements

In this section

Overview

Introduction

This section describes the calculation of centi-call seconds and provides guidelines that are useful when interpreting OM reports.

Calculating centi-call seconds

Introduction

Many of the OM reports provide usage time in centi-call seconds. Centi-call seconds (CCS), or hundreds of call seconds, can be calculated using the formula in this section.

Definition

CCS is a traffic measurement statistic. One CCS is equal to 100 seconds of call connection time per hour. The CCS is based on the total number of call seconds, not the average length, multiplied by the number of accesses.

Formula

To calculate the CCS value, use the following formula.

$$CCS = \frac{60\ minutes}{interval\ (in\ minutes)} \times \frac{total\ call\ seconds}{100\ seconds}$$

The first part of the formula compensates for intervals that are not one hour.

Examples

320 total call seconds during a half-hour interval produces the following CCS:

$$CCS = \frac{60\ minutes}{30\ minutes} \times \frac{320\ seconds}{100\ seconds} = 2 \times 3.2 = 6.4 \approx 6$$

If the interval is one hour, the first part of the formula can be ignored. For example, 320 total call seconds over a one-hour interval produces the following CCS:

$$CCS = \frac{60\ minutes}{60\ minutes} \times \frac{320\ seconds}{100\ seconds} = 1 \times 3.2 = 3.2 \approx 3$$

Interpretation guidelines

Introduction

When interpreting the OM reports, consider the following guidelines.

Service counts

Look not only at the counts for each service but also at the relationship between the counts for different services.

Example
Both Express Messaging and Call Answering features allow messages to be left in the system. Therefore, both counts should be taken into consideration when looking at the total number of incoming messages during a particular time period.

System size

Know the size of the system — both channels and disk capacity. Smaller systems will be much more sensitive to high traffic counts and durations than larger systems.

How your organization uses the system

Know how your organization uses the system.

Many of the counts and durations will have a direct relationship to how the organization uses the system as part of its overall operation (for example, voice messaging only, auto attendant, menus, and so on). If you do not know how the organization functions, find someone within the organization who does, and interpret the information together. That person will provide the necessary knowledge about how the organization works, and you can provide the information about the system.

If there is unusual system activity

Make sure you have taken any unusual operational activity into consideration.

For example, is it a national holiday? an election day? or was there a major news event recently? Such unusual activities may cause an abnormal usage of your system that will distort the figures.

Report relationships

Many reports relate to one another.

For instance, the Services Summary report provides a summary of the voice menus, fax, announcement traffic, and other services, but the Services Detail report provides much more detail about particular services. Know what reports a system can produce, and know which ones relate to others. Read through each report and move back and forth through the information, making sure you have optimized the interpretation and analysis process.

User consultation

Consult the users of the system to gain further insight into a report's findings.

Find out how the system is working for the users and if they have any problems to report. Some apparent system problems may be the result of improper usage of the system (perhaps due to lack of training or awareness of certain system features).

Impact of new features or services

Consider how long a feature or service has been in operation.

When something is new, it may generate more traffic than normal as a result of curiosity, or it may generate less traffic due to lack of familiarity with the new feature, so the initial figures may be distorted.

Working with multiple Meridian Mail systems

If you are working with numerous systems, remember that each system is unique in its application and user base.

Make sure you apply all the previously described guidelines separately to each system.

Chapter 32

Operational Measurements traffic reports

In this chapter

Overview

Introduction

This chapter is devoted to Operational Measurement (OM) traffic reports. These reports show how much the system is being used. The reports identify the number of calls processed, and the number of times a user logs in to Meridian Mail or accesses particular features such as Voice Messaging, Voice Menu applications, and Outcalling.

Section A: Generating traffic reports describes how to generate, view, and print OM traffic reports. The section also describes the Traffic Reports screen, which lists the reports that can be generated.

Section B: Traffic reports provides descriptions and analyses for all of these reports.

Section A Generating traffic reports

In this section

Overview

Introduction

This section describes the Traffic Reports screen and the procedure for generating, viewing, and printing traffic reports. All traffic reports that can be generated are listed on the Traffic Report screen. For descriptions and analyses for all of the traffic reports, see Section B: Traffic reports on page 32-9.

Traffic Reports screen

Introduction

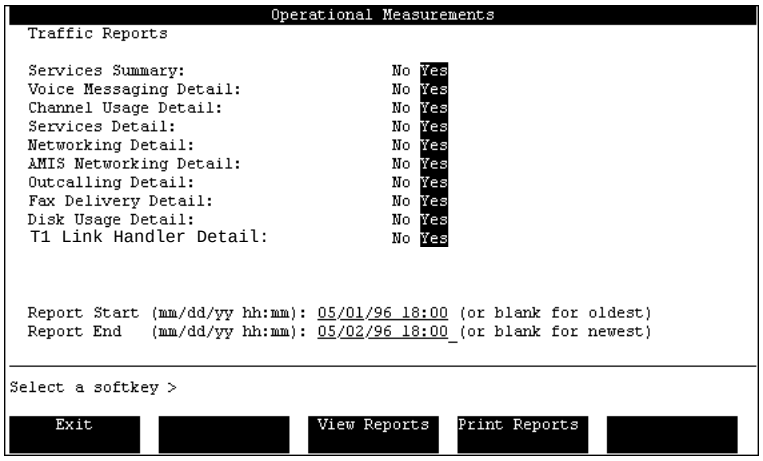
This section describes the Traffic Reports screen. Access the Traffic Reports screen by selecting Traffic Reports on the Operational Measurements screen.

Administration level

Traffic reports are available only when you are logged on as system administrator.

The screen

The following is an example of the Traffic Reports screen.



Available traffic reports

Each line in the Traffic Reports screen represents a specific type of report. The following is a list of the available traffic reports. Some of the reports are available only if additional features are installed on your Meridian Mail system. For descriptions and analyses of these reports see Section B: Traffic reports.

- Services Summary
- Voice Messaging Detail
- Channel Usage Detail
- Services Detail (if the Fax on Demand, Voice Forms, or Voice Menus feature is installed)
- Networking Detail (if Meridian Networking is installed)
- AMIS Networking Detail (if AMIS Networking is installed)
- Outcalling Detail (if Outcalling is installed)
- Fax Delivery Detail (if Fax on Demand is installed)
- Disk Usage Detail
- T1 Link Handler Detail (MSM only)

Generating traffic reports

Introduction

This section describes the procedure for generating traffic reports. The Traffic Reports screen allows you to choose which reports you want to view and print. Also, you have the option of choosing a Report Start and Report End date and time.

Administration level

Traffic reports can be generated only by the system administrator.

Procedure

To generate traffic reports, follow these steps.

Starting Point: The Operational Measurements screen

Step	Action
1	Select Traffic Reports from the Operational Measurements screen. ***Result:*** The Traffic Reports screen displays.
2	Move the cursor to the report titles you wish to view or print. Use the arrow keys to toggle the field value to Yes.
3	(This step is optional.) Specify start and stop times for the report period by entering the values in the Report Start (mm/dd/yy hh:mm) and Report End (mm/dd/yy hh:mm) fields. (The format mm/dd/yy hh:mm is the default. The format can be changed in General Administration, General Options. For more information, see Chapter 14, “General options”. ***Note:*** The values you enter are based on the 24-hour clock. The valid range is from 00:00 to 23:59 (12:00 midnight to 11:59 p.m.). If the Report Start and Report End fields are left blank, the defaults of start of available data and end of available data are used respectively.
4	Go to step 5 to view the reports on the terminal, step 6 to print the reports, or step 7 to cancel.

Step	Action
5	Press [View Reports]. ***Result:*** The selected report screens are displayed one at a time. Follow the instructions in the table below to view the next report, exit the screen, or view the next page in the same report.

IF you want to	THEN press softkey
leave the current report and go to the next report	[Next Report].
exit all reports and return to the Traffic Reports screen	[Exit].
view subsequent pages of the current report (if available)	[Next Page].

For descriptive and analytical information on individual reports, see Section B: Traffic reports on page 32-9.

6	Press [Print Reports]. ***Result:*** You are prompted to ensure the printer is ready and online. During printing, you have two options available.

IF you want to	THEN press softkey
print the reports	[Continue Printing].
cancel printing at any time	[Cancel Printing].

Note: There may be some delay before control is returned to the screen because it waits for the printer to stop printing.

7	Press [Exit]. ***Result:*** The Operational Measurements menu is displayed again.

Section B Traffic reports

In this section

Overview

Introduction

This section provides descriptions and analyses of each traffic report. Included are an example report screen and field descriptions.

Services Summary report

Overview

The Services Summary report provides statistics for each of the services installed in your system. The total number of times a user dialed a service (number of accesses), and the average length of each access are given.

The screen

The following is an example of the Services Summary report screen.

```
                         Operational Measurements
Services Summary

                                                     Average        Voice
                                        Number of    Length         Mail Usage
Interval Start-End Service Name         Accesses     (in seconds)   (in CCS)
5/01 18:00-19:00   Thru-Dial               53           7              4
                   Voice Menus            301          12             36
                   Voice Messaging       1022          65            664
                   Call Answering        1437          29            416
                   AMIS                     0           0              0
                   Express Messaging       86          49             42
                   Voice Announcements     31         111             34
                   Meridian Networking      0           0              0
                   Voice Administration     0           0              0
                   Voice Prompt Admin       0           0              0
                   Time of Day Control      0           0              0
                   Delivery to Non-User     0           0              0
                                                                       0

Select a softkey > _

   Exit          Next                           Next
                 Report                         Page
```

Fields in the Services Summary report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example
If data is collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Service Name

This field displays the name of the service that was accessed.

Number of Accesses

This field displays the number of calls (peg count) made to the corresponding service. The number of Thru-Dial accesses includes accesses to Voice Service Thru-Dial (automated attendants), Call Service Thru-Dial, and Logon Thru-Dial.

Note: If a call continues past the interval, the access is counted only in the second interval (when the call is completed), although the call length is properly divided between the two intervals.

Example 1
If a call starts ten minutes before the end of an interval, that ten minutes of call length is counted in that interval. If the same call continues for five minutes into the next interval, the five minutes is counted in the second interval. The number of accesses is increased by zero in the first interval and by one in the second interval. The call is pegged in this way to match the way calls are tracked by the switch.

Example 2

If a call that spans two intervals is the only call to that service in those intervals, the number of accesses in the first interval would be zero while the number of accesses in the second interval would be one.

Average Length (in seconds)

This field displays the average length of the corresponding voice service sessions during the specified interval.

Voice Mail Usage (in CCS)

This field displays the amount of time that a Meridian Mail service was active in the defined interval. The value is given in CCS (hundred call-seconds), a traffic measurement statistic. One CCS is equal to 100 seconds of call connection time per hour. The CCS is based on the total number of call seconds, not the average length multiplied by the number of accesses.

Analyzing the Services Summary report

Introduction

Use the summary report, including the CCS values, to get an overall sense of which services are generating the most traffic and which are generating little or no traffic. Consider the example and the information that follows when doing your analysis.

Example

The second line in the sample report on page 32-12 shows that 301 calls, with an average length of 12 seconds, were placed to the Voice Menu service for a total of 3612 seconds (301 x 12). This equates to 36 CCS in the one-hour interval. The CCS count is computed for the one-hour interval as follows:

$$CCS = \frac{3612\ seconds}{100\ seconds} = 36.12 \approx 36$$

A feature is not being used

This may mean that the feature is not working properly, or that the users are not aware of the feature and therefore do not use it.

Suggested action

After the administrator notices a low (or no) usage of a particular feature, it is up to the administrator to do additional research to determine if there is a technical problem with the feature, or if it simply is not being used, or if it is normal for the usage to be low for the observed time period.

If a particular feature is generating an unusually high amount of traffic

If a feature is generating an unusually high amount of traffic, you may encounter system performance problems such as no free channels.

Suggested actions

Run the report that goes with that service, if there is one, for more information. As the administrator, you may need to do more research beyond checking the OM reports to learn more about the nature of the problem to come up with a solution. For example, you need to determine if the high traffic level was due to some unusual event that affected your organization (if so, the high traffic would not be expected to continue).

If the high traffic for a particular feature is expected to continue, one solution may be to dedicate a channel to the feature so that the feature does not tie up the whole system. For more details on dedicating channels, see Chapter 24, “Configuring Meridian Mail services”. Another solution is to expand the system if overall traffic for the whole system is higher than what was originally anticipated for the system.

Check the average length for Voice Menu and Announcement accesses

Another area to check is the average length for Voice Menu and Announcement accesses (see “Services Summary report” on page 32-12).

Suggested action

If the average length is long, review your menus and announcements to see if they can be shortened or rearranged for more efficient use.

In menus, place the popular items first so that users do not need to stay on the line as long before the item they want is presented. If a menu has a long average length and it accesses an announcement, try to shorten the announcement.

High number of Call Answering accesses

Suggested action

If the number of Call Answering accesses is high, check the logon count versus the number of times Call Answering has been accessed (the Voice Messaging Detail report gives the logon count).

If the logon count is low compared to the number of Call Answering accesses, this means that users are accumulating several messages before logging on to listen to them. Too many accumulated messages lowers the amount of available disk space to the point where overall system performance may be affected.

Users are having trouble logging in at a certain time

Suggested action

If users are having trouble logging in to Meridian Mail at a certain time, check the level of traffic for that time period.

You may have found your heavy traffic period or busy hour. If there is no way to reduce the traffic during that time period, you may need to expand your system.

The number of Thru-Dial accesses is unusually high

If you have an unusually high number of Thru-Dial accesses, this may be a sign of hackers present on your system.

Suggested actions

If you suspect hackers are accessing the Thru-Dial feature, first check how the Thru-Dial service is set up to see if the OM data are unusual. If your research suggests the possible presence of hackers, review the dialing restrictions for Thru-Dial (refer to the *Voice Services Application Guide* [NTP 555-7001-325] for details). Also, if you are using an access password for Thru-Dial, change the access password and continue to monitor the Thru-Dial usage.

Voice Messaging Detail report

Introduction

The Voice Messaging Detail report provides information about logon sessions, Call Answering sessions, and messages composed during logon sessions. If data is unavailable for a given statistic, N/A (not available) is displayed instead of a value. For example, if the interval is one minute long, the system may interpret that interval as having zero length, so no data is available. A 1-minute interval may be created if you update and save the OM options, which forces all traffic data to be written to disk at that point and results in an irregular interval.

If a value is too large to fit in a field, >999 is displayed.

The screen

The following is an example of the Voice Messaging Detail report screen.

```
                          Operational Measurements
Voice Messaging Detail (VM Logon, Call Answering and Express Messaging)

                       Number      Number of  Session    Messages     Message
                       of Calls    Sessions   Length     Created      Length
Interval Start-End     Int  Ext   EM/Ans Log  Avg  Max  EM/Ans Log    Avg  Max
5/01 13:00-14:00       18    0      2    16   238  470    0     2     20   25
5/01 14:00-15:00       12    2      5     9   310  310    1    32     14   14
5/01 15:00-16:00       17    1      1    17   478  614    1    20     20   20

Select a softkey > _
   Exit        Next
               Report
```

Fields in the Voice Messaging Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example
If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Number of Calls (Int and Ext)

This field shows the number of Voice Messaging, Call Answering, or Express Messaging calls made. The data are displayed in the following subfields.

Int
This display indicates the number of calls made from inside the switch during the specified interval.

Ext
This display indicates the number of calls made from outside the switch during the specified interval.

Number of Sessions (EM/Ans and Log)

This is the number of sessions in the interval.

EM/Ans
This display indicates the number of sessions used for Express Messaging and Call Answering services.

Log
This display indicates the number of time users logged into their mailboxes during the interval.

Note: The sum of the values in these two columns should equal the sum of the two Number of Calls values. To determine the number of messages that were actually received or created during these sessions, check the Messages Created fields.

Session Length (Avg and Max)

This field indicates the average length and maximum length (in seconds) of Call Answering, Express Messaging, and logon sessions for the interval.

Messages Created (EM/Ans and Log)

This field indicates the number of messages created during the interval.

EM/Ans
This display indicates the number of messages left during Express Messaging and Call Answering services.

Log
This display indicates the number of messages that were created (using the compose, forward, or reply command) during the interval.

Message Length (Avg and Max)

This field indicates the average length and the maximum length (in seconds) of messages received and created during the interval. Since message length has an impact on disk storage, use this information to determine if enough disk space has been provisioned for voice messages.

Analyzing the Voice Messaging Detail report

Introduction

The first line in the sample report on page 32-18 shows that 18 calls were placed to Meridian Mail. Sixteen were logon sessions (for example, to compose, forward, or listen to messages). Two calls accessed the Express Messaging or Call Answering feature (an attempt to leave a message at another mailbox). If the number of sessions does not equal the number of calls, there is a problem with your system.

EM/Ans Sessions and Messages are similar in number

The number of EM/Ans sessions should match or be close to the number of EM/Ans messages created. When there are more EM/Ans sessions than EM/Ans messages created (as in the sample report), this means that during an Express Messaging session, or after reaching the Call Answering greeting, users are hanging up without leaving a message, or they are pressing 0 to transfer to an attendant. Either of these results in Express Messaging or Call Answering sessions but no messages created.

Suggested actions

If the disparity between the two numbers is high, the users may need some training on the use of Express Messaging and Call Answering. Also, users should review their greetings. If greetings are unfriendly or if instructions are too complex, this may be causing users to hang up without leaving a message.

There is a high numbers of calls and long messages

On this report, watch for high numbers of calls and long messages. Too many calls in a short period of time and users leaving long messages will tie up channels and prevent others from accessing Meridian Mail.

Suggested action

You may need to expand your system.

