

Network Administration Center

User Guide Supplement

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Preface

About this guide

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Overview

Introduction	The <i>Network Administration Center User Guide Supplement</i> describes the features in Network Administration Center (NAC) 2.5.
Who should read this guide	This guide is for administrators, technicians, supervisors, and others who are responsible for NAC 2.5.
Assumptions	<p>This guide assumes that you are familiar with NAC 2 and Meridian MAX.</p> <p>This guide also assumes that the NAC 2.5 is correctly installed and operational.</p>
How to use this guide	<p>NAC 2.5 is an update of NAC 2. You need to use this supplement guide to understand the differences between NAC 2 and NAC 2.5.</p> <p>For detailed instructions on how to install and operate the NAC system, you must refer to the existing NAC 2 documentation. A list of the existing documentation is provided in “Required documentation” on page 13.</p>

Inside this guide

The *Network Administration Center User Guide Supplement* is structured as follows:

Chapter 1, “What’s new in NAC 2.5,” describes the new features in NAC 2.5. It also provides the modifications to the software installation and upgrade code. Finally, this chapter lists the documentation manuals you should use with NAC 2.5.

Chapter 2, “Preparing the system,” describes the hardware and software requirements of NAC 2.5. It also describes the MVME332XTS eight-channel asynchronous board, which is a new feature in NAC 2.5.

Chapter 3, “Configuring the modems,” describes the modems you can use with NAC 2.5.

Chapter 4, “Using the Meridian Terminal Emulator,” describes how to use Meridian Terminal Emulator (MTE) 9 to access NAC 2.5.

Chapter 5, “Saving to a file,” describes how to save reports into files. Third-party software, such as database and spreadsheet applications, can use these files.

Chapter 6, “Handling local printing,” describes how to print a report to a printer attached to your PC.

Chapter 7, “Using Multiple Queue Assignment,” describes how to interpret the Network Position Status Counts Display screen if you use the Multiple Queue Assignment (MQA) feature.

Chapter 8, “Configuring 10+ nodes,” describes how to configure NAC 2.5 to monitor up to 20 Meridian MAX nodes.

Chapter 9, “Remote supervisor login,” describes how to remotely log in to a Meridian MAX node from your NAC workstation.

Chapter 10, “Handling error messages,” contains a list of the error messages that can be generated in NAC 2.5.

The **Index** provides the index entries in this guide.

Chapter 1

What's new in NAC 2.5

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Overview

Introduction

This chapter describes the new features introduced in NAC 2.5. It also describes modifications made to the software, such as new installation messages and a new format for entering the year.

New features in NAC 2.5

Introduction This section describes the new features in NAC 2.5.

List of new features The following table lists the new features in NAC 2.5 and where to find more information on these features.

New feature	For more information, refer to
Support for the Year 2000	“Support for the Year 2000” on page 4
Higher network link speed	“Higher network link speeds” on page 4
MVME332XTS eight-channel asynchronous board	Chapter 2, “Preparing the system”, “Using the MVME332XTS or MVME332XT card” on page 21
US Robotics Sportster 28.8 modem	Chapter 3, “Configuring the modems”
Meridian Terminal Emulator interface	Chapter 4, “Using the Meridian Terminal Emulator”
Save reports to a file	Chapter 5, “Saving to a file”
Print reports to a printer attached to your PC	Chapter 6, “Handling local printing”
Multiple Queue Assignment	Chapter 7 “Using Multiple Queue Assignment”
Support for 10+ Meridian MAX nodes	Chapter 8, “Configuring 10+ nodes”

Support for the Year 2000

NAC 2.5 and its operating system are designed to support the Year 2000. With this enhancement, NAC 2.5 can operate between the years 1970 and 2037.

The screens in NAC 2.5 are modified to allow you to enter a two-digit year or a four-digit year when you create reports.

Note: To enter a range of years in a two-digit format, the range must consist of the years only within the 20th century, or the years only within the 21st century. If the range of years is different from the current century, you must specify the years in a four-digit format. For example, to produce a report with data from 1998 to 1999, you enter the years as 98 and 99. To produce a report with data from 2000 to 2001, you enter the years as 00 and 01. However, you cannot request data in a two-digit format for the years ranging from 1998 to 2001. To receive this data, you must enter the years in a four-digit format.

A report with the *Year* field only shows a two-digit year. For example, the Year 2000 appears as 00 on reports, and the Year 1999 appears as 99.

The Year 2000 appears in a two-digit format (for example, 00) in the Configuration Control transaction log. In the system error log, the years appear in a two-digit format only within the 20th century (for example, 99), but in a four-digit format for years in the 21st century (for example, 2000).

Higher network link speeds

NAC 2.5 offers a higher link speed of 19,200 baud on the network link connected with a Meridian MAX 9 (or higher) node. In previous releases, NAC supervisors could only configure the network link up to a speed of 9600 baud.

Note: If NAC 2.5 is monitoring a Meridian MAX 8 (or lower) node, the network link should configure up to 9600 baud.

NAC supervisors can configure a modem or direct network link connection with this new speed on any of the serial ports. The new speed improves the response time for network operations sent over the network link.

The network link is assigned on the NAC Communication Port Assignment screen. For more information on this screen, refer to the *Network Administration Centre (NAC) Installation Guide* (NTP 553-4011-110), “Maintenance and administration system shutdown” chapter, “Configure NAC System” section.

Additional software codes

Introduction

System messages appear on your screen when you install the software. The messages indicate the status of the installation or upgrade procedure.

Several new lines of installation/upgrade code appear in NAC 2.5 that did not appear in earlier releases of NAC. This section describes those lines of code.

Previous installation code

During a new software installation, the system configures the port devices. This code is shown in the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), "New software installations" chapter, page 6-17.

During this configuration process, the earlier versions of NAC displayed the following messages:

```
***> Configuring port devices...(TIME)
```

```
***> Finished configuring port devices.(TIME)
```

If you are completing reentry point 2, 3, or 4, the following message appears:

```
port_hold started.
```

```
Stream Error logging started.
```

```
netspec "tcpip" not set up.
```

```
Line printer scheduler started.
```

```
Module ID = NAC00
```

New software installation code

In NAC 2.5, the new software installation code appears as follows:

```
***> Configuring port devices...(TIME)
***> Finished configuring port devices.(TIME)
```

If you are completing reentry point 2, 3, or 4, the following message appears:

```
port_hold started.
Transport Provider daemon started.
Internet services provided.
portmap started.
Stream Error logging started.
netspec "tcpip" not set up.
Network Commands: rwalld
routed started.
NFS Startup...
ONC daemons:
NFS daemons:
Lock manager:
NFS Startup complete.
Line printer scheduler started.
Module ID = NAC00
```

**Previous
reinstallation and
upgrade code**

During a software reinstallation or upgrade, the system configures the port devices. This code is shown in the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), "Software reinstallations and upgrades" chapter, page 8-20.

During this configuration process, the earlier versions of NAC displayed the following messages:

```
***> Configuring port devices...(TIME)
```

```
***> Finished configuring port devices.(TIME)
```

The following message appears only if you use reentry point 2, 3, or 4:

```
port_hold started.
```

```
Stream Error logging started.
```

```
netspec "tcpip" not set up.
```

```
Line printer scheduler started.
```

```
Module ID = NAC00
```

**New software
reinstallation or
upgrade code**

In NAC 2.5, the new software installation code appears as follows:

```
***> Configuring port devices...(TIME)
***> Finished configuring port devices.(TIME)
```

The following message appears only if you use reentry point 2, 3, or 4.

```
port_hold started.
Transport Provider daemon started.
Internet services provided.
portmap started.
Stream Error logging started.
netspec "tcpip" not set up.
Network Commands: rwalld
routed started.
NFS Startup...
ONC daemons:
NFS daemons:
Lock manager:
NFS Startup complete.
Line printer scheduler started.
Module ID = NAC00
```

Time and year modifications

Introduction

This section describes the modifications made to some of the NAC 2.5 fields, which provide information about the time or year. These fields appear during the installation or upgrade procedure.

Modified time messages

During a NAC software installation or upgrade, the system occasionally displays the amount of time required to complete a task. When the system formats the hard disk drive and creates file systems, it indicates that the task could take about 30 minutes. In NAC 2.5, the system message now indicates that the task could take between 30 to 60 minutes.

The message appears as follows:

```
***> Formatting root file system's disk drive
      (TIME)
      This will take about 30 to 60 minutes...
```

This message appears in the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “New software installations” chapter, page 6-12. It also appears in the “Software reinstallations and upgrades” chapter, page 8-13.

EST reference removed

Prior to NAC 2.5, you entered the time as Eastern Standard Time (EST) during an installation or upgrade procedure. In NAC 2.5, you enter the local time instead of the EST. The reference to EST no longer appears on the installation and upgrade screens.

Enter year in “yyyy” format

Prior to NAC 2.5, you entered the year in “yy” format during an installation or upgrade procedure. In NAC 2.5, you enter the year in “yyyy” format.

Changes to link status

Introduction	Modifications have been made to the description for displaying the latest link status information on the View Miscellaneous Parameters screen.
Previous documentation	<p>The View Miscellaneous Parameter screen is described in the <i>Network Administration Center (NAC) 2 Supervisor's User Guide</i> (P0724352), "Network Configuration Control" chapter, "View Miscellaneous Parameters" section, page 12-13.</p> <p>The note in this earlier documentation stated that it could take up to seven minutes before changes to the status of the Meridian MAX configuration control link or a NAC link were reflected on the screen.</p>
Modified information	This information has been modified in NAC 2.5. To see a change in the status of a link, you must close the screen and reopen it.

Restrictions for list names

No hyphens or all numbers The List Management feature allows you to create lists of NACD-DNs, ACD-DNs, and CDNs.

However, you cannot use hyphens or all numbers in a list name. This causes an error message.

For more information on the List Management feature, refer to the *Network Administration Center (NAC) 2 Supervisor's User Guide* (P0724352), "List Management" chapter.

Required documentation

- Introduction** This section lists the documentation you should have on hand to run Network Administration Center 2.5.
- Network Administration Center documentation** To run Network Administration Center 2.5, you should have the following manuals:
- *Network Administration Center (NAC) 2 Supervisor's User Guide (P0724352)*
 - *Network Administration Center (NAC) 2 NTPs (A0619661)* consisting of
 - *Network Administration Center (NAC) Installation Guide (NTP 553-4011-110)*
 - *Network Administration Center (NAC) System Administration and Maintenance Guide (NTP 553-4011-510)*
 - *Application Equipment Module Installation Guide (NTP 553-3201-200)*
 - *Meridian Terminal Emulator (MTE) Release 9 User Guide (P0881398)*
 - *Network Administration Center User Guide Supplement (P0886656)*
- Meridian MAX documentation** For information on the Meridian MAX, refer to one of the following manuals:
- *Meridian MAX 7 Supervisor's User Guide (P0815598)*
 - *Meridian MAX 8 Supervisor's User Guide (P0853407)*
 - *Meridian MAX 9 Supervisor's User Guide (P0881392)*
 - *Meridian MAX 9 Maintenance and Diagnostics Guide (NTP 553-4011-811)*

Chapter 2

Preparing the system

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Describing the system requirements

- Introduction** This section describes the hardware and software components that you require to run NAC 2.5.
- NAC 2.5 uses the same hardware components as NAC 2. However, a new LAN transceiver cable has been added to NAC 2.5.
- Equipment and material list** The following table lists the equipment and materials required by NAC 2.5.

Equipment	Contents
NAC 2.5 SNN	<ul style="list-style-type: none"> • Motorola MVME167-34 single board computer with M68040 33 MHz CPU • Motorola MVME332XT/XTS eight-channel asynchronous I/O board (maximum of five) • NT7D62CA Mass Storage Unit (contains 1 Gbyte hard disk drive and 600 Mbyte tape drive unit) • NT7D64AA/DC Application Module power supply (AC or DC) • NTD19SA Application Module
Cables	<ul style="list-style-type: none"> • three multiport cables (NT8D96BE) for each MVME332XT/XTS asynchronous communication controller • LAN transceiver cable (NT7D47EA) • external input/output cables
Workstations	<ul style="list-style-type: none"> • VDT-type (DEC VT520, DEC VT420, DEC VT320, DEC VT220, or terminals which are 100% compatible) • PC running Reflection 4+ for DOS terminal emulator and directly connected to the NAC 2.5. All PCs supported by Reflection are supported by NAC 2.5. • PC running MTE 9 and connected to the NAC 2.5 (either directly or through a LAN connection). For more information on PC requirements, refer to the <i>MTE 9 User Guide</i> (P0881398).

Equipment	Contents
Modems	<ul style="list-style-type: none"> • NetComm SmartModem M7F • Gandalf LDS 120E • Develcon DS511A • Ven-Tel 2400 Plus II • Ven-Tel 9600 Plus • Racal-Vadic V12422PA • UDS EC224A/D • UDS 2440 • US Robotics Sportster 28.8 Data/Fax • US Robotics Sportster 33.6 Data/Fax
Printers	<ul style="list-style-type: none"> • DEC LA 195 (Epson-mode only) • HP RuggedWriter • HP Laserjet series II • HP LaserJet series III • HP LaserJet series 4 Plus • HP PaintJet 3630 • HP DeskJet • HP DeskJet 500 • HP DeskJet 560C (with serial-parallel converter) <p><i>Note:</i> Many of these printers are manufacturer-discontinued. Nortel Networks recommends that new NAC 2.5 users print their reports using the MTE Generic printer setting. For more information, refer to <i>MTE User Guide</i> (P0881398).</p>
Software	<ul style="list-style-type: none"> • NAC 2.5 Operating System tape cassette including the Motorola UNIX System V/68 R3V8 Operating System and Standalone System Interactive Diagnostics package • NAC 2.5 Application Software tape cassette including the Motorola Network Services Extension package for the R3V7.1 OS UNIFY Version 5, Version UNI5.0.5.2.0 RDBMS Graftsman 3.10 • Meridian MAX 6 (or higher)

Equipment	Contents
Optional software	<ul style="list-style-type: none"> • Meridian Terminal Emulator (MTE) Release 9 • Reflection 4+ Version 3.3-4.2 for DOS if you use personal computers as workstations (customer-provided) • WinSock 1.1 compliance (required for LAN-based MTE supervisor workstations) • Microsoft Windows (for MTE supervisor workstations)
Miscellaneous equipment	<ul style="list-style-type: none"> • serial-parallel converter for printers (A0621070) • HP C2809A 9- to 25-pin converter
Supplies	<ul style="list-style-type: none"> • minimum of three blank 600 Mbyte cassette tapes
Documentation	<ul style="list-style-type: none"> • Refer to “Required documentation” on page 13.

NAC 2.5 hardware configuration NAC 2.5 supports the SNN hardware configuration. The following table shows the configuration.

System type	CPU card	RAM (Mbytes)	Hard drive (formatted size)	Tape drive	RS-232C ports	LAN available
SNN	MVME167	32	1 Gbyte	600 Mbyte	8/16/24/32/40	Yes

System capacity limits

The following table lists the maximum configurations supported by NAC 2.5.

Maximum number of	Maximum value
NAC systems per customer network	1
Meridian MAX systems connected to a NAC <i>Note:</i> The maximum number of network links is defaulted to 10. This value increases if you enable the 10+ MAX nodes feature.	10
Network ACD-DN/CDN queues <i>Note:</i> You must assume 16 queues per Meridian MAX node to calculate this configuration.	320
supervisor workstations connected (total)	60
<ul style="list-style-type: none"> • supervisor workstations connected on serial ports • supervisor workstations connected on a LAN 	38 60
system printers connected to NAC	38
local printers connected through MTE <i>Note:</i> This refers to the local printers that have a printer type other than MTE Generic. One MTE Generic printer can be configured for every supervisor workstation running single session MTE 9 (or higher) to the maximum number of workstations allowed.	20
Network Supervisor IDs per NAC	80

Maximum number of	Maximum value
remote Meridian MAX supervisor logins through NAC <i>Note:</i> The maximum number of remote supervisor login connections defaults to 10. This value increases if the 10+ MAX nodes feature is enabled.	10

Using the MVME332XTS or MVME332XT card

Introduction

This section describes how to use the MVME332XTS or the MVME332XT eight-channel asynchronous board to connect the NAC 2.5 module with all external devices. The MVME332XTS card is a new feature in NAC 2.5.

Similarities between the MVME332XTS and MVME332XT

The MVME332XTS uses the same configuration as the MVME332XT card.

For more information on this configuration, refer to the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “Hardware installation” chapter, “MVME332XT eight-channel asynchronous board” section.

Differences between the MVME332XTS and MVME332XT

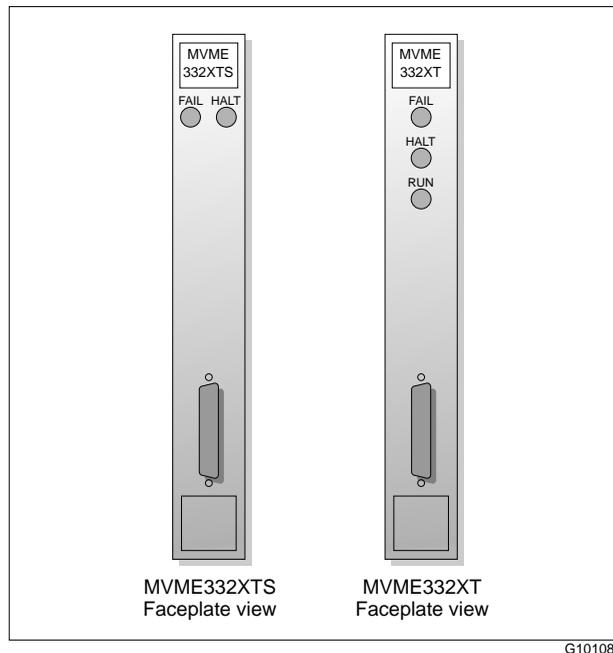
The MVME332XTS card has two light-emitting diodes (LEDs) on the faceplate. There are three LEDs on the faceplate of the MVME332XT.

The LEDs show the following conditions:

- **FAIL** This red LED illuminates when a hardware failure occurs on the card.
- **HALT** This red LED is steadily illuminated when the processor stops.
- **RUN** This green LED illuminates almost continuously and flickers every few seconds when applications run normally. This indicator appears only on the MVME332XT card.

Diagram of the MVME332XTS and MVME332XT cards

The following diagram shows the LED locations for the MVME332XTS and MVME332XT cards.



NAC 2.5 application module installation

Once you obtain your NAC 2.5 system, you must install the application module into your Application Equipment Module (AEM). The MVME332XTS/XT card is pre-installed in the application module.

For more information on how to install the NAC 2.5 application module, refer to the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “Hardware installation” chapter, “NAC application module installation” section.

The handling instructions for the MVME332XTS card are identical to the instructions for the MVME332XT card.

Chapter 3

Configuring the modems

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Overview

Introduction

NAC 2.5 supports the same modems used by NAC 2. The only additional modems, which NAC 2.5 also supports, are the US Robotics Sportster 28.8 Data/Fax and the US Robotics Sportster 33.6 Data/Fax.

This chapter describes the configuration you need to operate the US Robotics Sportster modems with NAC 2.5. It also provides an update to the steps required to configure the Racal V12422PA modem for use as a network link.

For detailed information on the other modems, refer to the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “Peripheral devices” chapter.

Modems supported by NAC 2.5

The following table lists the modems supported by NAC 2.5 and the functions for which they can be used.

Modem	Modem function				
	Limited distance	Remote diagnostics	Dial-up supervisor	Remote supervisor login	Network link
Gandalf LDS 120E	Yes			Yes	Yes
Develcon DS511A	Yes			Yes	Yes
NetComm Smart-Modem M7F		Yes	Yes	Yes	Yes
Racal V12422PA		Yes	Yes	Yes	Yes
UDS 2440		Yes	Yes	Yes	Yes
UDS EC224A/D		Yes	Yes		
Ven-Tel 2400 Plus II			Yes	Yes	Yes

Modem	Modem function				
	Limited distance	Remote diagnostics	Dial-up supervisor	Remote supervisor login	Network link
Ven-Tel 9600 Plus			Yes	Yes	Yes
US Robotics Sportster 28.8 or 33.6 Data/Fax		Yes	Yes	Yes	Yes

Cable connections You can connect modems to the NAC 2.5 with two modem cables: the NT7D99AA null modem cable and the NT7D61 cable.

For more information on the cabling arrangement, refer to the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “Peripheral devices” chapter, “Modem cables” section.

***Section A:* US Robotics modems**

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Overview

Introduction

Along with the other modems supported by NAC 2, the NAC 2.5 also supports the US Robotics Sportster 28.8 or 33.6 Data/Fax modem.

These modems provide functions such as remote diagnostics, dial-up supervisor, remote supervisor login, and a network link. This section describes these functions.

Remote diagnostics

Introduction Through your US Robotics Sportster 28.8 or 33.6 modems, Nortel performs remote diagnostics on your system.

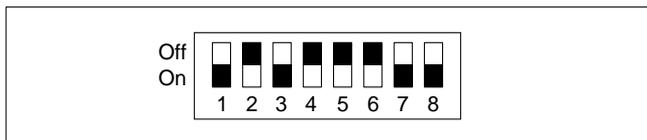
Cable connections To obtain remote diagnostics support, you must connect a modem to the remote diagnostic link.

For more information on the cabling arrangement, refer to the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “Peripheral devices” chapter, “Remote diagnostic modems” section.

Configuring for a remote dial-up supervisor or the remote end To configure the US Robotics Sportster 28.8 or 33.6 modem for use as a remote dial-up supervisor, follow these steps. These steps also apply to the configuration of the modem’s remote end for a remote dial-up supervisor.

Step Action

- 1 Open the modem and ensure that the DIP switch settings match the settings in the following diagram.

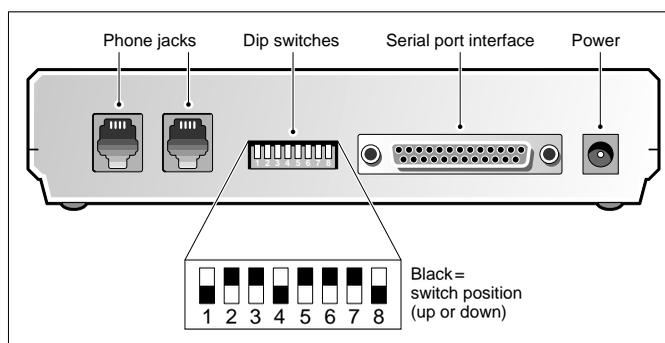


G101071

- 2 Set the workstation speed to 2400 baud.
- 3 Connect a workstation to the modem with a straight-through cable (NT1R03Dx or NT1R03Ex).

Step Action

- 4 Connect the workstation and the modem to their power sources. Ensure that the modem is connected to the telephone system with an RJ-11 cable/connector.
- 5 Power up the workstation and the modem.
- 6 On the workstation keyboard, type **AT&B1&W&W1**
Result: The system responds with OK.
- 7 Power off the modem.
- 8 Configure the modem's switch settings to match the settings in the following diagram.



G100426

- 9 If you are configuring the remote end and wish to dial the telephone number of the NAC 2.5 modem, use the Hayes AT command "atdt#####" for touch-tone dialing, or "atdp#####" for pulse dialing.

Note: The "#####" is the telephone number of the NAC 2.5 modem.

Remote supervisor login

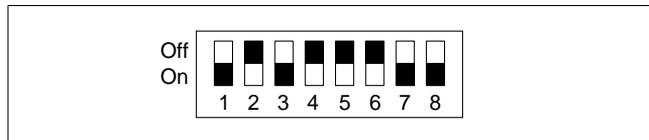
Introduction

You can use the US Robotics Sportster 28.8 or 33.6 modems as dial-up modems to permit remote supervisor logins.

For more information on how to configure the dial-up modem, refer to the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “Peripheral devices” chapter, “Dial-up supervisor modems” section.

Configuring for a remote supervisor login

To set up the US Robotics Sportster 28.8 or 33.6 modems for use as a remote supervisor login, ensure that the switch settings match those in the following diagram.



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For information on how to log in as a remote supervisor, refer to Chapter 9, “Remote supervisor login”.

Network link

Introduction

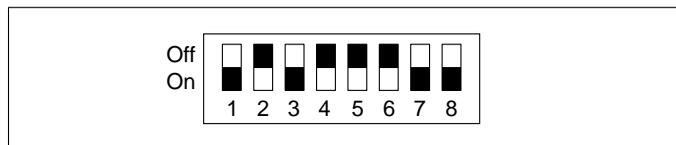
This section describes how to configure the US Robotics Sportster 28.8 or 33.6 modems for a network link.