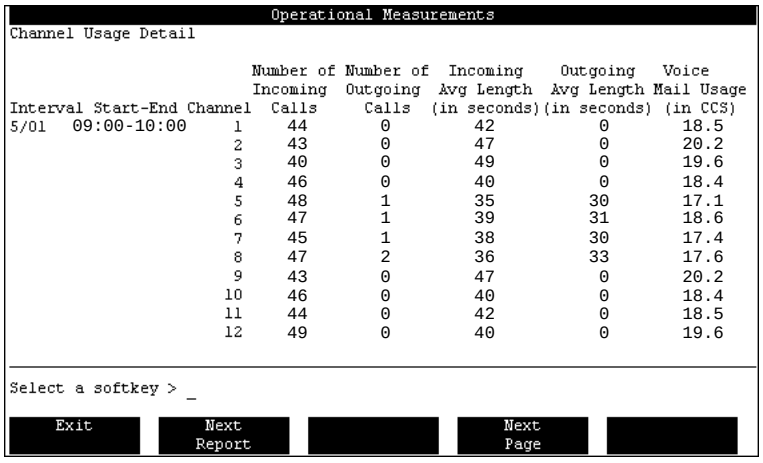
Channel Usage Detail report

Introduction

The Channel Usage Detail report provides details about channel activity for incoming and outgoing calls, including average session lengths and CCS statistics.

The screen

The following is an example of the Channel Usage Detail report screen.



Fields in the Channel Usage Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example
If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Channel

This field indicates the channel being monitored.

Number of Incoming Calls

This field indicates the number of incoming calls during the interval.

Number of Outgoing Calls

This field indicates the number of outgoing calls during the interval.

Incoming Avg Length (in seconds)

This field indicates the average length of incoming calls during the interval.

Outgoing Avg Length (in seconds)

This field indicates the average length of outgoing calls during the interval.

Voice Mail Usage (in CCS)

This field represents the amount of time in terms of CCS that a Meridian Mail channel was active in the defined interval. CCS is a traffic measurement statistic. The value is displayed in the nearest one tenth of a CCS (for example, 11.0).

Note: There is a similar Voice Mail Usage field in the Services Summary Traffic report (see "Services Summary report" on page 32-12). However, because the two fields measure usage differently (one in terms of channels and the other in terms of voice services), there may be small differences between the two fields if you calculate the totals for the displayed values.

Analyzing the Channel Usage Detail report

Introduction

The CCS for each channel gives an indication of how busy each channel is. With Uniform Call Distribution (UCD), the traffic (measured in CCS) should be evenly distributed across all channels over a lengthy period (for example, 12 hours).

Is channel traffic distributed equally?

Channels with short durations will have a higher number of calls than channels with long durations, but the average amount of traffic (for example, CCS) for each nondedicated channel should be similar.

Suggested action

If the traffic is not evenly distributed, check if all channels are working properly. If a channel has no traffic at all for the entire period of the report, this may indicate that the channel is out of service. If any channels are dedicated to a particular service, the number of calls for the dedicated channels may differ significantly from the number of calls on the other channels.

Users are having trouble accessing Meridian Mail

Users may have trouble accessing Meridian Mail (for example, callers are getting ringback or a busy signal) if the system is busy.

Suggested action

Check if the dedicated channel appears to have much fewer calls than other channels. If so, you may be better off removing the dedication and opening the channel to all services. A busy system cannot afford to have any channels that are not sharing the full load on the system.

Services Detail report

Introduction

This report is available only if Fax on Demand, Voice Forms, or Voice Menus is installed on your system. The Services Detail report records the number of accesses, direct or indirect, to voice menus, announcements, fax items, thru-dial service, time-of-day controllers, and voice forms. Direct accesses occur when a user dials the VSDN of the service. Indirect accesses occur when a service is accessed from another service through a menu selection.

The screen

The following is an example of the Services Detail report screen.

```
                          Operational Measurements
Services Detail

Interval Start-End
                      Service     For each menu item, the number of accesses are:
        ID            Accesses     1    2   3    4    5   6    7   8    9   0    *    #
5/01  09:00-10:00
        AS 1003          11        0    0   0    0    0   0    0   0    0   0    0    0
        MS 1011           2        0    0   0    0    0   0    0   0    0   0    0    0
        FI 3001           2        0    0   0    0    0   0    0   0    0   0    0    0
        MS 4022           2        1    0   0    1    0   0    0   0    0   0    0    0
        MS 4023           5        0    0   1    0    0   1    0   2    0   0    0    0
        MS 4033          42        6   21   0    0    0   0    0   0    0   0    0    0
        MS 4058         167       41  116   0    6    4   0    0   0    0   1    2    0
        VF 1013           1        -    -   -    -    -   -    -   -    -   0    -    -
        TD 1023           2        -    -   -    -    -   -    -   -    -   -    -    -
        TS 1033           1        -    -   -    -    -   -    -   -    -   0    -    -

Select a softkey > _

    Exit          Next                               Next
                  Report                             Page
```

Fields in the Services Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example

If data are collected 24 hours a day, and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

ID

This is the service followed by the ID number. The services are as follows:

Acronym	Service	Acronym	Service
AS	Announcement	VF	Voice Forms
MS	Voice Menu	TD	Time of Day
FI	Fax Information	TS	Thru-Dial

Service Accesses

This is the number of times the service was accessed (either directly or indirectly) during the measurement period.

For each menu item, the number of accesses are

This is the total number of times that each menu option was used during the measurement period. For stand-alone announcements and fax items, all frequencies are 0. If announcements or fax items are accessed through a voice menu, then there is an access count if a caller presses 0 to revert to the attendant.

Note: The number of accesses for the individual menu items may not add up to the number of accesses for the menu itself (Service Accesses) because some callers will hang up after reaching the menu if they do not want to choose any of the menu options, or if they want to talk to a live person.

Similarly, calls from rotary dial phones that are able to directly access a menu will be counted in the Service Accesses column but not in the number of accesses for individual menu items, since the rotary dial phone does not have the touch-tone capability required to select a menu item.

For Thru-Dial and Voice Forms, the number of accesses for key "0" count the number of times callers press zero to revert to the attendant. The "-" (dashes) emphasize no other count keys are being counted. For Time of Day, all menu item accesses are shown as dashes.

Analyzing the Services Detail report

Introduction

This report provides a detailed breakdown of which menu items, announcements, or fax items are actually being accessed, and a sense of the traffic that each service is generating.

Note: For a proper analysis of this report, have a printed copy of the service in front of you for reference.

While reviewing the report, consider the following.

If the menu requires reorganization

Menu items that are at the end of the menu (for example, item 8 or 9) are being accessed more frequently than earlier items.

Suggested action

You may wish to reorganize the menu so that the popular items are presented first.

This structure prevents users from having to wait through all the earlier options before hearing the one they want, thus reducing the call length.

A service is generating a high volume of traffic

A particular service is generating a high volume of traffic.

Suggested action

Find out if there is any call blockage (that is, users are unable to access the system).

If announcements or menus are causing call blockage, see if the information can be provided in some other way than through Meridian Mail (for example, through hard-copy memos or bulletin boards). If the service is a definite requirement and its usage cannot be decreased, then your system may require a channel expansion.

There are menu items with few or no accesses

If a menu item has few or no accesses, the reason may be either that there is a lack of training or awareness regarding those items, or that those items are simply not required.

Suggested action

If you find that certain services are not required, either remove them or replace them with more useful services. Check with the application owners to ensure the correct telephone number has been provided to the target audience. Be sure to rerecord the greetings and menu choices to reflect the changes.

The traffic pattern is unusual

Is the traffic high or low for a particular service?

Suggested action

Consult the users to determine if there was some unusual reason for the change in traffic.

If the high or low traffic is expected to return to acceptable levels, no adjustment may be necessary to the system.

Networking Detail report

Introduction

This report is available only on systems with Meridian Mail Networking installed. The Networking Detail report displays traffic totals for each active site within the Meridian Mail network for traffic generated by Meridian Mail, Enterprise, and AMIS Virtual Node Networking. Statistics are shown for the number of messages received at each site from other network sites and the messages delivered to network sites. Statistics are also displayed for network usage and failures.

The screen

The following is an example of the Networking Detail report screen.

```
                              Operational Measurements
Networking Detail

Interval Start-End
       Messages      Messages Delivered        Network Usage      Failures
       Received   Eco Std Urg NDN Ack Failed   Att Suc  Time   No   Not  Prot
Site  (from Site) (-----to site-----) to Send            (min)  Res Reach Error
05/01 10:00-11:00
111   100          10 10  5  0  0      0       2  1   2:32   6   12     0
112   100           0  0  2  0  0      0       4  2   4:04   0    0     0
05/01 11:00-12:00
111    25          15 11  8  0  0      0       3  1   3:02   4    9     0
112    50           0  0  4  0  0      0       6  4   5:09   2    3     0




Select a softkey > _

   Exit        Next
               Report
```

Fields in the Networking Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example
If data is collected 24 hours a day and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Site

This is the remote site ID to which the row of data applies.

Messages Received

This field indicates the number of messages received successfully by the local site from the specified remote site.

Messages Delivered

This is the number of messages delivered from the local site to the identified remote site during the specified interval. This statistic is further subdivided into the following categories based on the type of message.

Eco

These are messages that have been classed as economy.

Std

These are messages that have been classed as standard.

Urg

These are messages that have been classed as urgent.

NDN

These are non-delivery notification messages sent by the system to users whose messages could not be delivered to some of the intended recipients due to incorrect addressing.

Ack

These are acknowledgments sent to the remote site to indicate that a message (that was tagged for acknowledgment) was read by the Meridian Mail user at the local site.

Failed to send

This indicates messages for which each delivery attempt failed and the messages could not be delivered to the remote site within the stale time threshold (refer to the *Meridian Networking Installation and Administration Guide* [NTP 555-7001-244] for information about stale-dating). Failed to Send messages are returned to the user with a Non-Delivery Notification (NDN). The user then may forward the message to the remote user again.

Network Usage

This statistic indicates the number of networking calls placed by the local site to the specified remote site during the specified interval. It is further broken down into the following categories.

Att

This indicates the number of attempted calls. For outgoing sessions, this field is incremented each time a channel is acquired to make a call to this remote site (for Meridian Networking, a modem is also successfully allocated). For incoming sessions, it is incremented when the call is answered, and the network passwords and site IDs are confirmed.

Note: Virtual Node AMIS doesn't use network passwords.

Suc

This indicates the number of successful calls. For Meridian Networking outgoing connections, it is incremented when the call is placed to this remote site and the network passwords and site IDs are confirmed. For incoming sessions, it is incremented provided the maximum number of ports is not exceeded. For Virtual Node AMIS or Enterprise sessions, it is incremented once for each session in which at least one message is successfully sent or received.

Time (min)

This indicates the total amount of time (in minutes) used by networking calls to and from the specified remote site.

Failures

A failure refers to a single unsuccessful attempt to send a networking message. Networking will attempt to send these messages the next time it is scheduled to send messages to the remote site. If a message experiences many failures and is not delivered within a certain period of time, it will be reported in the Failed to Send field and the message is returned to the sender.

No Res
The No Resources failure means that one of the following occurred

- no channels available
- maximum number of outgoing connections is reached
- if Meridian Networking, there were no modems available

Not Reach
This field is incremented each time a network connection is dropped or a problem is encountered while sending or receiving message information.

Prot Error
This field is incremented if a protocol violation is detected.

Analyzing the Networking Detail report

Introduction

This report provides a detailed breakdown of the networking usage on the system. While viewing the reports, consider the following information.

Note: For a proper analysis of this report, have a diagram of the network in front of you to refer to.

The "Failed to Send" messages is high

If the number of "Failed to Send" messages is high, there may be a problem with your networking setup.

Suggested action

Check to make sure that the remote site is not down. If the remote site is up and running, check the networking schedule parameters to see if they are correct. For details on changing networking parameters, refer to one of the following documents:

- *Meridian Networking Installation and Administration Guide* (NTP 555-7001-244)
- *Virtual Node AMIS Networking Installation and Administration Guide* (NTP 555-7001-245)
- *Enterprise Networking Installation and Administration Guide* (NTP 555-7001-246)

The number of NDNs delivered is high

If the number of NDNs delivered is high, this indicates that messages couldn't be delivered to local users. This may be due to one of the following:

the local users don't exist, the address in the message is incorrect, or the user cannot receive composed messages (Class of Service field)

- the local systems disk is full
- the network setup is incorrect
  - site numbers and location IDs are defined differently from remote sites
  - mailbox number/dial plan is configured incorrectly

Suggested action

Check that the disk is not full. If that is not the problem, confirm that the network setup is the same as the remote site's network database. If this isn't the problem, confirm the existence of the remote site which the mailboxes cannot be delivered to and confirm that the site can receive composed messages.

The ratio of urgent networking messages to others sent is high

If the number of urgent networking messages sent is high compared to the number of standard messages, the system may not have enough channels or modems (Meridian Mail Networking only) to support the actual traffic.

Suggested action

If this is a problem, you may want to change the networking configuration. For details on changing networking parameters, refer to one of the following documents:

- *Meridian Networking Installation and Administration Guide* (NTP 555-7001-244)
- *Virtual Node AMIS Networking Installation and Administration Guide* (NTP 555-7001-245)
- *Enterprise Networking Installation and Administration Guide* (NTP 555-7001-246)

AMIS Networking Detail report

Introduction

This report is available only on systems with AMIS Networking capability. The AMIS Networking Detail report displays open AMIS traffic totals for AMIS Networking for your site. (Virtual Node AMIS traffic is displayed by site on the Networking Detail Report.) AMIS Virtual Node traffic is not included in this report. Statistics are shown for the number of AMIS messages received at your site and delivered to other voice messaging systems, the connect time, and the number of failures for each time interval displayed in the report.

The screen

The following is an example of the AMIS Networking Detail report screen.

```
                           Operational Measurements
AMIS Networking Detail

                                                           Connect    Failures
                        Messages  Messages Delivered        Time     No   Not  Prot
Interval Start-End      Received  Eco Std Urg NDN Failed   (mm:ss)   Res Reach Error
 5/01  10:00-11:00        12       0   5   2  0    0        4:00      0    1    1
 5/01  11:00-12:00         0       0   2   0  0    0        2:00      0    1    0
 5/01  12:00-13:00        24       0   5   1  0    0        8:00      0    0    1
 5/01  13:00-14:00         6       0   2   1  0    0        3:00      0    1    1
    .
    .
    :
    :
    :
    :
    :
    :
    :
--------------------------------------------------------------------------------
Select a softkey > _

    Exit          Next
                 Report
```

Fields in the AMIS Networking Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example
If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Messages Received

This field indicates the number of AMIS messages that were received at the local site during the time interval indicated.

Messages Delivered

This field indicates the number of AMIS messages (originating from the local site) that were delivered to other voice messaging systems during the interval indicated. This statistic is further subdivided according to the type of message.

Eco
This indicates the number of messages, tagged as economy, that were delivered to other AMIS voice messaging systems during the specified interval.

Std
This indicates the number of messages, tagged as standard, that were delivered to other AMIS voice messaging systems during the specified interval.

Urg
This indicates the number of messages, tagged as urgent, that were delivered to other AMIS voice messaging systems during the specified interval.

NDN
These are non-delivery notification messages sent by the local system to users at other messaging systems whose messages could not be delivered to the intended recipient at the local site. Messages may not be delivered for the following reasons

- the address is incorrect (for example, the mailbox doesn't exist)
- the user doesn't have the ability to receive AMIS messages (Class of Service field)
- disk is full
- a system error occurred

Failed
This indicates the number of unsent messages. These messages experienced a series of failures and could not be sent before the stale period.

Connect Time (mm:ss) This number indicates the total amount of time (in minutes and seconds) used by AMIS Networking calls during the time interval indicated.

Failures This indicates the number of AMIS messages that were not successfully delivered to other AMIS messaging systems due to specific problems. This statistic is further subdivided into the types of problems that may prevent messages from being delivered.

No Res
The No Resources failure means that a voice port could not be accessed to send these messages to another AMIS site.

Not Reach
This field is incremented each time a network connection is dropped or a problem is encountered while sending or receiving message information.

Prot Error
The Protocol Error failure means that the connection was made to the remote AMIS site, but message delivery was prevented by a protocol error.

Analyzing the AMIS Networking Detail report

Introduction

This report provides a detailed breakdown of the AMIS Networking usage on the system. While viewing the reports, consider the following information.

The number of NDNs delivered or the number of "Failed to Send" messages is high

If the number of NDNs delivered or the number of "Failed to Send" messages is high, there may be a problem with your networking setup or the switch/telephone network. Since Open AMIS requires the user to enter the DN to dial at the destination messaging system, it may be that users are addressing messages incorrectly.

Also, if the failed to send is high, check the "Number Of Messages To Transmit Per Session" field. Try setting it to a higher number, for example, nine. (Also, make sure a billing DN is defined.)

Suggested action

Refer to the *AMIS Networking Installation and Administration Guide* (NTP 555-7001-242) for details on the proper setup of the networking feature.

The ratio of urgent networking messages to others sent is high

If the number of urgent networking messages sent is high compared to the number of standard messages, the system may not have enough channels to support the actual traffic.

Suggested action

If this is a problem, you may want to change the networking configuration in the "Networking Call Maximum" field. Refer to the *AMIS Networking Installation and Administration Guide* (NTP 555-7001-242) for details on changing networking parameters.

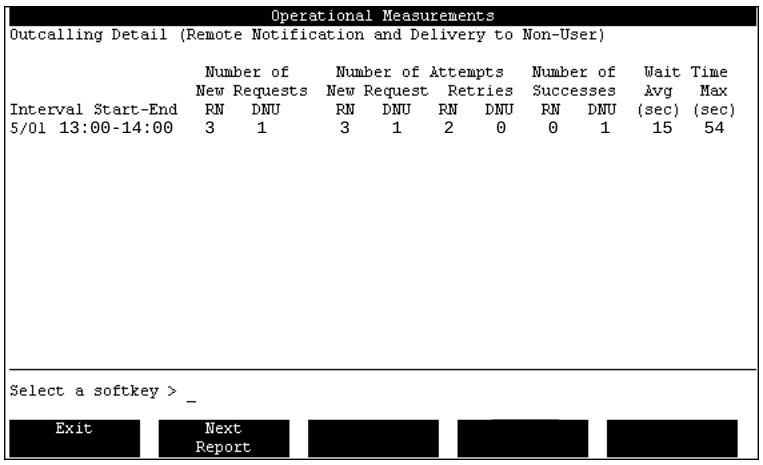
Outcalling Detail report

Introduction

This report is available only if Outcalling is installed on your system. The Outcalling Detail report details outcalling activity for the Remote Notification (RN) and Delivery to Non-Users (DNU) services.