Configuring for a network link

To configure the US Robotics Sportster 28.8 or 33.6 modems for a network link, follow these steps.

Step Action

- 1 Open the modem and ensure that the switch settings match the settings in the following diagram.

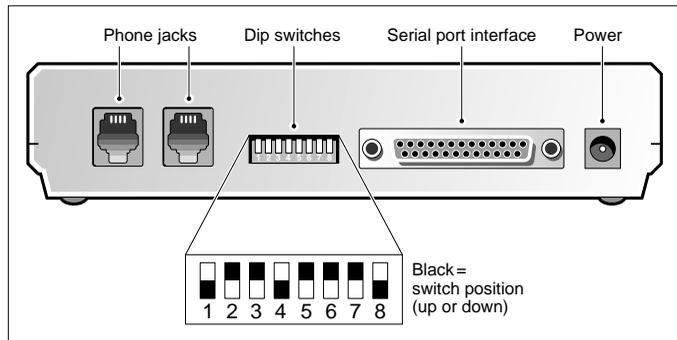


G101071

- 2 Set the workstation speed to 9600 baud.
- 3 Connect a workstation to the modem with a straight-through cable (NT1R03Dx or NT1R03Ex).
- 4 Connect the workstation and the modem to their power sources. Ensure that the modem is connected to the telephone system with an RJ-11 cable/connector.
- 5 Power up the workstation and the modem.
- 6 On the workstation keyboard, type **AT&F** followed by Enter.
Result: The system responds with OK.
- 7 Type **AT&B1** followed by Enter.
Result: The system responds with OK.

Step Action

- 8 Type **AT&Z1=#####** followed by Enter.
Result: The system responds with OK.
Note: The "#####" represents the telephone number for the Meridian MAX node.
- 9 Type **ATE0** followed by Enter.
Result: The system responds with OK.
- 10 Type **AT&W1&Y1** followed by Enter.
Note: This command does not appear on the screen.
Result: The system responds with OK.
- 11 Power off the modem.
- 12 Configure the modem's switch settings to match the settings in the following diagram.



G100426

- 13 Disconnect the modem from the workstation.

Step Action

- 14 Ensure that the modem at the Meridian MAX site is connected and powered up.

Result: The NAC 2.5 initiates the signal that connects the modem.

The NAC 2.5 modem dials the Meridian MAX telephone number as recorded in Step 8.

The connection between the NAC site and the Meridian MAX site is confirmed when the carrier detect LED constantly remains on.

- 15 Use an NT7D99AA modem cable to connect the modem directly to the NAC multiport cable.
- 16 Connect the modem to the telephone system with an RJ-11 cable/connector.
- 17 Power up the modem.

Result: If your Meridian MAX is powered up and functional, the LED labeled "TR" illuminates on the modem's front panel. If the "TR" LED does not illuminate, repeat this procedure. If the light still does not appear, contact your Nortel Networks representative.

***Section B:* Racal VI2422PA modem**

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Overview

Introduction

This section provides an update to the steps required to configure the Racal VI2422PA modem for use as a network link.

For more information on this modem, refer to the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “Peripheral devices” chapter.

Network link and Racal VI2422PA modem

Introduction

This section describes how to configure the Racal VI2422PA modem for a network link.

You only need to configure the modem on the Meridian MAX side. NAC 2.5 automatically configures the modem on its side.

Configuring for a network link

To configure the Racal VI2422PA modem for a network link, follow these steps.

Step	Action
------	--------

- | | |
|---|---|
| 1 | Connect the Meridian MAX workstation to the modem with a straight-through NT9D9007 cable.
Note: The workstation must be connected with a data format of 8N1 and a speed of 2400 baud. |
| 2 | Verify that the modem is connected to the telephone system with an RJ-11 cable/connector. |
| 3 | Connect the Meridian MAX workstation and the modem to a power source. |
| 4 | Power up the workstation and modem. |
| 5 | On the workstation keyboard, type AT&F followed by Enter.
Result: The system responds with OK. |
| 6 | Type AT*F0 followed by Enter.
Result: The system responds with OK. |
| 7 | Type AT*ZT-##### followed by Enter.
Result: The system responds with OK.
Note: The "#####" represents the telephone number for the Meridian MAX node. |
| 8 | Type ATQ1 followed by Enter.
Result: The system does not show a response. |

Step Action

- 9 Type **ATE0** followed by Enter.
Result: The system does not show a response.
- 10 Type **AT&W** followed by Enter.
Note: This command does not appear on the screen.
Result: The system does not show a response.
- 11 Power down the modem and workstation.
- 12 Disconnect the workstation from the modem.
- 13 Connect the modem directly to the NAC 2.5 using an NT7D99AA modem cable.
- 14 Verify that the modem is connected to the telephone system with an RJ-11 cable/connector.
- 15 Power up the modem.
- 16 Through the use of the Racal modem's front panel, choose option 1 and set the value to 1.
- 17 Choose option 13 and set the value to 2.
- 18 Connect the modem at the Meridian MAX site and power it up.
Result: The NAC 2.5 modem dials the Meridian MAX telephone number that you entered earlier in this procedure.
Note: The connection between the NAC site and the Meridian MAX site is confirmed when the carrier detect LED remains illuminated.
-

Chapter 4

Using the Meridian Terminal Emulator

In this chapter

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Configuring MTE	51

Overview

Introduction

The Meridian Terminal Emulator (MTE), Release 9, allows you to use your personal computer to access the NAC 2.5, Meridian MAX, and Customer Controlled Routing applications.

NAC 2.5 works only with MTE 9.

In this chapter

This chapter provides information on how to connect MTE 9 to NAC 2.5. For any other information on MTE 9, refer to the *MTE User Guide* (P0881398).

MTE 9 features

MTE 9 provides numerous features, such as

- an interface from your PC to NAC 2.5, Meridian MAX, and CCR
- a LAN connection
- the ability to print NAC reports to a printer attached to your PC
- the ability to save reports to a file
- the ability to preview reports on your screen

For other details on these and other MTE features, refer to the *MTE User Guide* (P0881398).

MTE 9 features not supported by NAC 2.5

You cannot use the following MTE 9 features with NAC 2.5:

- customize programmable buttons
- save to a file for MAXcaster
- monitor the real-time status of the agents

Connecting MTE 9 to NAC 2.5 You can use MTE 9 to connect your PC to NAC 2.5 in a variety of ways, such as a direct connection, a modem, or through a LAN.

Based on your hardware configuration, you can connect your NAC 2.5 to a maximum of 60 supervisor workstations. This maximum number consists of any combination of direct or LAN-based connections.

Connecting through a serial port or modem

Introduction This section describes how to configure NAC 2.5 to work with MTE 9 through a serial port or modem.

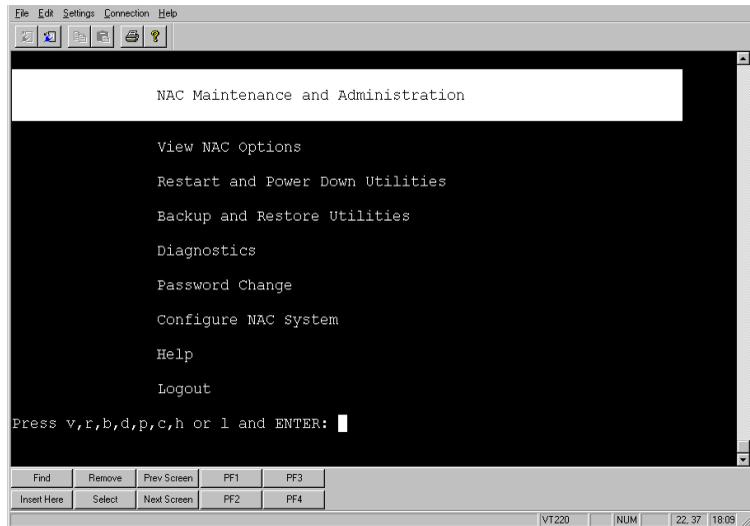
Setting the terminal type To prepare the NAC 2.5 to run with MTE 9, you must set the terminal type to “MTE 9 or above.”

To set the terminal type, follow these steps.

Starting Point: NAC 2.5 maintenance console

Step	Action
1	Verify that the NAC 2.5 system is shut down. Note: For instructions on how to shut down the system, refer to the <i>Network Administration Center System Administration and Maintenance Guide</i> (NTP 553-4011-510), “Maintenance and administration programs: system running” chapter.
2	Display the NAC Maintenance and Administration menu.

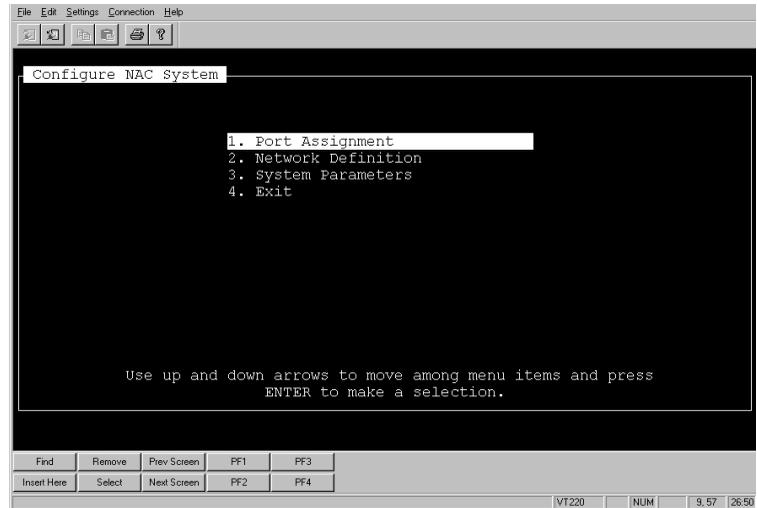
Step Action



- 3 Select Configure NAC System.

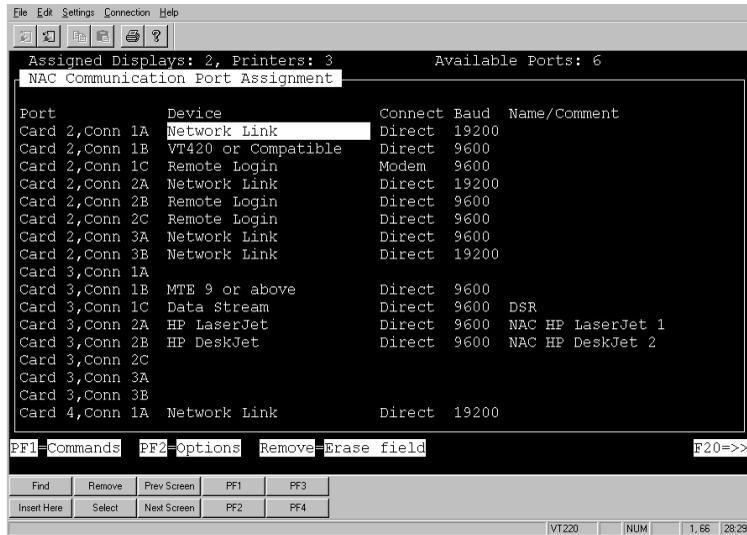
Result: The Configure NAC System screen appears.

Step Action

**4 Select Port Assignment.**

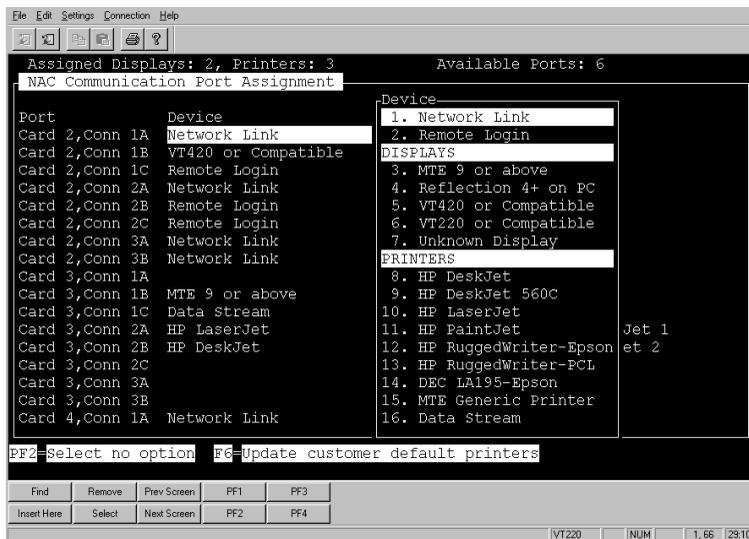
Result: The NAC Communication Port Assignment screen appears.