The screen

The following is an example of the Outcalling Detail report screen.



Fields in the Outcalling Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example

If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Number of New Requests

This field indicates the total number of new requests that were made for outcalling services during the interval.

RN

This indicates the number of new requests for the Remote Notification service.

DNU

This indicates the number of new requests for the Delivery to Non-User service.

Number of Attempts This indicates the total number of Remote Notification and Delivery to Non-User attempts made during the interval.

New Request

This number represents the number of attempts that have been made to answer the new requests for RN and DNU. If the Number of Attempts does not equal the Number of New Requests (see the previous field), the system is not keeping up with outcalling requests and more channels may need to be allocated to outcalling.

Retries

This number represents the number of times that the Remote Notification and Delivery to Non-Users services have retried calls because one of the following occurred at the destination number.

the number was busy	RN and DNU
there was no answer	RN and DNU
the phone or pager service answered but no logon occurred	RN
the required DTMF confirmation was not given	DNU

Number of Successes

This indicates the number of successful remote notifications and messages successfully delivered to non-users that occurred during the interval.

RN

RN successes are measured in terms of user login. In other words, an RN call is considered successful if the user logs in to his or her mailbox when the notification is received (on the same call as the notification). If the user receives the notification, hangs up, and then logs in to his or her mailbox, this is not counted as a success since the user terminated the notification call without logging in.

Note: For remote notification to a pager, RN calls are never counted as successful in reports because the paging service cannot log in to the mailbox. A better measure of the effectiveness of RN calls to pagers is to compare the number of RN retries to RN attempts. However, bear in mind that an RN retry does not necessarily mean the RN attempt to the paging service failed; it only signifies that the user did not log on within the retry interval.

DNU

A DNU call is considered successful if the called party answers the call (and DTMF confirmation is given if required).

Wait Time

These values are an indication of how long it takes for the outcalling agent to acquire a channel to outcall to the specified directory number (DN).

Avg (sec)

This is the average amount of time, based on all outcalling attempts made during the interval, that it took the outcalling agent to acquire the resources necessary to make the outcall.

Max (sec)

This number represents the outcalling attempt that took the longest amount of time to acquire the resources necessary to make the outcall.

Analyzing the Outcalling Detail report

Low usage of Outcalling features

The sample report may indicate minimal use of the Outcalling features. The following reasons may help explain why.

Users do not know how to use the service

If so, train all outcalling users on how to use the service.

Users are unaware that the service exists

If so, inform the users of the service and provide training if necessary.

Users do not need to use the service

Consult the users to determine if they really do not need the service. Delete the service from the mailbox of those users who confirm that they do not need the outcalling service.

Technical problem with the service

Have the problem investigated and fixed.

The number of retries is high

If the number of retries is high, the reason may be one of the following:

- The destination number was busy.
- There was no answer at the destination.
- The user at the destination answered the call but did not log in.

Users are not retrieving messages

If users are consistently not retrieving messages, they may not be aware of how to properly use the outcalling service; or there could be a technical problem preventing users from retrieving the messages.

Suggested action

Consult the users to find out if the problem is with the system or with the users.

New attempts and new requests are unequal

The number of new attempts should roughly equal the number of new requests. If the number of new requests is somewhat greater than the number of new attempts, then the system is not keeping up with the demand for outcalling RN or DNU.

Suggested action

The system may need more channels. Increase the limit set by "Maximum Number of Outcalling Channels" on the Outcalling Administration screen to allow more channels to be used for outcalls.

The wait time is high

The wait time indicates how long the outcalling agent has to wait for a free channel. If the wait time is high, this also indicates a need for more channels. Increase the limit set by "Maximum Number of Outcalling Channels" on the Outcalling Administration screen to allow more channels to be used for outcalls.

The number of attempts and successes are not equal

The number of successes should equal the number of attempts. If the numbers are not equal, then the reason may be one of the following:

- There may be a problem with the destination phone/pager.
- Although Meridian Mail may not have any outcalling restrictions, the switch might. For example, long distance dialing may be restricted.
- The Outcalling feature may have been set up incorrectly by either the administrator or the user.
- If the channels were tied up for a long time, the retry time outs may have expired. If the wait times are high, then this is probably what happened.

Suggested action

You may need to dedicate channels to outcalling or increase the number of channels dedicated to outcalling.

Fax Delivery Detail report

Introduction

This report is available only if Fax on Demand is installed on your system. The Fax Delivery Detail report details activity for the fax services.

The screen

The following is an example of the Fax Delivery Detail report screen.

```
                          Operational Measurements
Fax Delivery Detail

                     Number of     Number of     Number of  Number of  Wait Time
Interval Start-End   New Requests  New Attempts  Retries    Successes  Avg   Max
5/01  13:00-14:00         5             5           2          5        60    90
5/01  14:00-15:00        12            12           5         11        66   112
5/01  15:00-16:00         7             7           3          7        62   100
5/01  16:00-17:00        10            10           5          9        65   105

Select a softkey > _

 Exit    Next
         Report
```

Fields in the Fax Delivery Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example
If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Number of New Requests

This indicates the total number of new requests that were made for the fax callback services during the interval.

Number of New Attempts

This indicates the number of attempts made to process new requests for fax callback services during the interval.

Number of Retries

This indicates the number of attempts made to process old requests for fax callback services during the interval because one of the following occurred during the call:

- no carrier was received from the destination fax machine
- transmission errors occurred

Number of Successes

This indicates the number of successful fax callbacks during the interval.

Wait Time

Avg

This indicates the average amount of time, based on all fax callback attempts made during the interval, that the fax outcalling agent needed to acquire the resources necessary to make the call.

Max

This number represents the fax callback attempt that took the longest amount of time during the interval to acquire the resources necessary to make the call.

Analyzing the Fax Delivery Detail report

There is minimal use of fax outcalling

There could be several reasons for minimal use of the Fax Outcalling features.

Users do not know how to use the service
If so, train all fax callback users on how to use the service.

Users are unaware that the service exists
If so, inform the users of the service and provide training if necessary.

Technical problem with the service
Have the problem investigated and fixed.

The number of retries is high

If the number of retries is high, the reason may be one of the following:

- The destination number was busy or the machine was out of paper.
- There was no answer at the destination.
- A transmit error prevented the fax from being received.

The number of new attempts should equal the number of new requests. If the number of new requests is greater than the number of new attempts, then the system is not keeping up with the demand for fax outcalling. The system may need more multimedia channels.

If the wait time is high, this also indicates a need for more channels. The wait time indicates how long the fax outcalling agent has to wait for a free channel.

The number of successes do not equal the number of attempts

The number of successes should equal the number of attempts. If the numbers are not equal, then the reason may be one of the following:

- There may be a problem with the destination fax device.
- Although Meridian Mail may not have any outcalling restrictions, the switch might. For example, long distance dialing may be restricted.
- The fax outcalling feature may have been set up incorrectly by either the administrator or the user.
- If the channels were tied up for a long time, the retry time-outs may have expired. If the wait times are high, then this is probably what happened. You may need to dedicate channels to fax outcalling or increase the number of channels dedicated to fax outcalling.

The wait time is high

If the wait times are too long for the desired service levels, increase the Maximum Number of Fax Delivery Channels on the Fax Administration screen and add multimedia ports to the system.

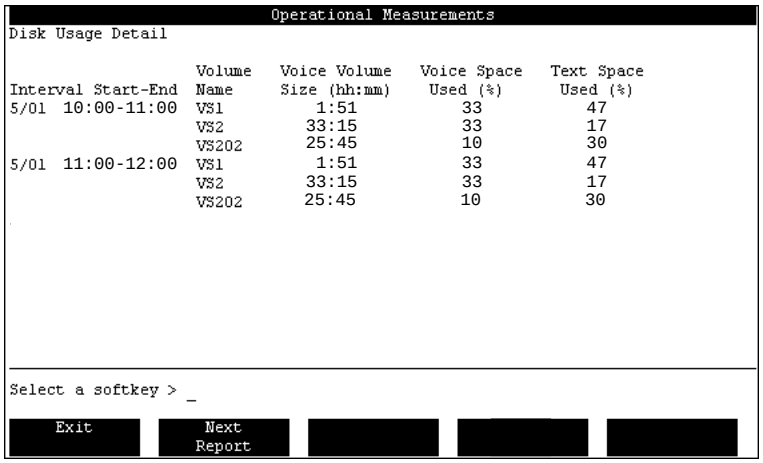
Disk Usage Detail report

Introduction

The Disk Usage Detail report provides information on disk space usage on the voice storage volumes.

The screen

The following is an example of the Disk Usage Detail report screen.



Fields in the Disk Usage Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example
If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Volume Name

This shows the name of the user volume (for example, VS1, VS2, VS202, VS203, and so on). Volumes are partitions on the MSM disks and sections on Meridian Mail disks. For more information, see “Distributing local voice users evenly over volumes” on page 8-15 of Chapter 8, “User administration—an overview.”

Voice Volume Size (hh:mm)

This shows the amount of disk space that has been used, displayed in hours and minutes. One hour of voice storage is equivalent to 8.5 Mbytes.

Voice Space Used (%)

This indicates the percentage of the volume’s voice capacity used at the end of the interval.

Text Space Used (%)

This indicates the percentage of the volume’s text capacity used at the end of the interval.

Analyzing the Disk Usage Detail report

Voice space

The voice space used will fluctuate, especially if your system has an automatic read-message deletion feature enabled. However, if the Voice Space Used percentage is consistently over your disk usage warning level, then steps should be taken to reduce the amount of voice space used.

> **ATTENTION**
>
> If the system generates a SEER 1103, print this Disk Usage Detail report immediately. This SEER indicates that your system has reached physical or virtual capacity. Check that the nightly audit is functioning. Remove files on the volume in question. If the operation involved VS1, remove directory entries or OM files. The effect of corrective actions may be delayed until the nightly audit is run. Consider redistributing users on multiple nodes, turning on automatic message deletion, or buying a storage upgrade.

Reducing voice space

You can reduce the voice space used by deleting unnecessary mailboxes and ensuring that distribution lists are up to date. If these unnecessary or unused mailboxes are on distribution lists, they may be storing messages sent using outdated distribution lists. With no one logging on to delete the messages, the messages continue to accumulate and use up more disk space. You can also encourage users to delete their messages more frequently, or even reduce the allowable maximum message length (see Chapter 27, “Class of Service administration”).

Reviewing voice menus, forms, and announcements

To lower voice space used, you can also review all voice menus, voice forms, and voice announcements to see if their size can be reduced. For example, unused menu items can be removed. You can also consult the User Usage reports to identify users with excessive storage. This might happen if a user stops accessing his or her mailbox (for example, if the user is on vacation), but callers continue to leave messages.

Are the storage volumes evenly balanced?

If voice space used is high on some volumes but low on others, you may need to move high-usage subscribers to low-usage volumes in order to balance system resources. If the voice space used on all volumes is high, you may need to expand your system.

The text space has changed dramatically

Text space used should not fluctuate greatly from day to day, although it will vary over time. Any large fluctuations or significant steady increases in the text space used should be reported to your technical support organization.

T1 Link Handler Detail report

Introduction

This report provides information regarding the number of errors encountered on the T1 links during a given reporting interval.

Platform

T1 links are applicable to MSM systems only.

The report

This is an example of the T1 Link Handler Detail report.

```
                         Operational Measurements
T1 Link Handler Statistics
                                        Out of                Backward   Forward
                               Bipolar  Frame    Extended     Slip       Slip
Interval Start-End    T1 Link  Violatns Errors   SF Errors    Count      Count
 7/22 16:53-17:00     13-1-1      0        0        0           0          0
 7/22 17:00-18:00     13-1-1      0        0       29           0          0
 7/22 17:00-18:00     13-1-2      0        0       21           0          0
 7/22 17:00-18:00     13-1-3      0        0       16           0          0
 7/22 17:00-18:00     13-1-4      0        1       31           0          0
 7/22 17:00-18:00     15-1-1      0        0       17           0          0
 7/22 17:00-18:00     15-1-2      0        0       12           0          0
 7/22 17:00-18:00     15-1-3      0        0        3           0          0
 7/22 17:00-18:00     15-1-4      0        0       14           0          0
 7/22 18:00-19:00     13-1-1      0        0        0           0          0
 7/22 18:00-19:00     13-1-2      0        0        0           0          0
 7/22 18:00-19:00     13-1-3      0        0        0           0          0
 7/22 18:00-19:00     13-1-4      0        0        0           0          0
 7/22 18:00-19:00     15-1-1      0        0        0           0          0

Select a softkey > _

   Exit         Next                        Next
                Report                      Page
```

Fields in the T1 Link Handler Detail report

Interval Start-End This field indicates the start and end time of each reporting interval within the reporting period.

T1 Link This is the T1 Link for which the reported statistics apply. The link is identified by the <node number>-<link number>-<number port>.

Bipolar Violatns This is the number of bipolar violations that have occurred in the specified interval. A bipolar violation is a type of digital communication error.

An excessive number of violations indicates one of the following:

- The quality of the line is poor.
- The line code between the MSM and the PBX/switch does not match. Check the line code in the MSM and PBX/switch.

Out of Frame Errors This is the number of out of frame errors that have occurred in the specified interval. An out of frame error is a type of digital communication error.

An excessive number of errors indicates one of the following:

- The quality of the line is poor.
- The clocking reference between the MSM and the PBX/switch or channel bank/terminating equipment is poor or is not set up properly.

If the MSM is configured to provide the timing reference (free-run mode), make sure that the channel banks/terminating equipment derive the timing reference from the MSM.

Out of Frame Errors (cont'd)

If the PBX/switch or terminating equipment is configured to provide the timing reference, make sure that you have nominated one or more T1 spans as candidates for clock referencing and that one of the nominated spans is active. For information about nominating T1 spans as candidates for clock referencing, For more information, see "Viewing or modifying a T1 link setup" on page 28-30 in this guide. A candidate is made the active reference in the T1 Link Status screen. For more information on the T1 Link Status screen, see Chapter 29, "System status and maintenance".

Extended SF Errors

Extended SF errors are due to incorrect frame alignment. These errors are not applicable.

Backward Slip Count

This is the number of backward slips that have occurred in the specified interval. See the description for Out of Frame Errors.

Forward Slip Count

This is the number of forward slips that have occurred in the specified interval. See the description for Out of Frame Errors.

Analyzing the T1 Link Handler Detail report

Introduction

The sample T1 Link Handler Detail report shows that a substantial number of errors have occurred on a T1 link during the time intervals shown. These errors are occurring continuously which indicates a problem that is not going away.

If these errors were to occur and then disappear, it would indicate that the reason for the problem disappeared because it was related to something else on the system that had been fixed or adjusted, or that something is starting to fail. In this case, it would be advisable to monitor the T1 Link Handler Detail report over the next few days to ensure that the problem has really disappeared.

How to correct a T1 Link Handler problem

To correct a problem with a T1 link handler, follow these steps.

Step	Action
1	Check the quality of the line.
2	Check the line code in the MSM and the PBX/switch.
3	If the MSM is configured to provide the timing reference (free-run mode), make sure that the channel banks/terminating equipment derive the timing reference from the MSM.
4	If the PBX/switch or terminating equipment is configured to provide the timing reference, make sure that you have nominated one or more T1 spans as candidates for clock referencing and that one of the nominated spans is active.

For information about nominating T1 spans as candidates for clock referencing. For more information, see “Viewing or modifying a T1 link setup” on page 28-30 in this guide. A candidate is made the active reference in the T1 Link Status screen (see the description “The T1 Link Status screen” on page 29-89 in this guide).

Chapter 33

User Usage reports

In this chapter

Overview

Introduction

The User Usage report provides statistics for local voice messaging usage on a per-user basis. If AMIS Networking or Meridian Networking is installed, then the report also displays users' daily networking activity. To generate User Usage reports, use the User Usage Reports screen.

Note: Check the Operational Measurement Options screen to make sure that the collection of user usage data is enabled. If it is disabled, enable it.

Administration level

User usage reports are available only from Customer Administration.

The User Usage Reports screen

Introduction

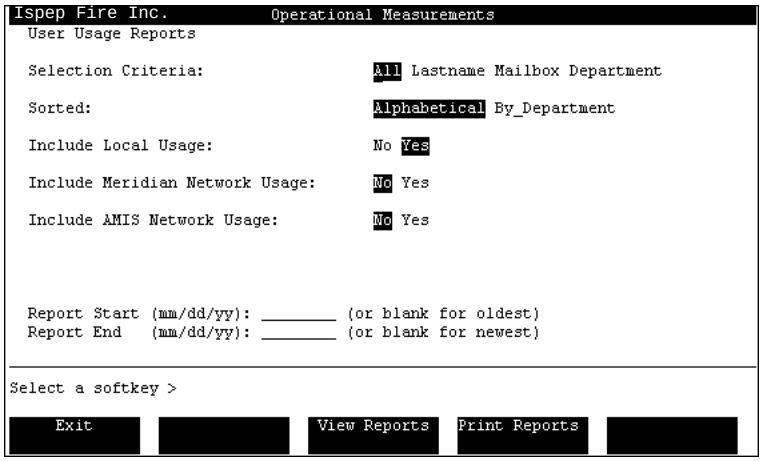
User Usage reports search criteria are specified in the User Usage Reports screen.

Administration level

The User Usage Reports screen is available from Customer Administration only.

The screen

The following is an example of the User Usage Reports screen.



Fields in the User Usage Reports screen

Introduction

The following fields appear on the User Usage Reports screen. Select parameters and choose options required to create the type of report you need.

Selection Criteria

The following options are search parameters. Statistics matching your selection are displayed in the report.

All

When this option is selected, user usage data for all local users will be displayed in the report.

Lastname

When this option is selected, you are prompted for the last name of the subscriber whose data you want to view. If the last name is not found, use the Find Users feature in User Administration to verify that the name exists in the system. You may use wildcard characters (“+”, “?”, or “_”) to retrieve a group of users.

Mailbox

When this option is selected, you are prompted for the mailbox number of the user whose data you want to view. You may use wildcard characters (“+”, “?”, or “_”) to retrieve a range of mailboxes. If the mailbox number is not found, use the Find Users feature in User Administration to verify that the mailbox number exists in the system.

Department

When this option is selected, you are prompted for a department name. All users associated with that department will be displayed in the report. The entry you make must correspond to an existing entry in the system. Use wildcard characters (“+”, “?”, or “_”) to retrieve a group of departments.

Note: When searching by department, users with blank department fields will not be displayed.

Sorted

If your selection criterion is All Users, you can choose to sort the user data alphabetically, according to user names, or according to department names.

Note: When sorting by department, users with blank department fields will not be displayed.

Include Local Usage

This field is displayed if Meridian Networking and/or AMIS Networking are enabled. (If networking is not installed, the report displays only local usage.) Set the field to Yes to include user usage data for local voice messaging. This includes information about the number of Express Messaging and logon sessions the user had during the specified interval, the number of messages that were created during the Express Messaging and logon sessions and the total length of those messages, the amount of time that the user was connected to Meridian Mail, and the amount of disk space used by those messages. The default is Yes.

Include Meridian Network Usage

This field is displayed if Meridian Networking is enabled. When this field is set to Yes, the report will include user usage data for Meridian Networking activity. This information includes the number of economy, standard, and urgent messages that users created during the specified interval as well as the total length of the messages created (for each of the three types of messages). The default is No.

Include AMIS Network Usage

This field is displayed if AMIS Networking is enabled. When this field is set to Yes, the report will include user usage data for AMIS Networking activity. This information includes the number of economy, standard, and urgent messages that users created during the specified interval as well as the total length of the messages created (for each of the three types of messages). The default is No.

Report Start (mm/dd/yy)

This is the date on which the selected reports are to start. If Report Start predates the earliest available date, the report starts with the earliest available date. Leave this field blank to retrieve reports for the earliest available data. (The format mm/dd/yy hh:mm is the default. The format can be changed in General Administration, General Options. For more information, see Chapter 14, “General options”.

Report End (mm/dd/yy)

This is the date on which the selected reports are to end. If Report End exceeds the latest available period, the report ends with the last available period. Leave this field blank to report on the most recent data. (The format mm/dd/yy hh:mm is the default. The format can be changed in General Administration, General Options. For more information, see Chapter 14, “General options”.

Generating User Usage reports

Introduction

The following information describes the procedure to generate User Usage reports.

Administration level

The User Usage Reports menu is available from Customer Administration only.

Procedure

To generate User Usage reports, follow these steps.

Starting Point: Customer Administration Menu

Step	Action
1	Select Operational Measurements. ***Result:*** The Operational Measurements screen is displayed.
2	Select User Usage Reports from the Operational Measurements menu. ***Result:*** The User Usage Reports screen is displayed.
3	Choose the selection criteria by which you want to retrieve data.
4	If the selection criterion is All, select how you want the data to be sorted: alphabetically (by user name) or by department name.
5	Select the type of data you want to view: local usage, Meridian Networking, or AMIS Network usage. You can select all three if required. ***Note:*** Meridian Networking and AMIS Networking usage are available only if Meridian Networking or AMIS Networking is installed.
6	If you wish to specify a start and stop time for the reporting period, enter the required values in the Report Start and Report End fields.
7	Choose one of the following options.

TO	GO to step
view User Usage reports	8.
print User Usage reports	9.
exit User Usage reports	10.

Step	Action
8	Press [View Reports]. ***Result:*** The selected report screens are displayed (see the following pages for descriptions of each report). Press [Next Page] to view subsequent pages of the report; press [Exit] to return to the User Usage Reports screen.
9	Press [Print Reports]. ***Result:*** You are prompted to make sure that your printer is ready and online. Press [Continue Printing] to print the reports, or press [Cancel Printing] at any time to cancel printing. There may be some delay before control is returned to the screen because it waits for the printer to stop printing.
10	Press [Exit]. The Operational Measurements menu is redisplayed.

User Usage report

Introduction

When you view the report on the terminal or from a printout, the data is arranged as shown in the diagram below. These examples show all types of user usage data (local, Meridian Networking, and AMIS Networking).

The screen

The following is an example of the User Usage report.

```
Ispep Fire Inc.                  User Usage Reports

Last Name          First Name        Department     MailBox              COS
 Forbes             William          Accounting     8050                 15

Local Usage:
           Number of      Connect      Number of      Message     Disk
           Sessions        Time        Messages       Length      Used
Date     EM/Ans Logon    (mm:ss)     EM/Ans Logon     (mm:ss)     (mm:ss)
6/10/96    10     4        4:00         9     2         6:30        4:30
         ---------------------------------------------------
Total      10     4        4:00         9     2         6:30
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Last Name          First Name        Department     MailBox              COS
 James              Curtis          Cust. Service   7000                 30

Local Usage:
           Number of      Connect      Number of      Message     Disk
--------------------------------------------------------------------------
Select a softkey > _

    Exit                                              Next
                                                      Page
```

The following is an example of a User Usage report when Meridian Networking and AMIS Networking is installed.

```
Ispep Fire Inc.                  User Usage Reports


Meridian Network Usage:
         Number of   Total     Number of   Total     Number of   Total
         Economy     Length    Standard    Length    Urgent      Length
Date     Messages    (mm:ss)   Messages    (mm:ss)   Messages    (mm:ss)
6/10/96    8          2:23        7        11:40        0        00:00
          ------------------------------------------------------------

Total      8          2:23        7        11:40        0        00:00

AMIS Network Usage:
         Number of   Total     Number of   Total     Number of   Total
         Economy     Length    Standard    Length    Urgent      Length
Date     Messages    (mm:ss)   Messages    (mm:ss)   Messages    (mm:ss)
6/10/96    10         3:10        1         1:30        0        00:00
          ------------------------------------------------------------
Total      10         3:10        1         1:30        0        00:00

--------------------------------------------------------------------------
Select a softkey > _

    Exit                                              Next
                                                      Page
```

Fields in the User Usage report

Introduction

These are the fields that are displayed in the User Usage report.

Header fields

Last Name
This is the user's last name.

First Name
This is the user's first name.

Department
This is the user's department name.

Mailbox
This is the user's mailbox number.

COS
This is the class of service number assigned to the user.

Local Usage fields

Date
This is the date of the reporting interval.

Number of Sessions
This is the number of Express Messaging, Call Answering, and logon sessions that occurred during the interval. To check the number of messages that were actually received or created during these sessions, check the Number of Messages field.

- **EM/Ans** refers to the total number of sessions created by Express Messaging or Call Answering calls to this mailbox. The number of abandoned calls (where no message is left) can be calculated by subtracting the number of EM/Ans messages from the number of EM/Ans sessions.
- **Logon** refers to the number of times the user logged into the mailbox for any reason.

Connect Time (mm:ss)

This is the length of time (in minutes and seconds) that the user was connected to the Voice Messaging service on the given date.

Number of Messages

This is the number of messages that the user received and created on the given date.

- **EM/Ans** refers to the number of messages left in the user's mailbox by both the Express Messaging and Call Answering services. The number of abandoned calls (where no message is left) can be calculated by subtracting the number of EM/Ans messages from the number of EM/Ans sessions.
- **Logon** refers to the number of messages that the user created on the report date.

Message Length (mm:ss)

This is the total time (in minutes and seconds) of all call answering messages received and messages created by the user or deposited in the user's mailbox on the given date.

Disk Used (mm:ss)

This is the amount of storage used by the user (measured in minutes and seconds) on the given date. This includes storage for greetings and personal verifications (spoken name recordings).

Meridian and AMIS Networking usage fields

Date

This is the date of the reporting interval.

Number of Economy Messages

This is the number of economy messages that the user created on the given date.

Total Length (mm:ss)

This is the total length (in minutes and seconds) of all networking messages created by the user on the given date and tagged as economy.

Number of Standard Messages
This is the number of standard messages that the user created on the given date.

Total Length (mm:ss)
This is the total length (in minutes and seconds) of all networking messages created by the user on the given date and tagged as standard.

Number of Urgent Messages
This is the number of urgent messages that the user created on the given date.

Total Length (mm:ss)
This is the total length (in minutes and seconds) of all networking messages created by the user on the given date and tagged as urgent.

Analyzing User Usage reports

The EM/Ans numbers are high and the logon count is low

The user may be accumulating too many messages before checking the mailbox and thereby contributing to a low disk space problem.

Suggested action

If disk space is already low (check the Disk Usage Detail report), you may need to make the user more aware of the importance of not accumulating messages. If you are a customer administrator, you will have to ask your system administrator for the information.

Monitor the length of messages closely. If messages are too long for some users, you may wish to shorten their storage limit to encourage the users to empty their mailboxes more frequently. (For more information, see Chapter 8, “User administration—an overview”.) You can also alter the maximum message length parameter (see Chapter 27, “Class of Service administration”) to deter callers from leaving long messages.

You can assign a class of service (COS) with a shorter storage limit to encourage the users to empty their mailboxes more frequently (see Chapter 8, “User administration—an overview”). You can also alter the maximum message length parameter (see Chapter 27, “Class of Service administration”) to deter callers from leaving long messages.

The number of logons is zero

Suggested action

Check the Time of Last Logon field in the View/Modify Local Voice User screen. If a considerable amount of time has passed since the last successful logon, you may want to contact the user to see if he or she is having any problems logging on. For example, the user may not know how to log on and retrieve messages (especially if this is a new user), or the user may have forgotten the mailbox password and has stopped trying to log on.

Chapter 34

Audit Trail reports

In this chapter

Overview

Introduction

This chapter describes the two types of Operational Measurement (OM) Audit Trail reports—Outcalling and Fax. These reports are useful for monitoring the use of these two features.

Section A: Collecting Audit Trail data, describes the procedure for enabling the collection of audit trail data.

Section B: Outcalling Audit Trail reports, provides descriptions and analyses for the Outcalling Audit Trail reports.

Section C: Fax Audit Trail reports, provides examples, descriptions, and analyses for the Fax Audit Trail reports.

Section A Collecting Audit Trail data

In this section

Overview

Introduction

This section describes the Operational Measurements Options screen and the procedure for setting up the collection of audit trail data.

Enabling the collection of audit trail data

Introduction

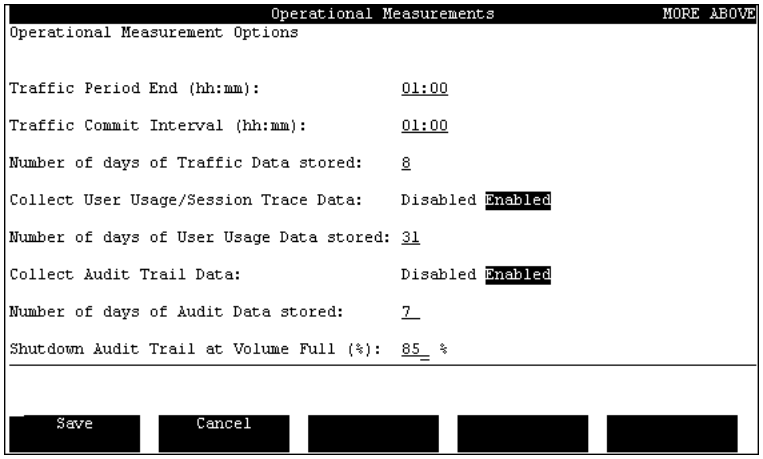
You must explicitly enable the collection of audit trail data, and specify how long this data should be stored before being deleted.

Administration level

Audit trail data collection is enabled in the Operational Measurement Options screen at the system administration level.

Operational Measurement Options screen

The following is an example of the lower portion of the Operational Measurement Options screen at the system administration level. It is this portion of the screen that contains the fields that are relevant to enabling the collection of audit trail data.



Fields used to enable audit trail data collection

These fields are used to enable audit trail data collection.

Collect Audit Trail Data	
Description	This field determines whether or not audit trail data is collected.
Options	Enabled and Disabled
Default	Enabled

Number of days of Audit Data stored	
Description	The field determines how long the collected audit trail data will be stored on disk before being overwritten.
Range	1 to 63 days
Default	7

Shutdown Audit Trail at Volume Full (%)	
Description	Use this field to identify the percentage at which you want the collection of audit trail data to stop.
Example	If set to 80%, audit trail data collection is disabled when the volume on which audit data is stored reaches 80% capacity. If set to 100%, collection of data will not stop until the volume is completely full. This is not recommended. ***Note:*** This is a percentage of text space, not voice space.
Default	85%

Procedure

To enable the collection of audit trail data, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select Operational Measurements.
2	Select Operational Measurement Options. ***Result:*** The Operational Measurement Options screen is displayed. Three fields on the screen (Collect Audit Trail Data, Number of days of Audit Data stored, and Shutdown Audit Trail at Volume Full) are used to enable audit trail data collection.
3	Set the Collect Audit Trail Data field to Enabled if currently disabled (Enabled is the default.)
4	Specify the number of days that audit trail data should be stored on disk. ***Note:*** Detailed field descriptions are provided on the preceding pages.
5	In the Shutdown Audit Trail at Volume Full (%) field, enter the percentage full at which collection of audit trail data should stop. The default is 85 percent.
6	To save the current configuration, go to step 7. To exit without saving, go to step 8.
7	Press [Save]. ***Result:*** The outcalling data is saved and you are returned to the Operational Measurements menu.
8	Press [Cancel]. ***Result:*** Any changes you have made are not saved and you are returned to the Operational Measurements menu.

Section B Outcalling Audit Trail reports

In this section

Overview

Introduction

Outcalling audit trail statistics allow you to monitor how users are using the Remote Notification (RN) and Delivery to Non-User (DNU) features. There are two Outcalling Audit Trail reports that you can generate: a summary report and a detail report. Each report provides outcalling data for a certain period of time as specified by you.

Report types

The following two report types are available for Outcalling.

Outcalling Audit Trail Summary report

The summary report shows each outcall (RN or DNU) that was made during the reporting interval, along with the user who made the call, the user's mailbox number, the target number, and the status of the call. It shows only completed (answered) calls.

Outcalling Audit Trail Detail report

The detail report provides a more thorough account of each outcall request, including the start time and duration of the call, the DN of the channel that was used to place the call, and the number of retries (if any). It shows all outcalls, both successfully completed and unsuccessful.

Generating an Outcalling Audit Trail report

Introduction

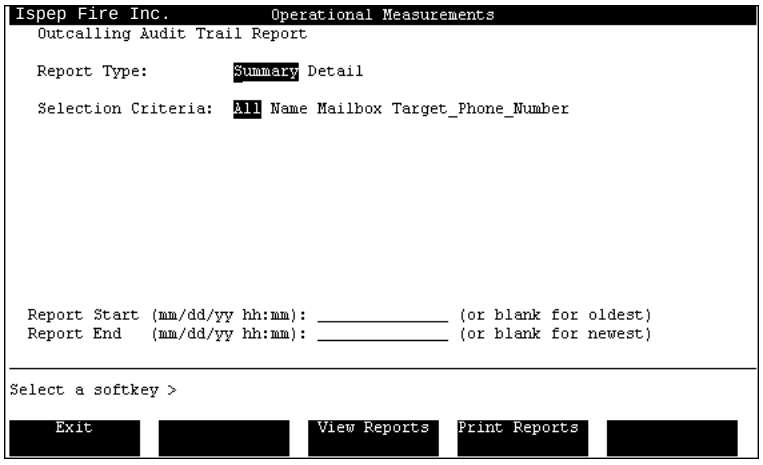
The Outcalling Audit Trail Report screen is accessed from the Operational Measurements menu. This is a report selection screen in which you specify the type of report you want to retrieve (summary or detail) as well as the duration of the report period. You must specify whether you want to generate a report for a particular user, mailbox number, phone number, or all. You can either generate a report that includes all of the information currently stored on disk for that user (mailbox number or phone number) or generate a shorter report for a specific time period. The report can either be viewed on your terminal or printed.

Administration level

Outcalling Audit Trail reports can be viewed from both the system and the customer administration level. At the system administration level, outcalls for all customer groups are reported. At the customer administration level, only outcalls for the current customer group are reported.

The Outcalling Audit Trail Report screen

The following is an example of the Outcalling Audit Trail Report screen.



Fields in the Outcalling Audit Trail Report screen

The following fields are used to specify the information required to generate an Outcalling Audit Trail report.

Report Type	
Description	Use this field to select the type of report to be generated.
Options	Your options are Summary and Detail. A summary report shows only completed calls. A detail report shows all actions, such as Submission, both successful and unsuccessful.
Default	Summary

Selection Criteria	
Description	All entries in the database can be viewed, or you can view data for a specific user, mailbox number, or phone number.
Options	All, Name, Mailbox, Target_Phone_Number
Default	All

Last Name	
Description	This field is displayed if Selection Criteria is set to Name. To view outcalling data for a particular user, enter that user's last name (and first name in the next field, as there may be more than one user with the same surname).
Limitations	This field does not accept the characters "+", "?", and "_" (underscore).

First Name	
Description	This field is displayed if Selection Criteria is set to Name. To view outcalling data for a particular user, enter that user's full first name (as well as the last name in the previous field).
Limitations	This field does not accept the characters "+", "?", and "_" (underscore).

Mailbox	
Description	This field is displayed if Selection Criteria is set to Mailbox. To view outcalling data for a specific mailbox, enter the full mailbox number.
Limitations	This field accepts numeric data only.
Target Phone Number	
Description	This field is displayed if Selection Criteria is set to Target Phone Number. To view outcalling data for a particular target phone number or pager number (the number entered in the Target DN field in the outcalling schedule), enter the full number in this field.
Limitations	This field accepts numeric data only.
Report Start/End	
Description	Enter the start date and time and end date and time to indicate the reporting period.

Procedure

To generate an Outcalling Audit Trail report, follow these steps.