Step Action



- 5 Move the cursor to the next available entry in the *Device* field.
- 6 Press PF2 to view a pop-up menu that lists the available devices.

Step Action



- 7 From the pop-up menu, select MTE 9 or above.
Result: The entry appears in the Device field.
- 8 In the *Connect* field, press PF2 and select Direct or Modem.
Note: If you select Modem, you must also enter a value in the *Baud* field.
- 9 In the *Name/Comment* field, enter appropriate information if desired.
- 10 Press PF1 to display the Commands menu.
- 11 Select "Save changes and exit."

Step Action

- 12 Refer to “Configuring MTE” on page 51 for instructions on how to configure the MTE 9 to work with NAC 2.5.

Note: The changes take effect when you restart the NAC 2.5 system. For instructions on how to restart the system, refer to the *Network Administration Center System Administration and Maintenance Guide* (NTP 553-4011-510), “Maintenance and administration programs: system shutdown” chapter.

Connecting through a LAN connection

Introduction This section describes how to configure NAC 2.5 to work with MTE 9 through a LAN connection.

NAC 2.5 and LAN connectivity NAC 2.5 provides Ethernet LAN connectivity for supervisor workstations through the industry standard TCP/IP protocol.

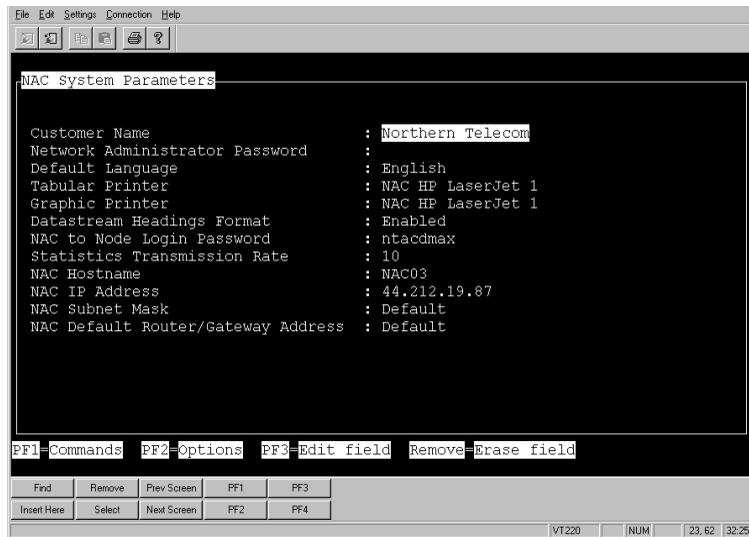
Configuring the LAN connection To configure the LAN connection, follow these steps.

Starting Point: NAC 2.5 maintenance console

Step	Action
------	--------

- | | |
|---|--|
| 1 | Verify that the NAC 2.5 system is shut down.
Note: For instructions on how to shut down the system, refer to the <i>Network Administration Center System Administration and Maintenance Guide</i> (NTP 553-4011-510), "Maintenance and administration programs: system running" chapter. |
| 2 | Display the NAC Maintenance and Administration menu. |
| 3 | Select Configure NAC System.
Result: The Configure NAC System screen appears. |
| 4 | Select System Parameters.
Result: The NAC System Parameters screen appears. |

Step Action



- 5 In the *NAC Hostname* field, enter the host name for this node.
The host name can be up to eight characters. It must start with a letter and contain only letters, numbers, an underscore, or a dash. The default is NAC00.
- 6 In the *NAC IP Address* field, enter the IP address for the NAC 2.5.
You must enter the IP address in the format of N1.N2.N3.N4. N1 is between 0 and 223 (inclusive but excluding 127). N2 and N3 are between 0 and 255 inclusive. N4 is between 0 and 254 inclusive.
- 7 In the *NAC Subnet Mask* field, enter the subnet mask for the NAC 2.5.
You must enter the subnet mask in the format of N1.N2.N3.N4. The numbers can range between 0 and 255 inclusive.
To use the system default, enter Default.

Step Action

- 8 In the *NAC Default Router/Gateway Address* field, enter the default router address for NAC 2.5.
You must enter the default router/gateway address in the format of N1.N2.N3.N4. N1 is between 0 and 233 (inclusive but excluding 127). N2 and N3 are between 0 and 255 inclusive. N4 is between 0 and 254 inclusive.
To use the system default, enter Default.
 - 9 Press PF1 to display the Commands menu.
 - 10 Select "Save changes and exit."
The changes take effect after you restart NAC 2.5.
 - 11 Refer to "Configuring MTE" on page 51 for instructions on how to configure the MTE 9 to work with NAC 2.5.
-

Configuring MTE

Introduction

After you configure a direct, modem, or LAN connection, you must configure the MTE to work with NAC 2.5.

Configuring the MTE

To configure the MTE, follow these steps.

Starting Point: NAC 2.5 maintenance console

Step	Action
1	Configure a serial, direct, or LAN connection in NAC 2.5. For information on how to configure a direct or modem connection, refer to "Connecting through a serial port or modem" on page 42. For information on how to configure a LAN connection, refer to "Connecting through a LAN connection" on page 48.
2	Install MTE 9 on your PC. For information on how to install MTE 9, refer to the <i>MTE User Guide</i> (P0881398), "Installing MTE" chapter.
3	Configure the MTE to work with NAC 2.5. For information on how to connect to MTE through a serial port, refer to the <i>MTE User Guide</i> (P0881398), "Connecting to an application" chapter, "To connect using a serial port" section. For information on how to connect to MTE through a modem, refer to the <i>MTE User Guide</i> (P0881398), "Connecting to an application" chapter, "To connect using a modem" section. For information on how to connect to MTE through a LAN connection, refer to the <i>MTE User Guide</i> (P0881398), "Connecting to an application" chapter, "To connect using a LAN" section.

-

Chapter 5

Saving to a file

In this chapter

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Printing to a file	57
Formatting headings in a data stream report	59
Downloading the report	61

Overview

Introduction

Data stream reporting allows system administrators to print historical reports into files. Third-party software, such as database and spreadsheet applications, can use these files.

You cannot purchase the data stream reporting feature separately. It is always enabled in NAC 2.5.

You can print the reports on an ad hoc basis through the Report Definition feature or at a predetermined time through the Schedule Definition feature.

Using data stream reporting

To use data stream reporting, you must complete several stages. These stages, which are described in this chapter, include

- assign a port
- enable the Datastream Headings Format field (optional)
- print the report to a file
- download the report into a third-party application

Using local printers and MTE

You can also configure data stream reporting for local printers and capture the report output on the MTE workstation.

For more information, refer to the *MTE User Guide* (P0881398), “Printing a report” chapter, “To print reports with Meridian MAX 8.6x (or higher) or NAC 2.5” section.

Assigning a port

Introduction

You can assign all of your printer ports, except one, to data stream reporting. You must reserve one non-data stream printer for use by the system.

Assigning a port for data stream reporting

To assign a port for data stream reporting, follow these steps.

Starting Point: NAC 2.5 maintenance console

Step Action

- | Step | Action |
|------|--|
| 1 | Verify that the NAC 2.5 system is shut down.
Note: For instructions on how to shut down the system, refer to the <i>Network Administration Center System Administration and Maintenance Guide</i> (NTP 553-4011-510), "Maintenance and administration programs: system running" chapter. |
| 2 | Display the NAC Maintenance and Administration menu. |
| 3 | Select Configure NAC System.
Result: The Configure NAC System screen appears. |
| 4 | Select Port Assignment.
Result: The NAC Communication Port Assignment screen appears. |
| 5 | Move the cursor to the port to be used for data stream reporting. |
| 6 | Press PF2 to view a pop-up menu that lists the available devices. |
| 7 | From the pop-up menu, select Data Stream.
Result: The entry appears in the <i>Device</i> field. |
| 8 | Ignore the Connect and Baud fields. |
| 9 | In the <i>Name/Comment</i> field, enter a name to indicate that this port is assigned to data stream reporting. |
| 10 | Press PF1 to use the Commands menu to save and exit. |

Step Action

11 Restart the NAC 2.5 system.

Note: For instructions on how to start the system, refer to the *Network Administration Center System Administration and Maintenance Guide* (NTP 553-4011-510), "Maintenance and administration programs: system shutdown" chapter.

Printing to a file

Introduction

After you assign a data stream reporting port, you must prepare the print settings in NAC 2.5.

If you use MTE 9, follow the steps in this procedure and the “Printing to a file” section in the *MTE 9 User Guide* (P0881398).

Printing reports to a file

To print a report to a file, follow these steps.

Starting Point: NAC 2.5 supervisor workstation

Step	Action
1	Display the NAC 2.5 main menu.
2	Select Network Report Definition. Result: The Network Report Definition submenu appears.
3	Select Report Parameter Definition. Result: The Report Parameter Definition screen appears.
4	Complete the Report Parameter Definition screen. Note: For more information, refer to the <i>Network Administration Center (NAC) 2 Supervisor's User Guide</i> (P0724352), “Network Report Definition” chapter, “Report Parameter Definition” section.
5	In the <i>Output Device</i> field, press Options. Result: A pop-up window appears that displays a list of devices to use to print the report.
6	Select Data Stream or the name given to the data stream port in the “Assigning a port” section on page 55.
7	If you want to print this report immediately, press Commands and select “Print this report.” If you want to print the report at a later time, incorporate the report into a schedule.

Step Action

- 8 Press PF1 to display the Commands menu.
 - 9 Select "Save changes and exit."
-

Formatting headings in a data stream report

Introduction

In NAC 2.5, a new field has been added to the Miscellaneous Options screen to allow you to format the headings in a data stream report. This field is called *Datastream Headings Format*.

If the field is enabled

If the *Datastream Headings Format* field is enabled, the column headings in the data stream report contain the system-defined names of the formula used in the columns in the tabular format definition. For example, if you use the “Number of calls accepted” formula in a column, the system-defined heading “Calls Accept” automatically appears as the column heading. Customized headings, which you may have assigned to a column, are ignored.

If the field is disabled

If the *Datastream Headings Format* field is disabled, the headings contain the customized names you assigned to the columns in the tabular format definition. For example, you may have assigned the name “Calls Accepted” as the heading for the column that contains the “Numbers of Calls Accepted” formula. The column heading “Calls Accepted” appears in the report sent to the file. If a column heading is not customized, the system-defined heading automatically appears in the report.

Setting the Datastream Headings Format field

To set the *Datastream Headings Format* field, follow these steps.

Starting Point: NAC 2.5 supervisor workstation

Step	Action
------	--------

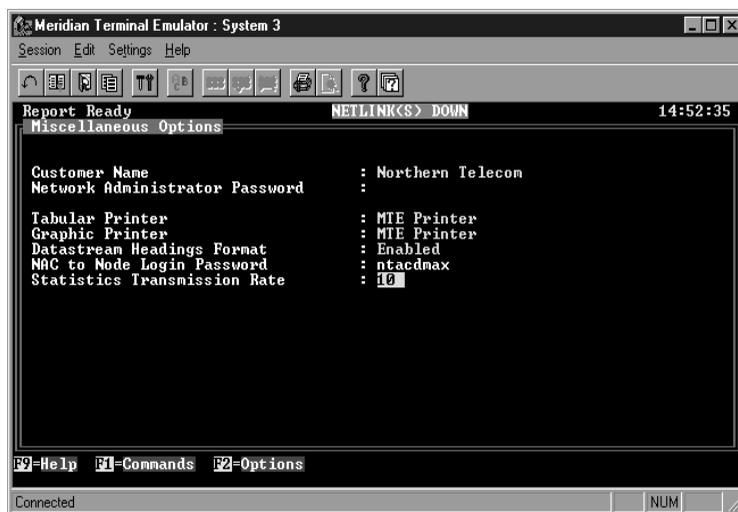
- | | |
|---|----------------------------------|
| 1 | Display the NAC 2.5 main menu. |
| 2 | Select Parameter Administration. |

Result: The Parameter Administration submenu appears.

Step Action

- 3 Select Miscellaneous Options.

Result: The Miscellaneous Options screen appears.