Starting Point: The Main Menu or the Customer Administration menu

Step	Action
1	Select Operational Measurements.
2	Select Outcalling Audit Trail Report. ***Result:*** The Outcalling Audit Trail Report screen is displayed.
3	Specify the report type (Summary or Detail).
4	Specify the selection criteria (Name, Mailbox, Target Phone Number, or All).
5	Fill in the field that corresponds to the selection criteria you choose.
6	Enter the report start and end times. ***Note:*** If these fields are left blank, all outcalling data that is currently stored on disk will be retrieved.

Step	Action
7	Choose step 8 to view the reports on the terminal or step 9 to print the reports.
8	Press [View Reports]. ***Result:*** The first Outcalling Audit Trail report is displayed. When viewing the report, press [Next Page] to view the next page of the report. When the last page has been displayed, a prompt appears indicating it is the end of the report. ***Note:*** For a description of the fields in the summary report, see "Fields in the Summary Outcalling Audit Trail report" in this chapter. For a description of the fields in the detail report, see "Fields in the Detail Outcalling Audit Trail report" in this chapter.
9	Press [Print Reports]. ***Result:*** You are prompted to ensure the printer is ready and online. Press [Continue Printing] to print the report or [Cancel] if you do not want to print the report. If you selected [Continue Printing], a [Cancel] softkey is displayed that can be used to cancel printing once printing has started. There may be some delay before control is returned to the screen because it waits for the printer to stop printing.
10	Press [Exit]. You are returned to the Outcalling Audit Trail Report screen.

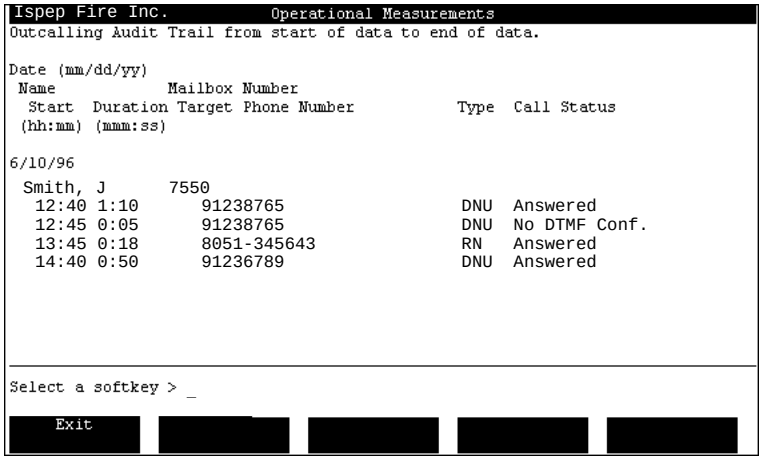
The Summary Outcalling Audit Trail report

Introduction

The Summary Outcalling Audit Trail report is displayed if you select Summary as the report type when you generate the report. This report provides summary information about the use of the Remote Notification (RN) and Delivery to Non-User (DNU) features.

The report

The following is an example of the Summary Outcalling Audit Trail report screen.



Fields in the Summary Outcalling Audit Trail report

Introduction

The following informational fields are displayed when you generate a Summary Outcalling Audit Trail report.

Date

The date the call was made.

Name

The name of the Meridian Mail user who initiated the call.

Mailbox Number

The mailbox that originated the call.

Start (hh:mm)

The time at which the call was made.

Duration (mm:ss)

The length of the call in minutes and seconds.

Target Phone Number

This is the number called. A maximum of 30 digits can be displayed in this field. For calls placed to paging services (such as SkyPager), the pager identification number (PIN) is also displayed.

Example
In the number 8051-345643, the last six digits are the PIN number. If the full number is longer than 30 digits, the first few digits in the paging service phone number will be truncated.

Type

The Outcalling service that was used: either Remote Notification or Delivery to Non-User.

Call Status

The result of the call. The result status can be one of the following types.

Answered
This indicates that the destination number was answered and the message was heard by the called party.

RN Disabled
This indicates that the called party answered and pressed 3 to disable Remote Notification (RN).

Call Status, cont'd

No DTMF Conf.
This display indicates that the called party did not press 2 to hear a DNU message (not relevant if DTMF confirmation is not required).

Not Played
This display indicates that the called party disconnected before the DNU message was played.

Analyzing the Summary Outcalling Audit Trail report

Introduction

This report provides a list of the type and result of all outcalling attempts during the specified period.

Invalid RN target

If a particular RN target is associated with RN failures, the RN target may be invalid. Check to see if only one mailbox is associated with the invalid RN target. If so, contact the user and suggest that the target RN be corrected, or correct the RN through the Meridian Mail interface. If multiple mailboxes are associated with the faulty RN target, determine why the RN target is no longer valid.

The Detail Outcalling Audit Trail report

Introduction

The Detail Outcalling Audit Trail report is displayed if you selected Detail as the report type. This report includes the information displayed in the summary report, as well as detailed information regarding the usage of the RN and DNU features.

The report

The following is an example of the Detail Outcalling Audit Trail report screen.

```
Ispep Fire Inc.          Operational Measurements
Outcalling Audit Trail from start of data to end of data.

Date (mm/dd/yy)
 Name            Mailbox Number
Transaction   Start  Duration  Device/Target Phone Number          Channel   Re-
(hh:mm)      (hh:mm) (mmm:ss)                                       DN      try
 Request#   Outcall Process    Call Status   Outcall Action

 06/10/96
 Howe A.        8050
 15:05       15:05                                                          0
 #00003     RN  Submission                   Continue
 15:05       15:05     0:30   ToneP/7050                            2800     0
 #00003     RN  Call Results   Answered      Remove, User logged in.
 15:06       15:06                                                          0
 #00004     RN  Submission                   Continue
 15:09       15:09                                                          0
 #00005     RN  Submission                   Continue

Select a softkey > _

   Exit                                                    Next
                                                           Page
```

Fields in the Detail Outcalling Audit Trail report

Introduction

The following fields are displayed when the Detail Outcalling Audit Trail report is chosen.

Date

This is the date the call was made.

Name

This is the name of the Meridian Mail user who initiated the call.

Mailbox Number

This is the mailbox that originated the call.

Transaction (hh:mm)

This indicates the time at which the audit trail record was stored (using 24-hour clock).

Start (hh:mm)

This indicates the time at which the current outcall process started (using 24-hour clock).

Duration (mm:ss)

This indicates the length of the call.

Device/Target Phone Number

This indicates the type of device called followed by the phone/pager number. The device will be one of the following choices:

- Phone
- ToneP (tone pager)
- Voice (voice pager)
- NumPa (numeric pager)
- PaSrv (pager service)

Note: If the device is a paging service, the paging service phone number, followed by the pager identification number (PIN), will be displayed. The maximum length for this field is 30 digits. If this limit is exceeded, the first few digits of the paging service phone number will be truncated.

Channel DN

This indicates the DN associated with the voice channel used.

Retry

This shows the number of retries that have been made at the time of the attempt. This field increments by one whenever

- a DN is busy and is retried
- multiple target DNs are defined and they have all been tried and either not answered or answered with no login

Transaction Request #

This is a unique number identifying the RN or DNU request.

Outcall Process

This shows the type of audit trail entry. This could be one of the following.

Submission

This type indicates that a request has been made for an Outcalling service.

Recovery

This type indicates that messages for outcalling have been detected and submitted after a system reboot.

Cancellation

This type indicates that during recovery, requests for outcalling have been detected but have been cancelled since they are no longer valid.

Logout/Admin

This type indicates that one of two conditions has occurred. The first possibility is that a user has logged out with unannounced messages left in his or her mailbox. Normally, if a user is listening to a message when a new message comes in, the new message is announced after the user has finished listening to the other message. However, if the user hangs up before the message has finished playing, the new message will not be announced. (In this situation, the user will continue to be notified of messages.) The second possibility is that someone (an administrator or you) has modified a user's account while there were unread messages in the user's mailbox.

Validation

This type indicates a checking process just before a call was/is made.

Outcall Process, cont'd

Call Results
This type indicates information regarding the Call Status and Outcall Action in the adjacent fields to the right.

Call Status

This is a general statement of the results of a call. The following list describes the possible call status results.

Busy
The RN or DNU target DN was busy. A retry attempt will be scheduled if the busy and no answer retries have not been exhausted.

Answered
An outcall to an RN or DNU target DN was placed. The RN call was answered but the user did not log in on the same call to listen to the message. Remote notification will be rescheduled if the answered retries have not been exhausted. The DNU call was answered and the message was successfully delivered.

No Answer
An outcall to an RN or DNU target was placed and the call was not answered. A retry attempt will be scheduled if the no answer retries have not been exhausted.

No DTMF Conf
An outcall to a DNU target DN was placed. The call was answered but the caller did not provide the required DTMF confirmation (in other words, he or she did not press 2 to hear the message). DNU will be rescheduled if the answered retries have not been exhausted.

Reorder
During an outcall, the target DN was dialed, and a reorder tone was detected. The primary reasons for a reorder tone are that an invalid DN was called, there were no resources to complete the call, or there were access restrictions that the DN violated. The call attempt will be treated as a busy attempt, and a retry attempt will be scheduled if the busy and no answer retries have not been exhausted.

Call Status, cont'd

Resource Delay

The outcall was not completed because the line on which the call was to be made was taken away due to an incoming call that was given priority. The outgoing call is retried on a different channel. If this is a persistent problem, reserve channels for outcalling and make sure no line DNs terminate on them.

Incomplete

The outcall could not be completed. The call attempt will be treated as a busy attempt, and a retry attempt will be scheduled if the busy and no answer retries have not been exhausted. If there is an accompanying SEER, follow the action described in the *Maintenance Messages (SEERs) Reference Manual* (NTP 555-7001-510).

RN Disabled

During an RN attempt, the target DN was dialed, the call was answered, and 3 was pressed to disable Remote Notification. There will be no further RN attempts for this user until the user logs in to his or her mailbox.

Not Played

During a DNU attempt, the target DN was dialed, and the call was answered and disconnected before DNU could play its message. If the answered retries have not been exhausted, DNU will retry using the answered retry limits and intervals.

Illegal Window

A user attempted to send a DNU message. The message became stale during an illegal time window and could not be delivered. (The stale date parameter defaults to 36 hours. If a message cannot be delivered within this time, a message becomes stale.) The user receives a non-delivery notification.

Call Status, cont'd

Stale Date
A user attempted to send a DNU message. The message was not delivered immediately (either because it was sent during a restricted time period or the call was not answered and was, therefore, rescheduled). The message became stale during a permitted time period and could not be delivered. (The stale date parameter defaults to 36 hours. If a message cannot be delivered within this time, a message becomes stale.) The user receives a non-delivery notification.

SIT Tone
During an outcall, the target DN was dialed, and a SIT tone was detected. A SIT tone is usually a series of tones followed by a voice message, indicating that this DN is invalid. This causes remote notification for this user to be turned off by disabling all of his or her remote notification schedules. The administrator or user should define a new valid DN and reenable Remote Notification for the user. DNU is cancelled for the message and the user receives a non-delivery notification (NDN).

Bad Called DN
During an outcall, the target DN was dialed, and a bad called DN was detected by the local switch. (In other words, the target DN is invalid for some reason.) This causes Remote Notification for this user to be turned off by disabling all of his or her remote notification schedules. The administrator or user should define a new valid DN and reenable Remote Notification for the user. DNU is cancelled for the message and the user receives a non-delivery notification (NDN).

Outcall Action

This field indicates the action performed on the request. The possible results are described below.

Continue
The validation has been passed and a call attempt is to be made.

Remove, retry limit reached
After the call, the retry was not rescheduled because the retry limit had been reached.

Outcall Action, cont'd

Remove, another RN exists
The validation step determined that the user has logged on since the last RN attempt and the retry was cancelled.

Reset
A problem was encountered retrieving information. Requests will be discarded and recovered from disk.

Delayed 1
A channel could not be obtained on which to call out, and an attempt will be made later to obtain one.

Delayed 2
A channel was obtained but it was taken away before the call was made. An attempt will be made to retry later.

Defer
Another call attempt has been scheduled. RN calls to pagers are always rescheduled, unless the retry limit is reached, because the user may fail to receive the page. (However, if the user logs on before the next retry, the retry will be cancelled.)

Outcall Action - Reason Codes for Delivery to Non-User

Reason codes indicate why an action occurred. Possible reason codes follow.

Delivery to Non-User

DNU Interpretation
All OK
Past delivery window
Past system limit (retry, stale date)
Problem reading the message
Stale date time
Problem sending NDN, try again in 5 minutes
Message deleted by utility or file lost
Past system limit (no NDN given)
Outcalling not set up for customer
Had difficulty determining if the customer had Outcalling; will defer this request for Validation/Results stage and retry
Duplicate call made due to DNU recovery
Duplicate request discarded due to DNU recovery
Indicates invalid DN
No suitable channels
Channels out of service

Remote notification

RN Interpretation
All OK
Notification was cancelled by login
Message arrival is outside the time period
Failed to read personal profile
Outcalling not set up for customer or user

RN Interpretation
Past retry limit
RN not turned on
RN already active
RN no longer active (RN should still be active)
Message of wrong priority
Reinstated old request
Schedule missing
Failed to read the phone number
Failed to update the personal profile
No messages in the user’s mailbox
Duplicate recovery entry for user
Notification was cancelled by another request
Non-MM8 profile; no component list
DN no longer valid
Invalid Client ID given

RN Interpretation
RN disabled by the called party
RN turned off due to multiple retry
Had difficulty determining if the customer had Outcalling; will defer this request for Validation/Results stage and retry
RN disabled by invalid DN
No suitable channels
Channels out of service

Analyzing the Detail Outcalling Audit Trail report

Introduction

This report provides a list of the type and result of all outcalling attempts during the specified interval.

Recurring channel failures on one channel

Recurring outcalling failures on the same channel may indicate problems with the channel hardware.

Suggested Actions

To determine the channel number from the Channel DN, go to Meridian Mail Administrative screen and view the Channel Allocation Table (CAT).

1. If the system is connected to a Meridian 1 system, look under the SCN field and find Channel DN, and then look up the channel number.
2. If the system is connected to a non-Meridian 1 switch, look under the Channel DN field for the Channel DN, and then look up the channel number.

Run the Channel Problem Identification report to see if the channel has unusual traffic patterns. You may need to check the DSP hardware and switch terminal number status as well.

Remote Notification not being received

If a user complains of not receiving Remote Notification, follow the suggested actions.

Suggested actions

Run the Audit Trail with the filter set for the user mailbox over the time interval in question. Then do the following:

- check to see if RN requests were processed for that user; if none exists, check the Mailbox Session Analysis report to see if any messages arrived during the interval
- if there was RN activity, check the RN targets used to see if they are valid

Section C Fax Audit Trail reports

In this section

Overview

Introduction

Fax audit trail statistics allow you to monitor how users are using the Fax on Demand features. There are actually two Fax Audit Trail reports that you can generate: a summary report and a detail report. Each report provides fax data for a period specified by you.

Note: Before you can generate a Fax Audit Trail report, the Meridian Mail system must be set so that the collection of audit trail data is enabled (see "Enabling the collection of audit trail data" in this chapter).

Report types

The following two types of Fax Audit Trail Data reports are available.

Summary report

The summary report shows each fax outcall that was made during the reporting interval, along with the called DN and the status of the call.

Detail report

The detail report provides a more thorough account of each outcall request, including the DN of the channel that was used to place the call and the number of retries (if any).

The Fax Audit Trail Report screen

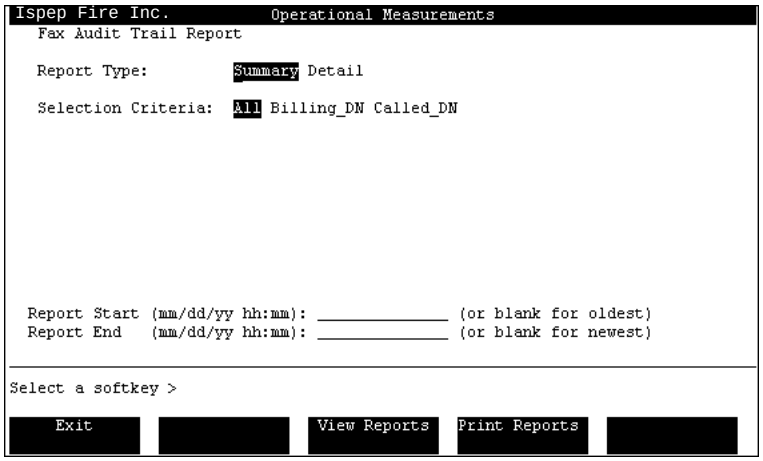
Overview

The Fax Audit Trail Report screen is accessed from the Operational Measurements menu. This is a report selection screen in which you specify the type of report you want to retrieve (summary or detail) as well as the duration of the report period.

You must specify whether you want to generate a report for a particular billing DN, called DN, or all. You can either generate a report that includes all of the information currently stored on disk for that billing DN or called DN, or generate a shorter report for a specific time period. The report can either be viewed on your terminal or printed.

The screen

The following is an example of the Fax Audit Trail Report screen.



Fields in the Fax Audit Trail Report screen

The following table lists the fields displayed on the Fax Audit Trail Report screen.

Report Type	
Description	Use this field to select the type of report to be generated.
Options	Summary or Detail. For a description of each report type see “Report types” on page 34-32.
Default	Summary

Selection Criteria	
Description	Use this field to select the appropriate report criteria.
Options	Use this field to select the scope of the database search.

SELECT	TO view
All	all entries in the database
Billing_DN	database entries matching the specified billing DN only
Called_DN	database entries matching the specified called DN only

Default	All

Report Start/End	
Description	Use this field to indicate the start and end time period for the report.
Default	Blank

Generating a Fax Audit Trail report

To generate a Fax Audit Trail report, follow these steps.