- 4 Set the *Datastream Headings Format* field to Enable.
- 5 Press PF1 to display the Commands menu.
- 6 Select "Save changes and exit."
-

Downloading the report

Introduction

You must have a terminal emulation package, such as MTE 9, or a capturing software program on your workstation to download the data stream report from the NAC 2.5 into your third-party software application.

Note: For more information on how to use MTE 9 to save a report, refer to the *MTE User Guide* (P0881398), “Saving to a file” chapter, “To save to a file with data stream reporting” section.

Setting the terminal settings

The terminal settings within the terminal emulation package should be

- 9600 baud rate
- 8 data bits
- no parity
- 1 stop bit
- VT-52 or V-100 terminal emulation

Preparing the file

You should mark the receiving data file with a “.txt” extension for easy identification and processing. Refer to the documentation from your capturing software program for instructions on how to download a file.

Once you have downloaded the file, you can import it into applications such as databases and spreadsheets.

Report codes

When you open the report in your third-party application, you will find that special codes are also included, as shown in this sample.

```

"[Meridian NAC BEGIN]"
56881, 1084
"Summarized ACD-DN Performance Report"
"Interval Report"
""
"" "" "Date: 11/06/98", "Time: 13:49:42"
"
"Interval: 08:00          Days: All          Relative time zone: Node"
""
" ACD-DN ", "INTVL", "SRV ", "AVG ", "1ST ", "2ND ", "TOT ", "TOTAL ", "CALLS ", "AVG ", "
AVG ", " AVG ", " AVG "
" NUMBER ", "LVL ", "ANS ", "DEL ", "DEL ", "CALLS ", " TOF ", "ABAND ", "ACD ", "
NOT ", " IN ", " OUT"
" % ", "DEL ", "RAN ", "RAN ", "ANSWD ", " CALLS ", "TALK ", "
RDY ", " DN ", " DN"
"TIME ", "TIME ", "TIME "
, , , "SEC" , , , , "SEC", "SEC", "SEC", "SEC"
"1000", "08:00 *", 0,95,0,0,4876,0,294,111,0,0,0,
-----
"1000", " ", 0,95,0,0,4876,0,294,111,0,0,0
-----
=====
"" "", 0, 95, 0, 0,4876,0,294,111,0,0,0
=====
"[Meridian NAC END]"1""

```

These codes allow your application to recognize the report. Without the codes, the report may not be legible in some applications. You can delete these codes after you import the report into your application file.

Reports that are output to a data stream printer consist of a start file marker, a report, and an end file marker. The sample shows a Summarized ACD-DN Performance Report sent to a data stream printer. The output is in the standard ISO 8859-1 Latin-1 character set.

The format of the report data conforms to computer industry standards, such as the Lotus 1-2-3 or Excel comma delimited format.

The start of the file marker information includes two lines of information. The first line signals the start of the report output. Double quotation marks enclose this alphanumeric string (“[Meridian NAC BEGIN]”). The second line contains numeric fields - a cyclic redundancy check (CRC), and a character count of the report data. A comma separates the fields in the second line. The CRC and character count do not include the characters in the start file or end file marker lines.

NAC must use an industry-standard CRC algorithm that is portable across different computing platforms. This algorithm simplifies the job of the third-party application provider who uses this information. The formula is the summation of the following expression, where X is each byte in the file:

$$\text{CRC-CCITT} = X_{16} + X_{12} + X_5 + X_0$$

The end file marker consists of a single line to signal the end of the report output. Since this string is an alphanumeric string, it is enclosed in double quotation marks.

Deciphering the report data

The data portion of a data stream report is similar to the output of a tabular report. One difference is that the column headings correspond to the formula's column label, not the tabular format's custom heading.

Chapter 6

Handling local printing

In this chapter

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Changing a local printer name	76
Deleting a local printer	77

Overview

Introduction

The Local Printing feature allows you to configure a printer attached to a personal computer (PC) to receive reports and other data from the NAC 2.5. The PC must be running MTE.

These printers are called local printers. They can be attached directly to any PC that runs NAC 2.5 and MTE. These printers can also be connected through a LAN and used by all the supervisors.

A local printer, however, is not intended for high volume. Printing may be slower than a dedicated system printer if the PC is in real-time display mode or is currently interacting with the display.

Features of local printing

Through the Local Printing feature, you can do the following:

- Send a report to any local printer, even one used by another supervisor.
- Send scheduled reports to the local printer.
- Queue reports to local printers.
- Print a variety of reports including tabular, graphic, data stream, and system reports.
- Print screen snapshots by using the [Print] key. If you use the [Print Screen] key, the international characters and graph details may not print correctly.

Restrictions for using local printing

There are several restrictions for using local printing:

- To run local printing in a Windows environment, you must use MTE 6 or higher. For more information, refer to the *MTE User Guide* (P0881398).
- You cannot use local printing if more than one MTE session is running on a PC.
- The print jobs on all printers stop if you add, delete, or change a local printer. The printing resumes after you finish configuring the printer.
- If you exit from MTE, the printing stops. This causes print jobs to queue on the printer until you restart MTE. However, you do not have to be logged in to the NAC 2.5 to send reports to the local printer.
- A NAC 2.5 can have a maximum of 20 local printers when the printer type is defined as something other than MTE Generic.

Printing to a LAN printer

Introduction

You can redirect print jobs to printers attached to your LAN if

- the LAN printer is a NAC-supported printer
- the PC responsible for redirecting the output is running MTE

LAN vendor software

You can run special software on a LAN-attached PC to intercept printer data before MS-DOS can send it to one of the PC's physical ports. This software is provided by the LAN vendor. The printer data is then sent to a printer on the network, usually through the server. This functionality is supplied by the specific LAN provider that your system's LAN administrator configures.

If you need this functionality, you must configure the PC printer port using the MS-DOS commands described in the MS-DOS user's guide. It is the LAN administrator's responsibility to install, configure, and maintain this feature.

Before you configure a local printer

Before you add, change, or delete a local printer, you should do the following:

- Ensure that the printer is connected properly.
You can connect the local printer to the PC through any one of the standard parallel printer ports (LPT1, LPT2, or LPT3), or through a serial port (COM1 or COM2). The type of connection depends on the printer interface.
- Ensure that the printer is configured as a NAC 2.5 printer.
For more information, refer to the *Network Administration Center (NAC) Installation Guide* (NTP 553-4011-110), “Peripheral devices” chapter.
- Ensure that MTE is configured correctly.
For more information, refer to the *MTE User Guide* (P0881398).

Directing reports to a local printer

Selecting a local printer

After you configure a local printer in NAC 2.5, it can be accessed through the pop-up window in the printer-related fields. For example, you can select the local printer in the *Output Device* field in the Report Parameter Definition feature to print a report.

Activating through MTE

You can also select the local printer directly through MTE. For more information, refer to the *MTE User Guide* (P0881398), “Printing a report” section.

Overriding the system printer

Introduction

If you move frequently, you can activate a new field that has been added to your profile to override the default print in favor of a local printer.

This allows you to move to another PC-based workstation with a local printer attached to it. The reports you send to the system default printer are printed at the local printer.

This field, *Local Printer Override*, has been added to the Profile Maintenance and Supervisor Definition screens.

Overriding the system printer

To override the system printer, follow these steps.

Starting Point: NAC 2.5 Profile Maintenance screen or Supervisor Definition screen

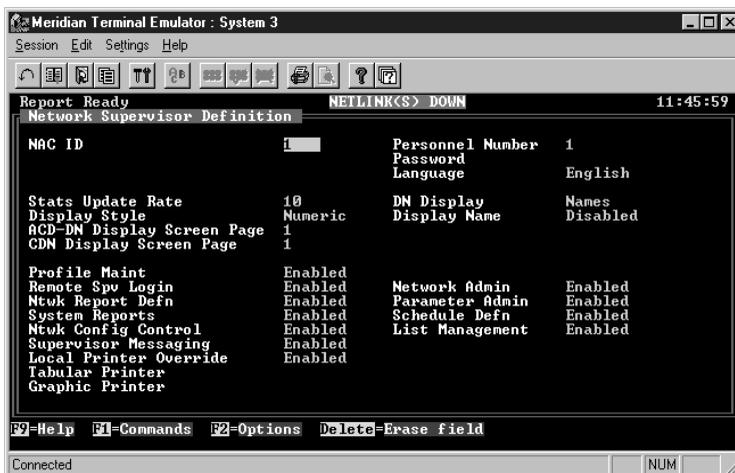
Step	Action
------	--------

- | | |
|---|---|
| 1 | Display the Profile Maintenance screen or the Supervisor Definition screen.

For information on the Profile Maintenance screen, refer to the <i>Network Administration Center (NAC) 2 Supervisor's User Guide</i> (P0724352), "Profile Maintenance" chapter.

For information on the Supervisor Definition screen, refer to the <i>Network Administration Center (NAC) 2 Supervisor's User Guide</i> (P0724352), "Parameter Administration" chapter, "Supervisor Definition" section. |
|---|---|

Step Action



- 2 In the Profile Maintenance screen or the Supervisor Definition screen, set the *Local Printer Override* field to Enabled.
 - 3 Save the changes made to the screen.
 - 4 Configure the MTE for local printing.
To do this, follow the procedure described in the *MTE User Guide* (P0881398), "Printing a report" chapter, "To print reports with Meridian MAX 8.6x (or higher) or NAC 2.5" section.
 - 5 Save the changes made to the screen.
-

Adding a local printer

Adding a local printer

To add a local printer, follow these steps.

Starting Point: NAC 2.5 supervisor workstation

Step	Action
------	--------

1	Display any NAC 2.5 screen.
---	-----------------------------

2	Press Control P.
---	------------------

Result: The Local Printer Control Window appears. If the window is blank, no local printer has been configured.



3	In the <i>Printer Type</i> field, press Options.
---	--

Result: A list of available printer types appears.

4	Select your printer type from the list.
---	---

Result: Your entry appears in the *Printer Type* field.

Step Action

- 5 In the *Printer Name* field, enter a name for the printer.
Note: This name appears in the pop-up window in the NAC 2.5 field used to select a printer. For example, the name appears in the *Output Device* field in the Report Parameter Definition screen.
 - 6 Press Commands and select "Save changes and exit."
Result: A pop-up window appears to confirm that the printer is to be added. This message warns that print jobs on all printers being used by NAC are stopped until the local printer is added.
 - 7 Type **y** to continue.
Result: A pop-up window appears to confirm that the local printer is being added to the system. After the printer is added, this message appears at the bottom of the screen: "Local printing to your PC is now enabled."
-

Changing a local printer type

Changing the type of local printer To change the type of local printer, follow these steps.

Starting Point: NAC 2.5 supervisor workstation

Step	Action
-------------	---------------

- | | |
|---|---|
| 1 | Display any NAC 2.5 screen. |
| 2 | Press Control P.
Result: The Local Printer Control Window appears. |
| 3 | In the <i>Printer Type</i> field, press Options.
Result: A list of available printer types appears. |
| 4 | Select your printer type from the list.
Result: Your entry appears in the <i>Printer Type</i> field. |
| 5 | Press Commands and select "Save changes and exit."
Result: A pop-up window appears to confirm that the printer is being changed. This message warns that print jobs on all printers being used by NAC are stopped until the local printer is changed. |
| 6 | Type y to continue.
Result: A pop-up window appears to confirm that the local printer is being changed. After the printer is added, this message appears at the bottom of the screen: "Local printer type has been changed." |
-

Changing a local printer name

Changing the name of the local printer

To change the name of the local printer, follow these steps.

Starting Point: NAC 2.5 supervisor workstation

Step	Action
-------------	---------------

- | | |
|---|---|
| 1 | Display any NAC 2.5 screen. |
| 2 | Press Control P.
Result: The Local Printer Control Window appears. |
| 3 | In the <i>Printer Name</i> field, type the new printer name. |
| 4 | Press Commands and select "Save changes and exit."
Result: The system responds with the following message: "The name of your local printer has been changed." |
-

Deleting a local printer

Deleting a local printer

To delete a local printer, follow these steps.

Starting Point: NAC 2.5 supervisor workstation

Step	Action
1	Display any NAC 2.5 screen.
2	Press Control P. Result: The Local Printer Control Window appears.
3	In the <i>Printer Type</i> field, press Delete local printer. Result: The current entry is deleted.
4	Press Commands and select "Save changes and exit." Result: A pop-up window appears to confirm that the printer is being deleted. This message warns that print jobs on all printers being used by NAC are stopped until the local printer is deleted.
5	Type y to continue. Result: A pop-up window appears to confirm that the local printer is being deleted. After the printer is added, this message appears at the bottom of the screen: "Local printing to your PC has been disabled."

Chapter 7

Using Multiple Queue Assignment

In this chapter

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Interpreting the Network Position Status Counts Display	81

Overview

- Introduction** In Meridian MAX 7, Multiple Queue Assignment (MQA) was introduced to allow an agent to service up to five ACD-DNs simultaneously. Without the MQA feature, agents service only the one ACD-DN associated with the phoneset into which they logged in.
- MQA and NAC 2.5** The Network Position Status Counts Display is the only screen in NAC 2.5 that is directly impacted by MQA. You must interpret the data differently on this screen if any of your Meridian MAX applications contain MQA.
- In this chapter** This chapter describes how to interpret the Network Position Status Counts Display if one of your Meridian MAX applications is running MQA.
- For more MQA information** For more information on MQA, refer to one of the following manuals:
- *Meridian MAX 7 Supervisor's User Guide (P0815598)*
 - *Meridian MAX 8 Supervisor's User Guide (P0853407)*
 - *Meridian MAX 9 Supervisor's User Guide (P0881392)*

Interpreting the Network Position Status Counts Display

Introduction

The Network Position Status Counts Display screen shows the number of positions currently in specific states. This screen is available in tabular or graphic format.

This section describes how to interpret the Network Position Status Counts Display screen if one of your Meridian MAX applications is running MQA.

For detailed information on this screen, refer to the *Network Administration Center (NAC) 2 Supervisor's User Guide* (P0724352), "Position Status Display" chapter.

Terminology

With MQA, you need to know the following terms:

- **Primary queue**
The primary queue is the first queue an agent selects when he or she logs in to the phoneset.
- **In-use queue**
The in-use queue is the queue in which an agent is currently handling an ACD call. If the agent is not handling an ACD call, the in-use queue becomes the last queue that the agent handled. When an agent logs in, the primary queue is considered to be the in-use queue.

Step Action

Spare Shows the number of positions that were not manned the last time the display was updated. If MQA is enabled, this field is pegged only against the agent's primary queue. For example, the agent could monitor the BL-4000, BL-5000, and BL-6000 queues. BL-4000 could be the primary queue. When the agent logs out, only BL-4000 increments by one.

ACD Call Shows the number of manned positions that were handling ACD calls the last time the display was updated. If MQA is enabled, only the in-use queue increments by one. Since the agent is not available to take calls from the other queues that he or she is servicing, the *Not Ready* field for those queues increments by one.

Not Ready Shows the number of manned positions that were not available to take calls the last time the display was updated. If MQA is enabled, only the in-use queue increments by one.

Waiting Shows the number of manned positions that were ready to take a call but did not have a call to take the last time the display was updated. If MQA is enabled, all queues being serviced by the agent increment by one.

DN Call Shows the number of manned positions that made or received a DN call the last time the display was updated. If MQA is enabled, only the in-use queue increments by one.

Chapter 8

Configuring 10+ nodes

In this chapter

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Configuring the nodes	87

Overview

Introduction

NAC 2.5 can monitor up to 20 Meridian MAX nodes. In previous releases of NAC, you could monitor only 10 Meridian MAX nodes at the same time.

Note: Although NAC 2.5 is designed to monitor up to 20 nodes, this number may vary depending on the number of ACD-DNs equipped within the network. Other network factors may also influence this number. Consult your Nortel Networks representative to determine the number of nodes that can you configure in your network.

When you need this chapter

You must follow the steps in this chapter if

- you want to add a Meridian MAX 8 (or lower) node to your node configuration; and
- the node configuration already contains 10 or more nodes

When you do not need this chapter

You do not need this chapter if

- your NAC 2.5 monitors only Meridian MAX 9 nodes; or
- the node configuration contains less than 10 nodes

Assigning the first 10 nodes

The Meridian MAX 8 (or lower) applications are assigned to one of the first 10 nodes in your node configuration. If Meridian MAX 9 (or higher) applications occupy the first 10 nodes, you must delete and reassign one of these applications to another node position. This chapter describes these steps.

Configuring the nodes

Introduction

This section describes the steps to follow if you want your NAC 2.5 to monitor nodes that contain Meridian MAX 8 (or lower) applications.

If you follow these steps, your NAC 2.5 can monitor up to 20 nodes. Some of these nodes can contain Meridian MAX 8 (or lower) applications.

Note: You can configure a maximum of 10 nodes to monitor Meridian MAX 8 (or lower) applications.

Before you begin

Back up your data before you begin the configuration process. For more information on how to back up data, refer to the *Network Administration Center System Administration and Maintenance Guide* (NTP 553-4011-510), “Maintenance and administration programs: system shutdown” chapter, “Backup and Restore Utilities” section.

Identifying nodes to be reassigned

The Meridian MAX 8 (or lower) applications must occupy one of the first 10 nodes. You must determine which of these nodes are occupied by Meridian MAX 9 (or higher) applications.

To identify the nodes that are occupied by Meridian MAX 9 (or higher) applications, follow these steps.

Starting Point: NAC 2.5 workstation

Step	Action
1	Display the NAC 2.5 main menu.

Step Action

- 2 Select Parameter Administration.

Result: The Parameter Administration submenu appears.

Note: For more information on the Parameter Administration submenu, refer to the *Network Administration Guide Supervisor's User Guide* (P0724352), "Parameter Administration" chapter.

- 3 Select Network Definition.

Result: The Network Definition screen appears.

Note: For more information on the Network Definition screen, refer to the *Network Administration Guide Supervisor's User Guide* (P0724352), "Parameter Administration" chapter, "Network Definition" section.

Node Addr.	Node Name	Short Name	Time Zone	Node Type	Release Number	Network Communication
100	Expansion2	E2	0.0			Disabled
102	DUMP102	D02	0.0			Disabled
328	ESSEX	ESX	0.0	MAX	07.51	Enabled
404	DUMP404	D04	0.0			Disabled
405	DUMP405	D05	0.0			Disabled
406	DUMP406	D06	0.0			Disabled
407	DUMP407	D07	0.0			Disabled
408	DUMP408	D08	0.0			Disabled
409	DUMP409	D09	0.0			Disabled
410	DUMP410	D10	0.0			Disabled
500	System7	S7	12.0	MAX	09.20	Enabled
666	Bellview	BL	-3.0	MAX	09.20	Enabled

- 4 Take note of the node addresses that are assigned to Meridian MAX 9 (or higher) applications.

Note: In the sample screen, Node 500 and Node 666 contain Meridian MAX 9 (or higher) applications.

- 5 Log out of the NAC 2.5 supervisor session.

Step Action

- 6 From the NAC 2.5 maintenance console, bring the system down and restart it.
- Note:** For more information on how to shut down the system, refer to the *Network Administration Guide (NAC) System Administration and Maintenance Guide* (NTP 553-4011-510), "Maintenance and administration programs: system running" chapter, "Shutdown the System" section.
- Note:** For more information on how to restart the system, refer to the *Network Administration Guide (NAC) System Administration and Maintenance Guide* (NTP 553-4011-510), "Maintenance and administration programs: system shutdown" chapter, "Restart and Power Down Utilities" section.
-

Identifying node numbers

After you identify the nodes assigned to Meridian MAX 9 (or higher) applications, you must find the node numbers that correspond to the first 10 nodes. This is done from the error log.

To identify the node numbers, follow these steps.

Starting Point: NAC 2.5 maintenance console

Step Action

- 1 Display the NAC Maintenance and Administration menu.
 - 2 Select Diagnostics.
- Result:** The NAC System Diagnostics menu appears.

Step Action

- 3 Select View NAC Error Log.

Result: The NAC error log messages appear.

Note: For more information on how to view the error log, refer to the *Network Administration Guide (NAC) System Administration and Maintenance Guide* (NTP 553-4011-510), "Maintenance and administration programs: system running" chapter, "Diagnostics" section.

Note: For more information on the error messages, refer to the *Network Administration Guide (NAC) System Administration and Maintenance Guide* (NTP 553-4011-510), "NAC error messages".

- 4 In the error log, find the nodes that correspond to the ones you identified on the Network Definition screen in the previous procedure.

This is a sample of two informational error messages:

```
INFORMATION: Node 500 is initialization in
              progress.
```

```
PROGRAM:      naclink1
```

```
INFORMATION: Node 666 is initialization in
              progress.
```

```
PROGRAM:      naclink10
```

Note: The *Program* field in the sample message indicates that Node 500 is assigned to the first node (naclink1), and Node 666 is assigned to the 10th node (naclink10). On the Network Definition screen in the previous procedure, both of these nodes contain Meridian MAX 9 (or higher) applications.

- 5 Take note of the node numbers that correspond to the first 10 nodes.
-

Assigning the ports

You must assign a new port for each new node. If an existing port is not being used by another device, you can use it instead of creating a new port.

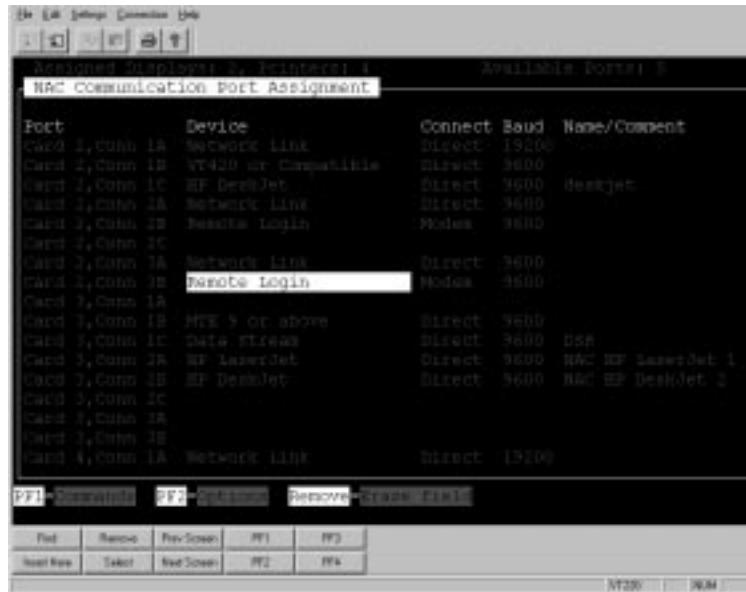
To assign a port, follow these steps.

Starting Point: NAC 2.5 maintenance console

Step Action

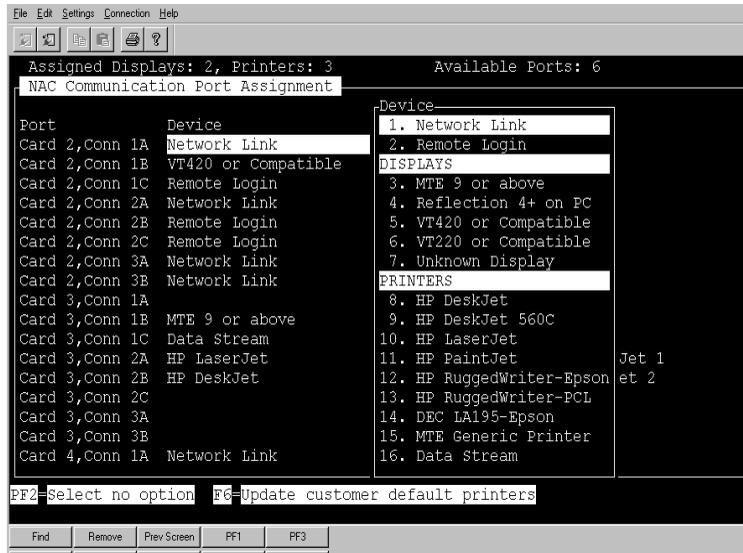
- 1 Verify that the NAC 2.5 system is shut down.
Note: For instructions on how to shut down the system, refer to the *Network Administration Center System Administration and Maintenance Guide* (NTP 553-4011-510), "Maintenance and administration programs: system running" chapter.
- 2 Display the NAC Maintenance and Administration menu.
- 3 Select Configure NAC System.
Result: The Configure NAC System screen appears.
- 4 Select Port Assignment.
Result: The NAC Communication Port Assignment screen appears.
Note: For more information on this screen, refer to the *Network Administration Guide (NAC) System Administration and Maintenance Guide* (NTP 553-4011-510), "Maintenance and administration programs: system shutdown" chapter, "Configure NAC System" section.