Starting Point: The Operational Measurements menu

Step	Action
1	Select Fax Audit Trail Report. ***Result:*** The Fax Audit Trail Report screen is displayed.
2	Specify the report type (Summary or Detail). See "Fields in the Fax Audit Trail Report screen" on page 34-34 for field descriptions.
3	Select the selection criteria (Billing_DN, Called_DN, or All).
4	Enter the report start and end times. ***Result:*** If these fields are left blank, all fax outcalling data that is currently stored on disk will be retrieved.
5	Press the [View Reports] softkey to view the reports, or the [Print Reports] softkey to print the reports. ***Result:*** The first Fax Audit Trail report is displayed or printed. ***Note:*** To cancel the request, press the [Cancel] softkey if you do not want to view or print the reports at this point.
6	Press the [Next Page] softkey to view the next page of the report. When the last page has been displayed, a prompt appears indicating it is the end of the report.
7	Press [Exit]. ***Result:*** You are returned to the Fax Audit Trail Report screen.

Printing a Fax Audit Trail report

To print a Fax Audit Trail report, follow these steps.

Starting Point: The Operational Measurements menu

Step	Action
1	Select Fax Audit Trail Report. ***Result:*** The Fax Audit Trail Report appears.
2	Change the selection criteria as desired.
3	Ensure that the printer is online and has paper.
4	Press [Print Reports]. ***Result:*** A new set of softkeys is displayed: [Cancel Printing] and [Continue Printing]. To cancel printing, press the [Cancel] softkey.
5	Press [Continue Printing] to print the report. ***Result:*** The report is printed and you are returned to the Operational Measurements menu. ***Note:*** If you selected [Continue Printing], a [Cancel] softkey is displayed that can be used to cancel printing once printing has started.

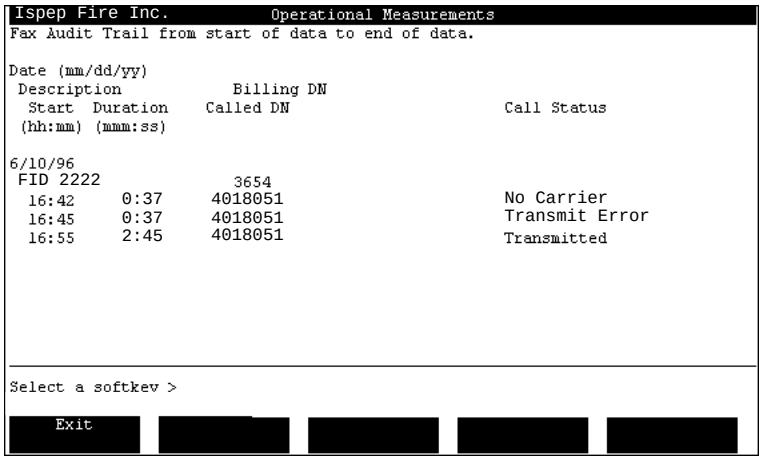
The Summary Fax Audit Trail report

Introduction

The Summary Fax Audit Trail report is displayed if the report type chosen is Summary.

The report

The following is an example of the Summary Fax Audit Trail report.



Fields in the Summary Fax Audit Trail report screen

Introduction The Summary Fax Audit Trail report displays the following information.

Date This indicates the date the call was made.

Description This is a description of the application.

Billing DN This indicates the billing DN that originated the call.

Start (hh:mm) This indicates the time at which the call was made.

Duration (mm:ss) This indicates the length of the call in minutes and seconds.

Called DN This indicates the destination DN for the fax delivery.

Call Status This field displays the result of the call. The allowed values are as follows:

Transmitted
This state indicates that fax transmission was completed without error.

Transmit Error
This state indicates that the fax transmission started but was not completed successfully.

No Carrier
This state indicates that the fax transmission was not started because the call was not answered, or was answered but not by a compatible fax device.

Analyzing the Summary Fax Audit Trail report

Description

This report lists each fax callback call attempt. Use this report to determine which fax delivery attempts are causing the high retry counts and failures that were detected by the Fax Activity report. To explore the cause of the problems in greater detail, run the Detail Fax Audit Trail report.

The Detail Fax Audit Trail report

Introduction

The Detail Fax Audit Trail report is displayed if the report type is Detail.

The report

The following is an example of the Detail Fax Audit Trail report.

```
Ispep Fire Inc.          Operational Measurements
Fax Audit Trail from start of data to end of data.

Date (mm/dd/yy)
 Description            Billing DN
Transaction   Start  Duration  Called DN                      Channel DN  Retry
(hh:mm)       (hh:mm) (mmm:ss)
 Request#   Outcall Process    Call Status   Outcall Action

6/10/96
  FID 2222              3654
 16:42        16:42                                                        0
 #*****     Submission                      Continue
 16:42        16:42   0:37       4018051                      2802         0
 #00001     Call Results      No Carrier     Defer
 16:45        16:45   0:37       4018051                      2802         1
 #00001     Call Results     Transmit Error  Defer
 16:55        16:55   2:45       4018051                      2802         2
 #00001     Call Results      Transmitted    Remove

Select a softkey > _

   Exit                                                  Next
                                                         Page
```

Fields in the Detail Fax Audit Trail report screen

Introduction

In addition to the information displayed in the summary report, the detailed report contains the following information fields.

Transaction (hh:mm)

This is the time at which the delivery should have taken place.

Start (hh:mm)

This is the time at which the current outcall process started.

Duration (mm:ss)

This is the length of the call.

Called DN

This is the destination DN for the fax delivery.

Channel DN

This is the DN that was used to originate the call.

Retry

This is the number of retries that were made at the time of the attempt. This field increments by one each time a DN is retried.

Request #

This is the number of the transaction request.

Outcall Process

This is the type of audit trail entry. This could be one of the following.

Submission
This type indicates that a request has been made for an Outcalling service.

Instead of Submission you may also see Recovery.

Recovery
This type indicates that faxes for outcalling have been detected and submitted after a system reboot.

Validation
This type indicates a checking process just before a call was or is made.

Outcall Process, cont'd

Call Results
This type indicates information regarding the Call Status and Outcall Action in the adjacent fields.

Call Status

This field indicates the status of the call attempt. The possibilities are as follows.

Transmitted
This state indicates that the fax transmission completed without error.

Transmission Error
This state indicates that the fax transmission was started but not successfully completed.

No Carrier
This state indicates that the fax transmission was not started because the call was not answered, or was answered, but not by a compatible fax device.

Illegal Window
This state indicates that the fax became stale during an illegal time window and could not be delivered. (The stale date parameter defaults to 36 hours. If a message cannot be delivered within this time, a message becomes stale.)

Stale Date
This state indicates that the fax was not delivered immediately (either because it was sent during a restricted time period, or the fax was not transmitted and was, therefore, rescheduled). The fax became stale during a permitted time period and could not be delivered. (The stale date parameter defaults to 36 hours. If a fax cannot be delivered within this time, the fax becomes stale.)

Bad Called DN
This state indicates that during an outcall, the target DN was dialed, and a bad called DN was detected by the local switch. (In other words, the target DN is invalid for some reason.) The callback fax is not delivered and is removed.

Call Status, cont'd

Resource Delay
This state indicates that the outcall was not completed because the line on which the call was to be made was taken away due to an incoming call that was given priority. The outgoing call is retried on a different channel. If this is a persistent problem, reserve channels for fax callback deliveries and make sure no UCD queues terminate on them.

Incomplete
This state indicates that the outcall could not be completed. The call attempt will be treated as a busy attempt, and a retry attempt will be scheduled if the busy and no answer retries have not been exhausted. If there is an accompanying SEER, follow the action described in the *Maintenance Messages (SEERs) Reference Manual* (NTP 555-7001-510).

Outcall Action

This field indicates the action performed on the request. The possibilities are as follows.

Continue
This action indicates that the validation has been passed and a call attempt is to be made.

Remove, retry limit reached
This action indicates that after the call, the retry was not rescheduled because the retry limit had been reached.

Remove
This action indicates that the fax was successfully delivered.

Reset
This action indicates that a problem was encountered retrieving information. Requests will be discarded and recovered from disk.

Delayed 1
This action indicates that a channel on which to call out could not be obtained. Will retry later.

Outcall Action, cont'd

Delayed 2
This action indicates that a channel was obtained, but it was taken away before the call was made. Will retry later.

Defer
This action indicates that another call attempt has been scheduled.

Outcall Action Reason Codes

Reason codes indicate why an action occurred. Possible reason codes follow.

Reason code
All OK
Past delivery window
Past system limit (retry, stale date, etc.)
Problem reading the message
Stale date time
Problem sending NDN, try again in 5 minutes
Message deleted by utility or file lost
Past system limit (no NDN given)
Fax on Demand not set up for customer
Had difficulty determining if the customer had Fax. Will defer this request for validation/results stage and retry.
Duplicate call made due to FP recovery
Duplicate request discarded due to FP recovery
Indicates invalid DN
No suitable channels
Channels out of service

Analyzing the Detail Fax Audit Trail report

Introduction

Use this information to analyze the Detail Fax Audit Trail report data.

Call Back Status

Check Call Back Status for the failing fax deliveries. For incomplete calls, check to see if a SEER has been produced, and refer to the *Maintenance Messages (SEERs) Reference Manual* (NTP 555-7001-510) for information on solving the problem. For call transmission failure due to resource delay, your system may need more multimedia channels. If faxes are becoming stale (faxes are not being sent before the maximum time for delivery attempts expires), check the time windows to make sure that the faxes are not being sent during illegal time periods.

Fax delivery fails on Bad Called DN

If the fax delivery attempt fails on Bad Called DN, dial the fax phone number to find out if the number is operational. The caller may have provided a wrong number.

Call Back Action field

Check the Call Back Action field for delays (Delay 1 and Delay 2). Delays indicate busy channels. If these problems with delays persist, your system may need more multimedia channels.

Recurring fax deliveries on the same channel

Recurring fax delivery failures on the same channel may indicate problems with the channel hardware. To determine the channel number from the Channel DN, go to the Meridian Mail Administrative screen and view the Channel Allocation Table (CAT).

- If the system is connected to a Meridian 1 system, look under the SCN field and find Channel DN, then look up the channel number.
- If the system is connected to a non-Meridian 1 switch, look under the Channel DN field for the Channel DN, then look up the channel number.

Run the Channel Problem Identification Report to see if the channel has unusual traffic patterns. You may need to check the DSP hardware and switch terminal number status as well.

Chapter 35

Bulk provisioning

In this chapter

Overview

Introduction

This chapter contains information on the bulk provisioning feature of Meridian Mail 11. Bulk provisioning allows administrators or distributors to copy voice services such as menus, announcements, and fax items from one Meridian Mail system to another.

Section A provides a conceptual overview of bulk provisioning and its uses.

Section B discusses bulk provisioning data sets, including the procedure to create them. As well, procedures for deleting, viewing, and printing data sets are included.

Section C describes the procedure for copying the bulk provisioning data sets onto tape.

Section D provides information about provisioning bulk provisioning data sets to the Meridian Mail system.

Section A Introduction to bulk provisioning

In this section

Overview

Introduction

This section includes information on the concept of bulk provisioning—what it is and how it can be used. Included are examples and operational considerations.

What is bulk provisioning?

Introduction

This topic describes and gives examples of bulk provisioning.

Description

Bulk provisioning is a feature that allows the administrator to collect voice service, VSDN, and local user information into data sets, copy them to tape, and have the information copied to other Meridian Mail systems.

Bulk provisioning enables selective distribution of one system's VSDNs and services on another system.

Administration level

Bulk provisioning is done from the system administration level only.

Example

The XYZ Company head office has decided to open a new location in the western region. The new site is obtaining its own Meridian Mail system. The company's president wants his customers in the western region to receive the same greetings and services provided at head office.

In order to provide the same services (for example, menus and announcements) to the new site as they have at head office, the administrator uses bulk provisioning to collect the required services onto tape. The administrator then sends the tape to the western region site. At the new site, the administrator provisions the new system with the information on the tape.

If both sites have Meridian Mail Networking installed, the administrator can use bulk provisioning to collect local user information, copy it onto a tape and send it to the western region site where it is added as remote users. This allows the remote users to have their names played in their own voices, during message compose and when name and dial addressed. This feature helps make the network appear transparent.

Using bulk provisioning

Introduction

This topic describes uses of the bulk provisioning feature.

System setup

Bulk provisioning can be used to initialize a new Meridian Mail system. Selected or all services as well as VSDNs can be collected from the "master" Meridian Mail system into data sets, copied to tape, and provisioned to new Meridian Mail systems.

This allows the administrator to ensure that all services, including menus, announcements, fax items, time of day controllers, and all other services defined using Voice Services Administration (VSA) are distributed and installed on all Meridian Mail systems.

Once the system is set up, the administrator can also save periodic updates to tape and provision them at other MM systems. In this way, a group of MM systems can always be kept up-to-date with the same services and VSDNs.

Multicustomer administration

Bulk provisioning can be used to copy services (but not VSDNs or users) between customer groups on the same Meridian Mail system. This could save time and reduce errors when setting up common services.

Remote user administration

Bulk provisioning allows the administrator to add remote user information to systems with Meridian Mail networking all at once rather than one user at a time. The users' spoken names in their own voices are included so that the administrator is no longer required to record them.

The users' organization directory entries are copied to tape; the administrator uses this tape to provision the users on another Meridian Mail system in the network. If the networking feature is installed, local users may be copied to tape.

Initial setup of temporary remote voice users

Bulk provisioning of the local users information allows the administrator to provide initial setup of temporary remote users on a new system. A sender's name and mailbox information can be propagated across the network along with their messages via Enterprise Networking.

Note: Temporary remote users are subject to a nightly audit. This audit removes the less recently accessed remote users in order to lessen the load on the system. See the chapter "Remote Voice Users." Permanent remote users remain on the system until deleted by the administrator.

Addition of remote user attributes: a comparison

The following table compares the addition of remote user attributes by network propagation and bulk provisioning.

Remote User Attribute	Remote user information added by network propagation	Remote user information added by bulk provisioning
Last name, first name	first 18 characters	entire name
Mailbox	yes	yes
Primary DN	=mailbox (if the DN=mailbox convention is set up in the network database)	=mailbox (if the DN=mailbox convention is set up in the network database)
Spoken name	yes, updated with each message sent	yes
Dialable by eternal callers	yes, default set by administrator	yes, default set by administrator
Department	no	yes
Temporary user flag	temporary	temporary or permanent, as selected by administrator

Bundled applications

A service bureau can create "applications" which, if bundled, could be sold as value-added packages to your mail system. For instance, a recorded front-end menu could be provided on all your systems.

Section B Working with bulk provisioning data sets

In this section

Overview

Introduction

This section includes information that you need to create and modify bulk provisioning data sets. Also included are instructions on viewing, printing, and deleting data sets.

Assembling bulk provisioning data sets

Introduction

This section provides information required to create new bulk provisioning data sets and modify data sets that currently exist.

Administration level

Bulk provisioning is done only from the system administration level.

Concept of bulk provisioning data sets

Bulk provisioning provides the administrator with the ability to group sets of provisioning data into a catalog. The administrator can select services, VSDNs, and local user information for provisioning to other systems. These selections are saved in a bulk provisioning data set and later copied to tape.

These data sets are the starting point for bulk provisioning. At this point, the tape is created from a data set and is sent to another site where the contents can be duplicated on the target Meridian Mail system.

The administrator can create up to 100 bulk provisioning data sets. The data sets can be stored for future use, and can be modified if required.

Using Wildcards in the Provisioning Data

Using wildcards can be useful when specifying multimedia services or VSDNs. By using wildcards, the administrator can collect much more information than the number of input fields would allow. Also, wildcards provide a means to help organize the items in the data set.

The wildcards available for use are the organization directory wildcards:

- "+" to represent any number of characters
- "_" to represent exactly one character

Example

The administrator in an automotive company can group one set of multimedia services (faxes, menus, announcements) referring to new products with service IDs beginning with the characters 11 (for example, 110001, 110002, 110003, 110004 and so on), By using a wildcard character, these services can be

referred to as 11+. Another set of services relating to parts and support could be referred to as 12+. This allows the administrator to choose specific groupings of services for various sites.

Important considerations

The administrator must be aware of the following important considerations before beginning to collect data for the provisioning data sets.

Support requirements

The administrator must ensure that the target system is correctly set up with support needed for the services and VSDNs that are being bulk provisioned. Included in these considerations are features, hours, networking sites, DNs or TNs, switch connectivity, and system restriction/permission lists.

Dependencies

The administrator must ensure that multimedia services provisioned to a target system do not have references to services that do not exist on the system. For instance, menus or time-of-day controllers typically refer to other services that should be included in the data set as well. VSDNs may also require certain services in order to function properly. Bulk provisioning does not automatically resolve these dependencies. This is the administrator's responsibility.

Hardware-specific information

Hardware-specific information is not propagated to the target system. This information includes

- port names
- link information
- network database information relating to local and remote sites
- the hardware database

Restriction/permission indexes

Restriction and permission indexes associated with specific services on the source system are brought over to the target system. The administrator must take care to ensure that the

indexes make sense when pre-configuring systems across area codes on the destination system.

Important considerations, cont'd

Dialing plan comparison

The system does not do a comparison check of the DNs of the source system against the dialing plan of the target system. This affects

- VSDNs (such as menus, announcements, and time-of-day controllers)
- billing DNs
- revert DNs
- fax confirmation DNs
- attendant DNs

Remapping capability

No capability is provided for remapping of DNs or various service IDs. The target system will have exactly the same DNs and service IDs as the source system.

The administrator should make sure that all revert DNs and service IDs make sense on the target system before beginning the bulk provisioning. If required, the administrator of the target system can use the MMI to correct DNs and service IDs of provisioned services.

System and customer profiles

Information kept in the system or customer profiles is not transferred during bulk provisioning.