Step Action



- 5 Move the cursor to the next available entry in the *Device* field.
- 6 Press PF2 to view a pop-up menu that lists the available devices.

Step Action



- 7 From the pop-up menu, select Network Link.
Result: The entry appears in the *Device* field.
- 8 In the *Connect* field, press PF2 and select Direct or Modem.
Note: If you select Modem, you must also enter a value in the *Baud* field.
- 9 In the *Name/Comment* field, enter the appropriate information, if desired.
- 10 Press PF1 to display the Commands menu.
- 11 Select "Save changes and exit."
- 12 Follow the steps described in the next procedure ("Defining the new node" on page 94) to continue the configuration process.

Defining the new node

To configure the new node, you must delete one of the existing nodes assigned to a Meridian MAX 9 (or higher) application. Next, you add the new node and reinsert the node you previously deleted. This allows the new node that contains the Meridian MAX 8 (or under) application to be assigned to one of the first 10 nodes.

To configure the node, follow these steps.

Starting Point: NAC 2.5 maintenance console

Step Action

-
- | | |
|---|--|
| 1 | Complete the steps described in the previous procedure (“Assigning the ports” on page 91). |
| 2 | Display the NAC Maintenance and Administration menu. |
| 3 | Select Configure NAC System.
Result: The Configure NAC System menu appears. |
| 4 | Select Network Definition.
Result: The NAC Network Definition/Installation screen appears.
Note: For more information on this screen, refer to the <i>Network Administration Guide (NAC) System Administration and Maintenance Guide</i> (NTP 553-4011-510), “Maintenance and administration programs: system shutdown” chapter, “Network Definition” section. |

Step Action

Node Addr	Node Name	Short Name	Time Zone	Connection Baud	Connection Port	Remote Login Directory Number	Ntwk Link
100	Expansion2	EX2	0.0	9600	C2-2B		Dsbl
111	DUMP1	D1	0.0	9600			Dsbl
338	ESSEX	ESX	0.0	9600	C2-1C		Enbl
404	DUM404	D04	0.0				Dsbl
405	DUM405	D05	0.0				Dsbl
406	DUM406	D06	0.0				Dsbl
407	DUM407	D07	0.0				Dsbl
448	DUMF448	D48	0.0				Dsbl
449	DUMF449	D49	0.0				Dsbl
500	System7	SY7	0.0	9600	C2-2C		Enbl
666	EXP3	EX3	0.0	9600	C2-1A C2-3B		Enbl

PF1=Commands PF2=Options Remove=Delete record

- 5 Find the node that you want to delete.
Note: This is the node you identified in “Identifying nodes to be reassigned” on page 87 and “Identifying node numbers” on page 89.
- 6 On a piece of paper, copy the information that corresponds to the node to be deleted.
Note: You need to make note of this information because you must reinsert it later. From the sample screen, you make note of the information that corresponds to Node 500 or Node 666. Both nodes contain Meridian MAX 9 (or higher) applications.
- 7 Delete the node.
Note: In the sample screen, you delete Node 500 or Node 666 because they both contain Meridian MAX 9 (or higher) applications.
- 8 Complete an entry for the new node that contains the Meridian MAX 8 (or lower) application.
- 9 Press PF1 to display the Commands menu.

Step Action

- 10 Select "Save changes and exit."
Note: The changes take effect after you restart the NAC 2.5 system.
- 11 Select Network Definition from the Configure NAC System menu.
Result: The NAC Network Definition/Installation screen appears.
- 12 Reenter the node information that you deleted in Steps 5 and 6.
- 13 Press PF1 to display the Commands menu.
- 14 Select "Save changes and exit."
Note: The changes take effect after you restart the NAC 2.5 system.
- 15 Restart the NAC 2.5 system.
-

Reconfiguring the node numbers

To print reports that contain the new node and the reassigned node, you must clean up the existing node configuration and reconfigure the correct information in the NACD-DN, CDN, and List Management definitions.

To reconfigure the node numbers, follow these steps.

Starting Point: Parameter Administration submenu in NAC 2.5

Step Action

- 1 Complete the steps described in the previous procedure ("Defining the new node" on page 94).
- 2 Display the Parameter Administration submenu.
Note: For more information on the Parameter Administration submenu, refer to the *Network Administration Guide Supervisor's User Guide* (P0724352), "Parameter Administration" chapter.

Step Action

- 3 From the Parameter Administration submenu, select Display NACD-DN Selection.
Result: The Display NACD-DN Selection screen appears.
Note: For more information on this screen, refer to the *Network Administration Guide Supervisor's User Guide (P0724352)*, "Parameter Administration" chapter, "Display NACD-DN Selection" section.
- 4 On the Display NACD-DN Selection screen, you must reconfigure the node ACD-DN numbers, if necessary. The node ACD-DN numbers should correspond to the node numbers defined in "Defining the new node" on page 94.
Note: You must change any numbers that do not match on the Display NACD-DN Selection screen.
- 5 From the Parameter Administration submenu, select Display CDN Selection.
Result: The Display CDN Selection screen appears.
Note: For more information on this screen, refer to the *Network Administration Guide Supervisor's User Guide (P0724352)*, "Parameter Administration" chapter, "Display CDN Selection" section.
- 6 On the Display CDN Selection screen, you must reconfigure the node CDN numbers, if necessary. The node CDN numbers should correspond to the node numbers defined in "Defining the new node" on page 94.
Note: You must change any numbers that do not match on the Display CDN Selection screen.
- 7 From the NAC main menu, select List Management.
Result: The List Management screen appears.
Note: For more information on this screen, refer to the *Network Administration Guide Supervisor's User Guide (P0724352)*, "List Management" chapter.
- 8 On the List Management screen, you must reconfigure the ACD-DN, NACD-DN, and CDN lists, if necessary, to ensure that they contain the correct node information.

Step Action

- | | |
|---|---|
| 9 | Print any NAC 2.5 reports after the node information has been verified. |
|---|---|
-

Chapter 9

Remote supervisor login

In this chapter

Overview	100
Configuring the hardware	101
Configuring the Meridian MAX port	104
Configuring the NAC port	107
Entering the phone number	109
Accessing the remote site	111

Overview

Introduction

The Remote Supervisor Login feature allows you to remotely log in to a Meridian MAX node from your NAC workstation. You can only access Meridian MAX nodes that are connected to the network.

All of the Meridian MAX supervisor capabilities are available to you once you have remote access.

In this chapter

This chapter describes the steps you must follow to configure the hardware and software. It also describes how to activate the Remote Supervisor Login feature.

Configuring the hardware

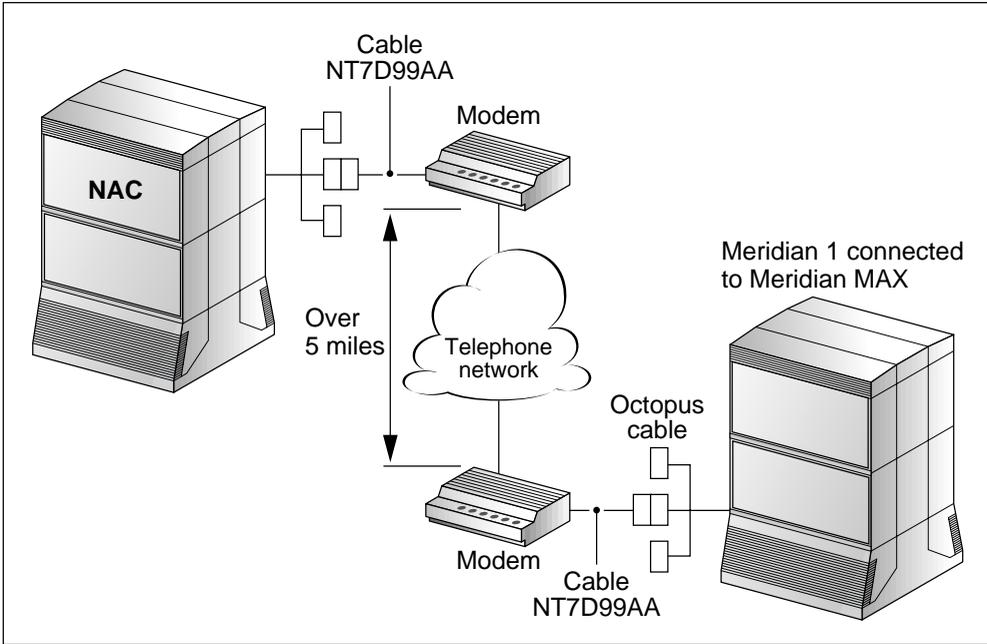
Introduction This section describes how to configure the hardware to obtain remote access to the Meridian MAX nodes.

Required cables and modems You need two NT7D99AA modem cables and two dial-up modems to create a remote connection between the NAC and the Meridian MAX node.

Preparing the hardware To configure the NAC and Meridian MAX hardware, follow these steps.

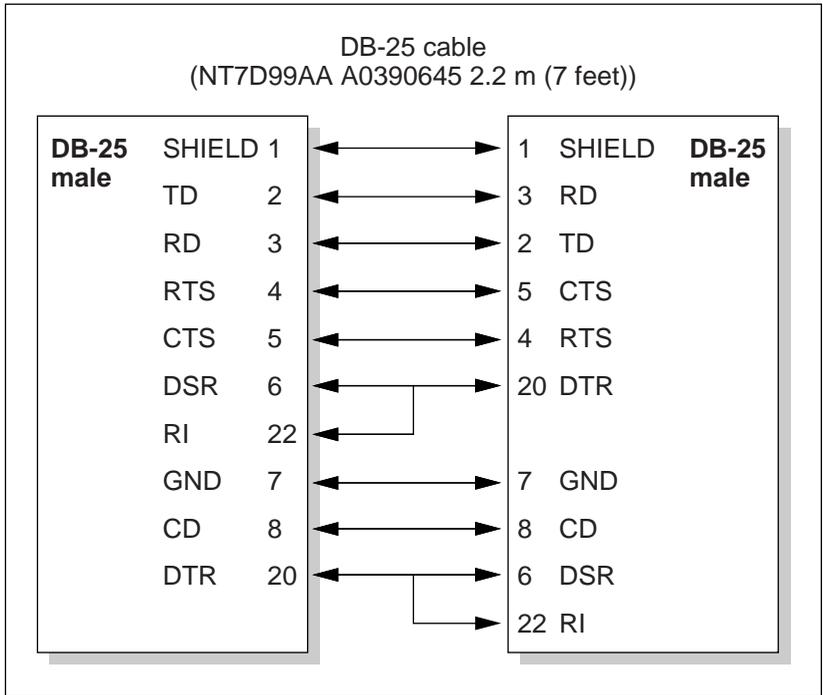
Step	Action
------	--------

- | | |
|---|---|
| 1 | Configure the modems for remote diagnostics.
Note: For more information on how to configure a US Robotics Sportster 28.8 or 33.6 modem, refer to “Remote supervisor login” on page 31. For information on how to configure on other modems, refer to the <i>Network Administration Center (NAC) Installation Guide</i> (NTP 553-4011-110), “Peripheral devices” chapter, “Dial-up supervisor modems” section. |
| 2 | Use the following diagrams to help you connect the cables between the modems and the telephone network. |
-



G101132

This diagram illustrates the cabling arrangement for the NT7D99AA cable.



G101133

Configuring the Meridian MAX port

Introduction

This section describes how to configure a port in Meridian MAX to permit remote access from a NAC workstation.

Configuring the Meridian MAX port

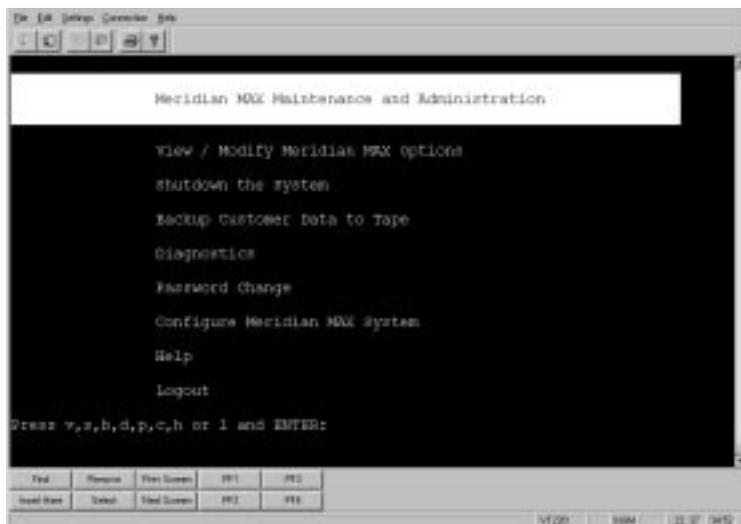
To configure the Meridian MAX port, follow these steps.