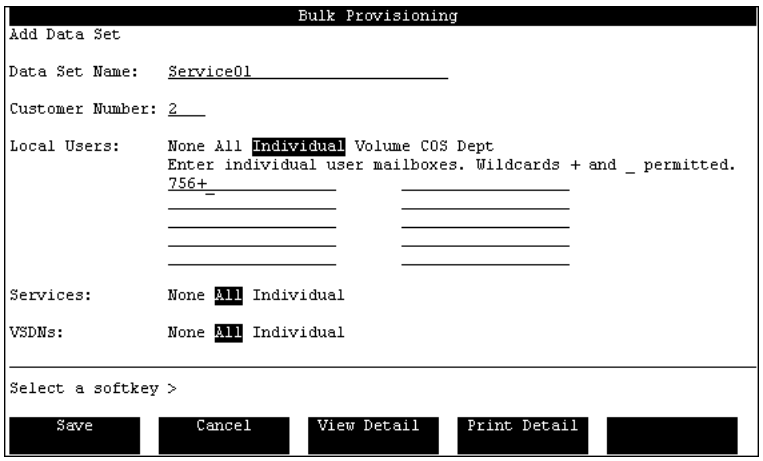
Creating and modifying bulk provisioning data sets

Introduction

This section provides information required to create and modify data sets for bulk provisioning.

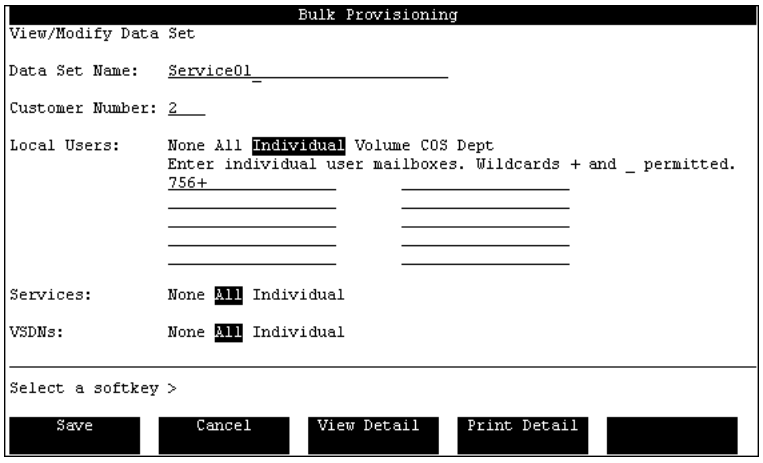
The Add Data Set screen

The following is an example of the Add Data Set screen.



The View/Modify Data Set screen

The following is an example of the View/Modify Data Set screen. As you can see, only its title differs from the Add Data Set screen.



Field descriptions

The following table describes the fields in the Add Data Set and the View/Modify Data Set screens.

Data Set Name	
Description	A descriptive name for the data set. This name is entered by the administrator.
Limitations	Maximum of 30 characters.
Default	For the Add Data Set screen, the default is blank. (The data set name must be entered or the data set cannot be saved.) For the View/Modify Data Set screen, the data set name is displayed.
Customer Number	
Description	Use this field to specify the customer that contains the data to be copied to tape. This field must be completed before any other field is selected. ***Note:*** A data set contains data for one customer only.
Default	Blank
Local Users	
Description	The Local Users field displays only on systems that have Meridian Mail Networking installed. Use this field to add users to the data set.
Options	None, All, Individual, Volume, COS, Dept.
Limitations	Individual: ten users (use of the wildcards "+" and "_" is allowed to expand the number of local users added). Volume: to maximum number of volumes on the system. COS: 15 classes of service. Dept.: five departments (use of the wildcards "+" and "_" is allowed to expand the number of departments added).
Default	None.

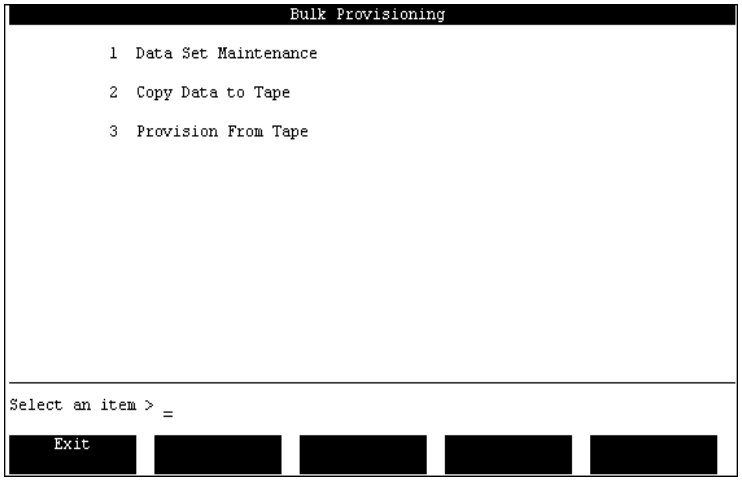
Services	
Description	These are the multimedia services that belong to the specified customer number.
Options	None, All, Individual.
Limitations	30 services (use of the wildcards “+” and “_” is allowed to expand the number of services added).
Default	None.
VSDNs	
Description	These are the voice service DNs included in the data set that belong to the specified customer number.
Options	None, All, Individual.
Limitations	20 VSDNs (use of the wildcards “+” and “_” is allowed to expand the number of VSDNs added).
Default	None.

Creating bulk provisioning data sets

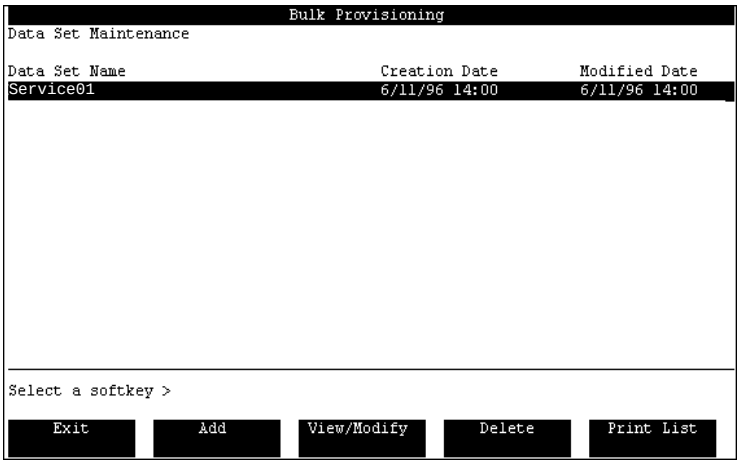
To create bulk provisioning data sets, follow these steps.

Starting Point: The Main Menu screen

Step	Action
1	Select Bulk Provisioning from the Main Menu screen. ***Result:*** The Bulk Provisioning Menu is displayed.



2	Select Data Set Maintenance. ***Result:*** The Data Set Maintenance Menu is displayed.



3	Press the [Add] softkey while in the Data Set Maintenance screen. ***Result:*** The Add Data Set screen displays.

Step	Action
4	Enter a descriptive data set name in the Data Set Name field. This field allows a maximum of 30 characters.
5	Enter the customer number in the Customer Number field. If networking is installed on the system and the selected customer has networking, go to step 6 to add users. If networking is not installed on the system, or the selected customer does not have networking, go to step 8.
6	Choose one of the following options.

IF you want to add	THEN select
no users	None
all users	All
individual users	Individual
users by volume they reside on	Volume
users by COS (Class of Service)	COS
users by department	Dept.

Result: For options Individual, Volume, COS, and Dept., the display is expanded to provide a number of input fields.

Step	Action
7	Complete the input fields as required. See “Field descriptions” on page 35-14 for information on the Local Users fields.
8	To add services and/or VSDNs to the bulk provisioning data set, move the cursor to the Services or VSDNs fields.

IF you want to add	THEN select
no services or VSDNs	None in the appropriate field
all services or VSDNs users	All
individual services or VSDNs	Individual

Result: For the Individual option, the display is expanded to provide a number of input fields.

Step	Action
9	Complete the input fields for Services and/or VSDNs as required. See “Field descriptions” on page 35-14 for information on the Local Users fields.

Step	Action
10	Save the data set by pressing the [Save] softkey. (Before saving the data set, you can view the details by pressing the [View Detail] softkey to make sure that you have chosen the information you require. See "Viewing details of bulk provisioning data sets" on page 35-20.) ***Result:*** The data set is saved. You are returned to the Data Set Maintenance screen.

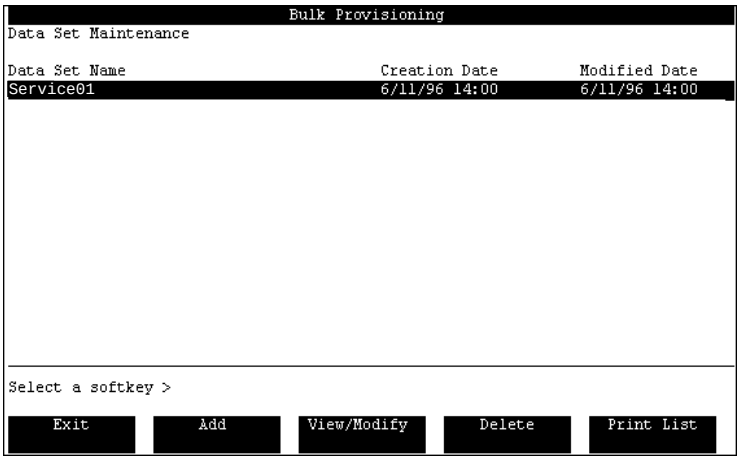
Modifying bulk provisioning data sets

To modify bulk provisioning data sets, follow these steps.

Note: Use the up and down arrows (↑↓) to move between fields and the left and right arrows (← →) to move between options within a field.

Starting Point: The Main Menu

Step	Action
1	Select Bulk Provisioning from the Main Menu screen.
2	Select Data Set Maintenance. ***Result:*** The Data Set Maintenance Menu is displayed.



3	Move the highlight bar to the data set that you want to modify. ***Result:*** The data set name is highlighted.
4	Press the [View/Modify] softkey. ***Result:*** The View/Modify Data Set screen is displayed.

Step	Action
5	Change the input fields as required. See “Field descriptions” on page 35-14 for information on each of the fields.
6	Save the data set by pressing the [Save] softkey. (Before saving the data set, you can view the details by pressing the [View Detail] softkey to make sure that you have chosen the information you require. See “Viewing details of bulk provisioning data sets” on page 35-20.) ***Result:*** The data set is saved. You are returned to the Data Set Maintenance screen.

Viewing and printing bulk provisioning data sets

Introduction

This section contains the information required to view and print the contents of bulk provisioning data sets.

View/Modify Data Set screen

The following is an example of the View/Modify Data Set screen.

```
                              Bulk Provisioning
View/Modify Data Set

Data Set Name:   Service01_____________________

Customer Number: 2___

Local Users:     None All Individual Volume COS Dept
                 Enter individual user mailboxes. Wildcards + and _ permitted.
                 756+_____________    _____________
                 _____________    _____________
                 _____________    _____________
                 _____________    _____________
                 _____________    _____________

Services:        None All Individual

VSDNs:           None All Individual

Select a softkey >

 Save |  Cancel  | View Detail | Print Detail |
```

Field descriptions

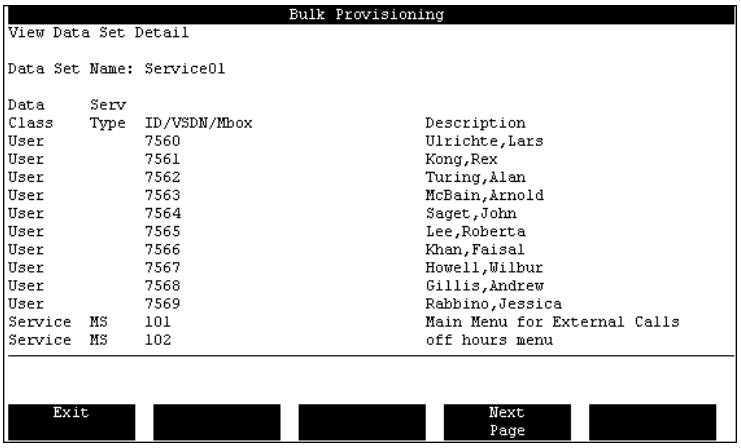
The fields in the View/Modify Data Set screen are the same as those in the Add Data Set screen. Please see page 35-14 for detailed field descriptions.

Viewing details of bulk provisioning data sets

To view details of bulk provisioning data sets, use the following steps. This procedure can be used when modifying existing data sets as well as when adding new data sets.

Starting Point: The Add Data Set or the View/Modify Data Set screen.

Step	Action
1	Press the [View Detail] softkey. ***Result:*** The View Data Set Detail screen is displayed.



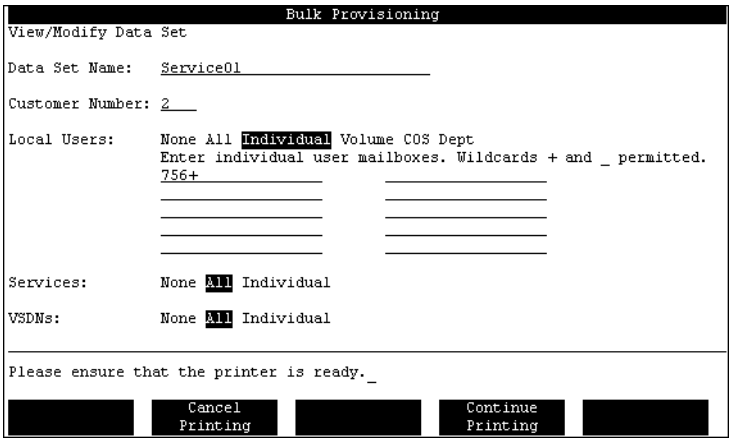
2	Press the [Next Page] softkey (if available) to view additional screens.
3	Press the [Exit] softkey to exit from the View Data Set Detail screen. ***Result:*** You are returned to the Add Data Set or View/Modify Data Set screen.

Printing bulk provisioning data

To print the detail of bulk provisioning data sets, use the following steps. This procedure can be used when modifying existing data sets as well as when adding new data sets.

Starting Point: The Add Data Set or the View/Modify Data Set screen.

Step	Action
1	Press the [Print Detail] softkey. ***Result:*** The prompt “Please ensure that the printer is ready” is displayed.



2 Use this table to determine your next action.

IF the printer is	THEN
ready	press the [Continue Printing] softkey to print the contents of the data set.
not ready	ready the printer and return to step 1.

To cancel the printing, press the [Cancel Printing] softkey at any time.

Result: When printing is complete, you are returned to the Add Data Set screen or the View/Modify Data Set.

Printing a list of bulk provisioning data sets

To print a list of bulk provisioning data sets, use the following steps.

Starting Point: The Bulk Provisioning menu.

Step	Action
1	Select Data Set Maintenance. ***Result:*** The Data Set Maintenance screen displays.
2	Press the [Print List] softkey. ***Result:*** The prompt “Please ensure that the printer is ready” is displayed.
3	Use this table to determine your next action.

IF the printer is	THEN
ready	press the [Continue Printing] softkey to print the list of data sets.
not ready	ready the printer and return to step 2.

Result: The list of data sets is printed.

To cancel the printing, press the [Cancel Printing] softkey at any time.

Deleting bulk provisioning data sets

Introduction

This topic provides information on deleting bulk provisioning data sets.

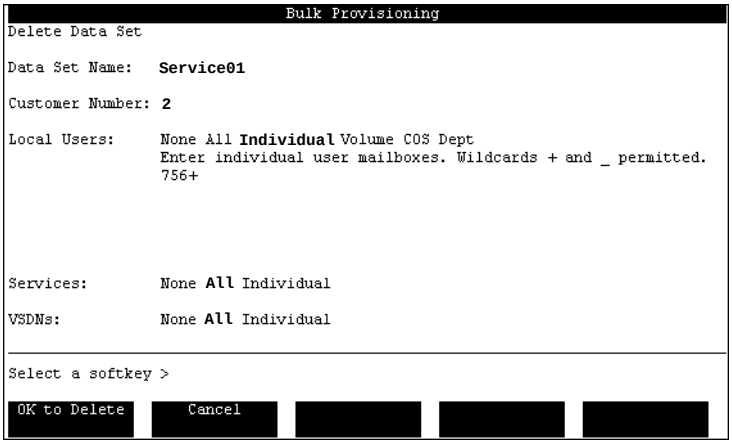
Procedure

To delete bulk provisioning data sets, use the following steps.

Starting Point: The Bulk Provisioning menu.

Step	Action
1	Select Data Set Maintenance. ***Result:*** The Data Set Maintenance screen displays.

Step	Action
2	Use the up and down arrows (↑↓) to move the cursor to the data set you want to delete then press the [Delete] softkey. ***Result:*** The Delete Data Set screen is displayed with a read-only version of the selected data set shown.



3	Press the [OK to Delete] softkey to delete the data set. (To abort this procedure, press the [Cancel softkey].) ***Result:*** The data set is deleted.

Section C Transferring bulk provisioning data onto tape

In this section

Overview

Introduction

This section provides the procedure for copying bulk provisioning data sets onto tape. Also included is a diagram of the Copy Data to Tape screen and a description of the fields in the screen.

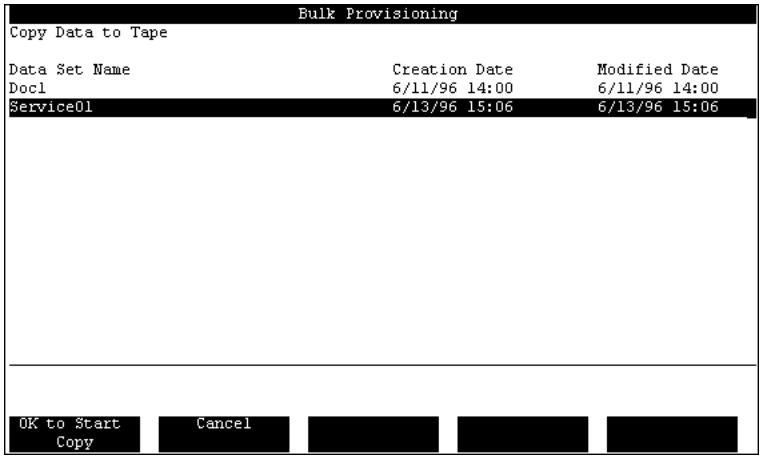
Copying provisioning data sets onto tape

Introduction

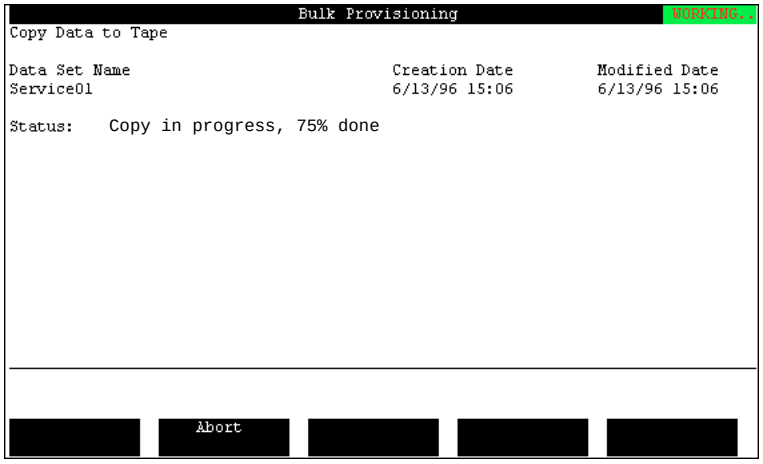
This topic explains how to copy provisioning data sets onto tape. Before you begin the procedure, make sure that you have a tape available and that you are able to load the tape when necessary. You must be logged in as system administrator to perform this procedure.

The Copy Data to Tape screen

This is an example of the initial Copy Data to Tape screen.



This is an example of the Copy Data to Tape screen while the copy is in progress.



Field descriptions

The following fields are contained in the Copy Data to Tape screen.

Data Set Name	
Description	The descriptive name of the data set created by the administrator.
Format	Data set names can be a maximum of 30 characters in length.
Creation Date	
Description	The original creation date and time (24 hour clock) of the data set.
Format	date hh:mm (where date is the system date format as selected under General Administration/General options)
Modified Date	
Description	The date and time (24 hour clock) that the data set was last modified.
Format	date hh:mm (where date is the system date format as selected under General Administration/General options)
Status	
Description	This field shows the status of the copy to tape. This field is viewable only after the tape has been retensioned and the copy to tape begins.
Format	Copy in progress, nn% done or Copy completed successfully ***Note:*** The percentage done is based on the number of items to be copied.

Before you begin

Ensure that the tape can be read by the destination system. Older systems have Archive tape drives which can only read DC150 and DC250 tapes.

Procedure

To copy provisioning data onto tape, use the following steps.

Starting Point: The Main Menu.

Step	Action
1	Select Bulk Provisioning from the Main Menu and press <Return>. ***Result:*** The Bulk Provisioning Menu is displayed.
2	Select Copy Data to Tape and press <Return>. ***Result:*** The Copy Data to Tape screen is displayed.
3	Using the up and down arrow keys (↑↓), move the highlight bar to the data set you want to copy to tape. ***Result:*** The data set is highlighted. ***Note:*** Since one data set can be selected, only one data set can be copied at a time.
4	Load a tape into the tape drive. Make sure that the tape is not write protected.
5	Press the [OK to Start Copy] softkey to begin the copy to tape.

IF the tape is	THEN
in the tape drive in ready status	the copy to tape process begins.
not ready or write protected	the message “Tape drive not ready” or “tape write protected” is displayed. Return to step 4.

Result: The message “The tape is retensioning” is displayed. Retensioning takes approximately four minutes. After the tape has retensioned, the data are copied to the tape. The Status field displays the status of the copy to tape during the process. Press the [Abort] softkey to cancel the copy to tape at any time.

When the copy to tape is complete, the message “Copy completed successfully” displays.

6	Use the [Exit] softkey to return to the Bulk Provisioning menu.

Tip

It is good practice to include a printout of the data set details (from Data Set Maintenance) along with the tape.

Section D Provisioning data into a Meridian Mail system

In this section

Overview

Introduction

This section provides information on provisioning data sets that were copied from one Meridian Mail system onto the current Meridian Mail system.

Before you start

Introduction

This section provides important information the administrator requires before beginning the provisioning of the bulk provisioning data on the target Meridian Mail system.

How the system responds to users during restore

When provisioning of a system is in progress or completes, services that are *in use* continue to use the previous version of the service as well as the previous set of prompts even after provisioning completes. The new services and prompts are available to users if they are first accessed after the provisioning completes.

Potential conflicts between databases

Two types of conflicts, system level or data, may arise when bulk provisioning data from one Meridian Mail system to another.

CAUTION

Risk of data loss

Check for system level and data conflicts before proceeding with the bulk provisioning. Failure to do so may result in a loss of data.

System level conflicts

System level conflicts will cause provisioning to fail. To overcome a system level conflict, the administrator may have to restrict the choice of data to be provisioned.

System conflicts that cause provisioning to fail include the following:

- a feature is not installed
- a feature is not enabled
- an insufficient number of languages are available
- networking sites are not defined
- VSDN is defined in another customer group

Data conflicts

Data conflicts do not cause provisioning to fail but they can cause data to be overwritten. If a particular VSDN or service is defined on the bulk provisioning tape and is also defined on the target Meridian Mail system, the target system data will be overwritten if provisioning continues. Provisioning can be continued or cancelled if data conflicts exist.

Also, if there are more users on the tape than the target system has room for, temporary users are added up to the system limit only. This may result in some users not being provisioned to the target system.

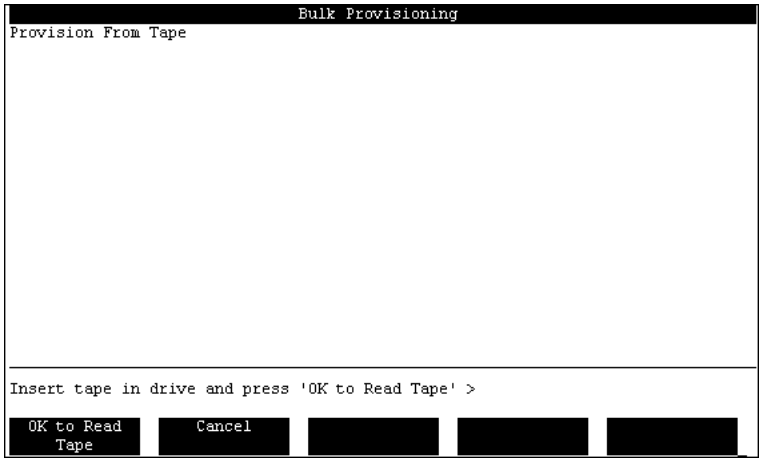
Provisioning data

Introduction

This topic provides information for provisioning the data from the tape to a Meridian Mail system. Also included are diagrams of the screens and descriptions of their fields.

The Provision From Tape initial screen

The following is an example of the Provision From Tape initial screen.

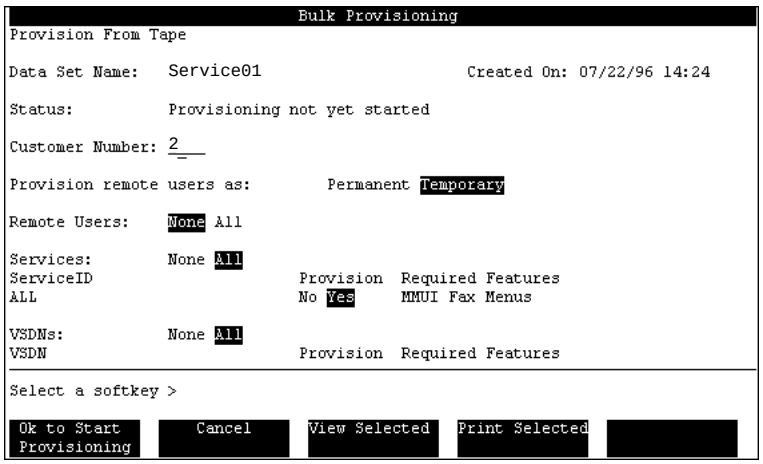


Description

The Provision From Tape initial screen contains no input fields. The [OK to Read Tape] softkey retensions the tape and reads summary information while the [Cancel] softkey returns to the bulk provisioning menu. See “Provisioning data from the bulk provisioning tape” on page 35-41 for more information.

The Provision From Tape screen

The following is an example of the Provision From Tape screen after the contents of the tape have been read.



Field descriptions

The following are the fields in the Provision From Tape screen.

Data Set Name	
Description	This is the descriptive label of the data set on the tape.

Created On	
Description	The date and time that the tape was created, in the date format of the destination system.

Status	
Description	This is the status of the provisioning process.

Customer Number	
Description	This field is used to specify the number of the customer group which is about to be provisioned.
Default	1

Provision remote users as	
Options	Permanent or Temporary. Temporary users are subject to the nightly audit. For information on temporary users and the nightly audit, see Chapter 10, “Remote voice users”.
Default	Temporary

Remote Users	
Description	This field appears only if there is user information on the tape and if networking is a feature on the target system.
Options	None, All, or Selected. If the administrator chooses Selected, additional lines display showing the grouping of users as entered in the data set definition. The administrator can then choose the users to be provisioned by using the Yes/No options.
Condition	If the data set was copied to tape by specifying All, then when provisioning from tape the selected option is not available.

Services	
Description	This field appears only if there is service data on the tape. The administrator specifies the services to be provisioned from the tape.
Options	None, All, or Selected. If the administrator chooses Selected, additional lines display showing the grouping of services as entered in the data set definition. The administrator can then choose the services to be provisioned by using the Yes/No options.
Default	All.
Condition	If the data set was copied to tape by specifying All, then when provisioning from tape the selected option is not available.

VSDNs	
Description	This field appears only if there is VSDN data on the tape. This field is used to specify the voice service DNs that are to be included in the data set.
Options	None, All, or Selected. If the administrator chooses Selected, additional lines display showing the grouping of VSDNs as entered in the data set definition. The administrator can then choose the VSDNs to be provisioned by using the Yes/No options.
Default	All.
Condition	If the data set was copied to tape by specifying All, then when provisioning from tape the selected option is not available.

Provisioning data from the bulk provisioning tape

To restore data from the bulk provisioning tape to the Meridian Mail system, follow these steps.

Starting Point: The Bulk Provisioning Menu.

Step	Action
1	Select Provision from Tape from the menu. ***Result:*** The Provision from Tape initial screen displays.
2	Insert the tape in the drive and press the [OK to Read Tape] softkey. ***Result:*** The tape begins to retension. Retensioning takes approximately four minutes.
3	After retensioning is complete, the system checks the tape for bulk provisioning information.

IF the tape	THEN
is not a valid bulk provisioning tape	you are prompted that the tape is not a bulk provisioning tape. Replace the tape and press the [OK to Read Tape] softkey to continue or the [Cancel] softkey to abort the procedure.
is a valid bulk provisioning tape	the Provision From Tape screen displays.

4	Enter the customer number of the target customer group that you are provisioning in the Customer Number field. If the system has networking, the customer selected must be the networking customer to provision Remote Users.
5	View the information on the Provision From Tape screen. Make changes to the Remote Users, Services, and VSDNs fields as necessary. See “Field descriptions” on page 35-38 for information on completing these fields.

Step	Action
6	Before beginning the provisioning process, view or print the potential conflicts between the data set on the tape and the target system. To view or print data set conflicts, see “Viewing and printing data conflicts” on page 35-43. ***Note:*** If system conflicts exist, [OK to Start Provisioning] will stop. You may wish to restart your choices by using the “Selected” option and toggling Yes to No until the conflicts are resolved.
7	Press the [OK to Start Provisioning] softkey to begin the provision from tape. ***Result:*** The provisioning begins (if there are no conflicts). During the provisioning process, the status of the process displays in the Status field. The only available softkey during provisioning is [Abort]. The [Abort] softkey aborts the provisioning process at the next logical step. When provisioning is complete, the Status field displays the message “Provisioning in progress, 100% done. Tape rewinding.” ***Caution:*** If there are data conflicts, you will be informed of this and prompted to cancel or continue. If you continue, you will overwrite existing data. [Cancel] returns to the Provision from Tape screen. [Continue] will start the provisioning and overwrite conflicting items.
8	Press the [Exit] softkey to return to the Bulk Provisioning Main Menu. ***Result:*** The provisioned data is ready to use. If necessary the MMI can be used to make corrections, such as changing a revert DN.

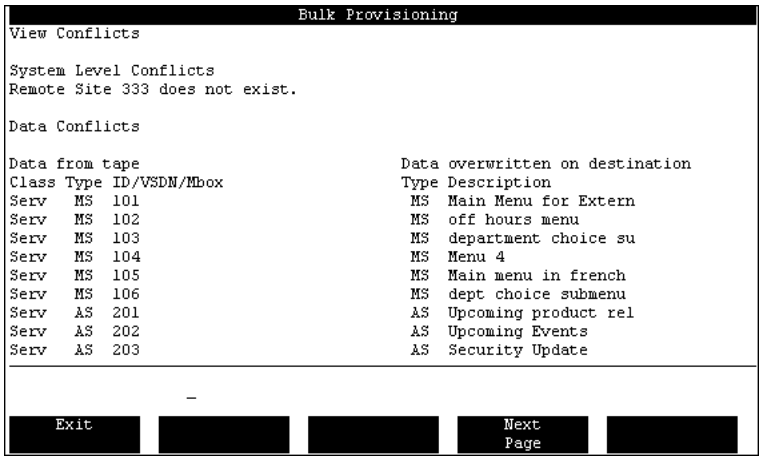
Viewing and printing data conflicts

Introduction

This section describes the procedure for viewing and printing data conflicts that may arise during bulk provisioning to another system.

The View Conflicts screen

The following is an example of the View Conflicts screen.



Field descriptions

These are the fields in the View Conflicts screen.

System Level Conflicts	
Description	This field shows all system level conflicts that would prevent bulk provisioning from proceeding. If there are no conflicts the field will display the word None. For more information, see "Potential conflicts between databases" on page 35-35.
Data Conflicts or All Entries	
Description	The appropriate field displays when either the Conflicts Only or the All Entries option is chosen. This field is divided into two parts: Data from tape on the left side, and Data overwritten on destination on the right side of the screen.
Data from tape	
Description	When the [Conflicts Only] softkey is pressed, this field shows only the data in conflict with the target system. When the [All Entries] softkey is pressed, this field shows all data that is contained on the provisioning tape for the specified selection criteria. The information is shown by Class, Type, and ID/VSDN/MBox. a. Class is the general class of data on the tape. Class is Serv, VSDN, or User. b. Type is the service type represented by the mnemonic used by Voice Service Administration (VSA). This applies to services and VSDNs only. c. ID/VSDN/MBox is the voice service ID for a service, the DN for VSDNs, and the mailbox with a network prefix for users.

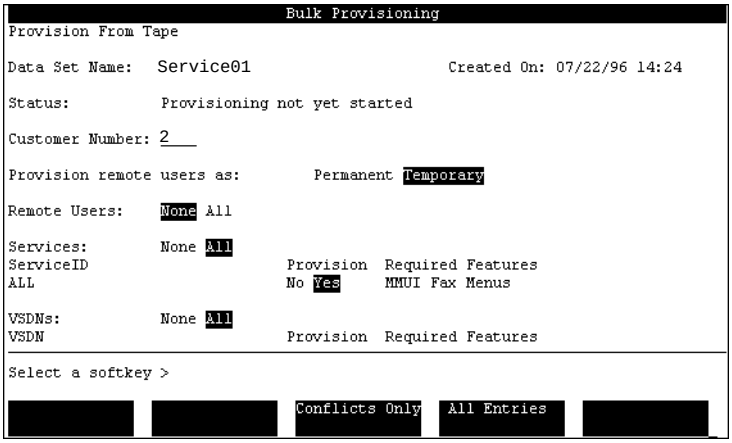
Data overwritten on destination	
Description	This field displays any data on the target system that will be overwritten if provisioning proceeds. The data is provided by Type and Description. • Type applies to services and VSDNs only. It is the service type of the service as represented by the mnemonic used by Voice Service Administration (VSA). • Description is the target system's name or the comment field of a data item that will be overwritten. ***Note:*** This field will be blank if the data item does not yet exist on the target system.

Viewing data conflicts

To view data conflicts before provisioning the data to the new Meridian Mail system, use the following steps.

Starting Point: The Provision From Tape screen.

Step	Action
1	Press the [View Selected] softkey. ***Result:*** The softkeys are replaced by the [Conflicts Only] and [All Entries] softkeys.



Step	Action
2	Use the following table to choose the next step.

IF you want to view	THEN press softkey
the conflicts between the data on the tape and the data on the target system only	[Conflicts Only]
all entries on the tape (for the specified criteria) and the conflicts on the target system	[All Entries]

Result: The View Conflicts screen displays with the appropriate information provided.

3	Press the [Exit] softkey to return to the Provision From Tape screen.

Printing data conflicts

To print data conflicts before provisioning the data to the new Meridian Mail system, use the following steps. The printout will go to the reports printer.

Starting Point: The Provision From Tape screen.

Step	Action
1	Press the [Print Selected] softkey. ***Result:*** The softkeys are replaced by the [Conflicts Only] and [All Entries] softkeys.This is an example of the screen.
2	Use the following table to choose the next step.

IF you want to print	THEN press softkey
the conflicts between the data on the tape and the data on the target system only	[Conflicts Only]
all entries on the tape (for the specified criteria) and the conflicts on the target system	[All Entries]

Result: The following screen displays.

3	Press the [Continue Printing] softkey to print the conflicts. ***Result:*** The conflict list is printed. ***Note:*** At any time, press the [Cancel Printing] softkey to cancel printing.

List of Fields

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Reader Response Form

Meridian Mail 11
System Administration Guide for Multi-Customer Systems

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Address: _____

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Occupation: _____ **Phone:** _____

1. What is your level of experience with this product?

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2. How do you use this book?

   ❑ Learning ❑ Procedural ❑ Reference ❑ Problem solving

3. Did this book meet your needs?

   ❑ Yes ❑ No

   If you answered No to this question, please answer the following questions.

4. What chapters, sections, or procedures did you find hard to understand?

   _____

   _____

   _____

5. What information (if any) was missing from this book?

   _____

   _____

   _____

6. How could we improve this book?

   _____

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   _____

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