Starting Point: Meridian MAX maintenance console

Step Action

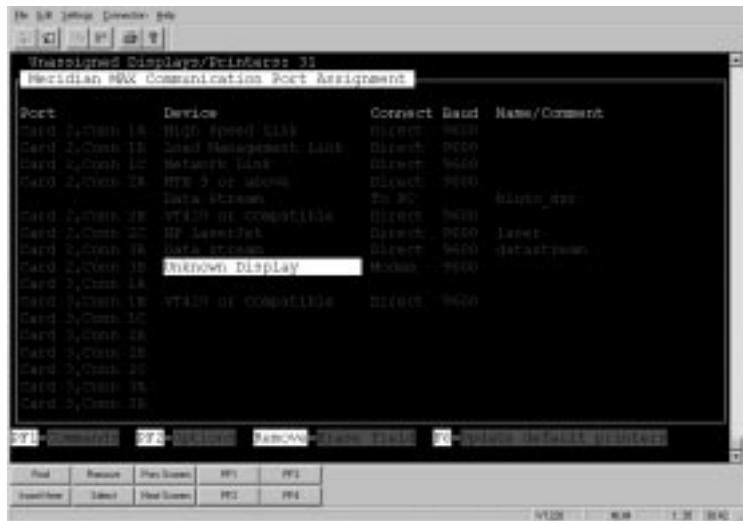
- 1 Complete the procedure described in "Configuring the hardware" on page 101.
- 2 Display the Meridian MAX Maintenance and Administration menu.

Note: The system can be in "system running" mode. It does not need to be shut down.



Step Action

- 3 Select Configure Meridian MAX System.
Result: The Meridian MAX System Configuration menu appears.
- 4 Select MAX Hardware Configuration.
Result: The Meridian MAX Hardware and System Parameters menu appears.
- 5 Select Port Assignment.
Result: The Meridian MAX Communication Port Assignment screen appears.
Note: For more information on this screen, refer to the *Meridian MAX Maintenance and Diagnostics Guide* (NTP 553-4011-811), "Configuring the Meridian MAX" chapter, "Port Assignment" section.



Step Action

- 7 Press PF2 to view a pop-up menu that lists the available devices.
 - 8 From the pop-up menu, select Unknown Display.
Result: The entry appears in the *Device* field.
 - 9 In the *Connect* field, press PF2 and select Modem.
Note: If you select Modem, you must also enter a value in the *Baud* field.
 - 10 In the *Name/Comment* field, enter the appropriate information, if desired.
Note: This is the port you will use to connect the modem to the Meridian MAX.
 - 11 Press PF1 to display the Commands menu.
 - 12 Select "Save changes and exit."
 - 13 Follow the steps described in the next procedure ("Configuring the NAC port" on page 107) to continue the configuration process.
-

Configuring the NAC port

Introduction This section describes how to prepare a NAC port to remotely access a Meridian MAX.

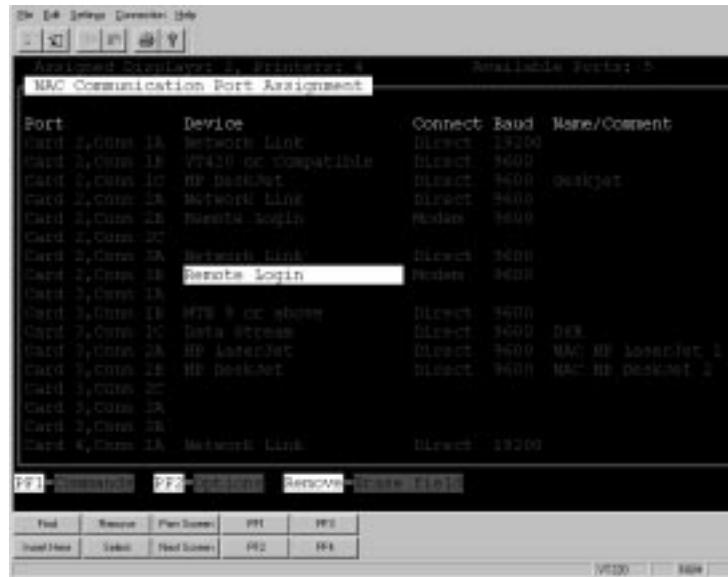
Configuring the port To configure the port, follow these steps.

Starting Point: NAC maintenance console

Step	Action
------	--------

- | | |
|---|---|
| 1 | Complete the procedure described in “Configuring the Meridian MAX port” on page 104. |
| 2 | Verify that the NAC 2.5 system is shut down.
Note: For instructions on how to shut down the system, refer to the <i>Network Administration Center System Administration and Maintenance Guide</i> (NTP 553-4011-510), “Maintenance and administration programs: system running” chapter. |
| 3 | Display the NAC Maintenance and Administration menu. |
| 4 | Select Configure NAC System.
Result: The Configure NAC System screen appears. |
| 5 | Select Port Assignment.
Result: The NAC Communication Port Assignment screen appears.
Note: For more information on this screen, refer to the <i>Network Administration Guide (NAC) System Administration and Maintenance Guide</i> (NTP 553-4011-510), “Maintenance and administration programs: system shutdown” chapter, “Configure NAC System” section. |

Step Action



- 6 Move the cursor to the next available entry in the *Device* field.
 - 7 Press PF2 to view a pop-up menu that lists the available devices.
 - 8 From the pop-up menu, select Remote Login.
Result: The entry appears in the *Device* field.
 - 9 In the *Connect* field, press PF2 and select Modem.
Note: If you select Modem, you must also enter a value in the *Baud* field.
 - 10 In the *Name/Comment* field, enter the appropriate information, if desired.
 - 11 Press PF1 to display the Commands menu and select "Save changes and exit."
 - 12 Follow the steps described in the next procedure ("Entering the phone number" on page 109) to continue the process.
-

Entering the phone number

Introduction

This section describes how to enter the phone number of the modem that NAC uses to remotely access the Meridian MAX.

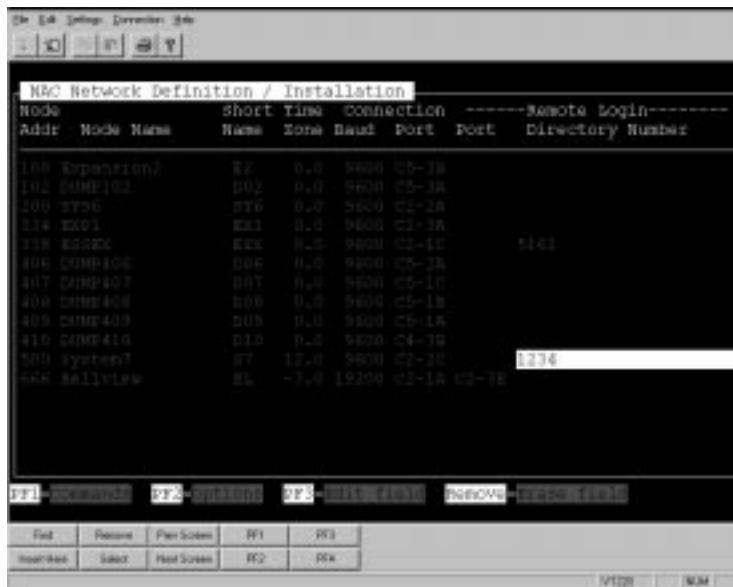
Entering the remote access number

To enter the remote access number, follow these steps.

Starting Point: NAC maintenance console

Step	Action
1	Complete the procedure described in "Configuring the NAC port" on page 107.
2	Verify that the NAC 2.5 system is shut down. Note: For instructions on how to shut down the system, refer to the <i>Network Administration Center System Administration and Maintenance Guide</i> (NTP 553-4011-510), "Maintenance and administration programs: system running" chapter.
3	Display the NAC Maintenance and Administration menu.
4	Select Configure NAC System. Result: The Configure NAC System screen appears.
5	Select Network Definition. Result: The NAC Network Definition/Installation screen appears. Note: For more information on this screen, refer to the <i>Network Administration Guide (NAC) System Administration and Maintenance Guide</i> (NTP 553-4011-510), "Maintenance and administration programs: system shutdown" chapter, "Configure NAC System" section.

Step Action



- 6 Find the network link used to connect to the Meridian MAX system.
Note: The node name should help you determine the network link that you can use to connect to the Meridian MAX.
 - 7 In the *Remote Login Directory Number* field of this network link, enter the modem phone number that you want to use to connect to the remote end on the Meridian MAX.
 - 8 Press PF1 to display the Commands menu.
 - 9 Select "Save changes and exit."
 - 10 Follow the steps described in the next procedure ("Accessing the remote site" on page 111) to continue the configuration process.
-

Accessing the remote site

Introduction This section describes how to use NAC to remotely log in to and out of the Meridian MAX.

Before you begin To log in to Meridian MAX, you need a Meridian MAX supervisor ID (and possibly a password). Although it is not mandatory, it is recommended that a unique supervisor definition be created for you in Meridian MAX. In this definition, you are supplied with a supervisor ID and a unique password. If a definition is not created, you need to use the identification number of an existing supervisor.

For more information on supervisor definitions, refer to the *Network Administration Center (NAC) 2 Supervisor's User Guide* (P0724352), "Parameter Administration" chapter, "Supervisor Definition" section.

Logging in to the remote site To log in to a remote site, follow these steps.

Starting Point: NAC 2.5 supervisor workstation

Step	Action
1	Complete the procedure described in "Entering the phone number" on page 109.
2	Display the NAC 2.5 main menu.

Step Action



- 3 Select Remote Supervisor Login.

Result: A pop-up window appears with a list of each accessible site configured in the network.

Note: For more information, refer to the *Network Administration Center (NAC) 2 Supervisor's User Guide* (P0724352), "Remote Supervisor Login" chapter.

Step Action



- 4 Use the arrow keys to move the cursor to the Meridian MAX site that you want to access.
- 5 Press Enter.

Result: A message appears to indicate that NAC is connecting to the Meridian MAX site.
- 6 Type **Y** when the following message appears: "Connection completed, continue (y or n)?"

Result: The Meridian MAX login screen appears. It may take a few minutes for the screen to appear.
- 7 Enter the nodal supervisor ID and password (if required) when the Meridian MAX login screen appears.

Note: You must enter the nodal supervisor ID associated with the Meridian MAX. Do not enter your NAC ID.

Logging out of the remote site If you are directly connected to the network, enter “~” to log out. This terminates the connection to the Meridian MAX and returns you to the NAC main menu.

If you connected by dialing in to the network, select Logout from the Meridian MAX main menu. This terminates the connection and returns you to the NAC main menu.

Chapter 10

Handling error messages

In this chapter

Overview	116
Error messages	117

Overview

Introduction

This chapter describes the error messages that can appear in NAC 2.5.

The error messages associated with NAC 2 can also appear in NAC 2.5. For a list of these error messages, refer to the *Network Administration Center System Administration and Maintenance Guide* (NTP 553-4011-510), “NAC error messages” chapter.

Error messages

Introduction

Four warning error messages have been added to NAC 2.5. The following tables describe these messages.

Descriptions of error messages

These warning error messages are associated with the local printer.

Error message	Failed to determine spool pipe status.
Task	display
Module	lp_print_spooler
Explanation	An internal variable has reached an illegal state. If this is an isolated incident, ignore the message. If the problem persists, contact your NAC service representative.

Error Message	Cannot access pRTMODEL table.
Task	display
Module	prtctrl_add_printer
Explanation	A database error has occurred. If there were errors during the most recent installation/upgrade of the NAC system, you must reinstall the hardware and software. If there were no errors during the installation/upgrade, or if the problem persists after reinstallation, contact your NAC service representative.

These warning error messages are associated with the display manager.

Error message	Unable to create socket for %s service.
Task	dsp_mngr
Module	make_listen_socket
Explanation	This message indicates a Meridian NAC socket task internal error. If the problem persists, contact your NAC service representative.

Error Message	Accept failed for %s service.
Task	dsp_mngr
Module	accept_call
Explanation	This message indicates a Meridian NAC socket task internal error. If the problem persists, contact your NAC service representative.

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