
Nortel Communication Server 1000

Nortel Communication Server 1000 Release 5.0

Communication Server 1000M and Meridian 1

61C CP PII to CS1000M SG CP PIV Upgrade

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Finding the latest updates on the Nortel web site

The content of this documentation was current at the time the product was released. To check for updates to the latest documentation and software for CS 1000 Release 5.0, click one of the links below.

Latest Software	Takes you directly to the Nortel page for CS 1000 Release 5.0 software.
Latest Documentation	Takes you directly to the Nortel page for CS 1000 Release 5.0 documentation.

How to get help

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

Getting help from the Nortel Web site

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

www.nortel.com/support

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

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the telephone from a Nortel Solutions Center

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

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

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

www.nortel.com/callus

Getting help from a specialist by using an Express Routing Code

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

www.nortel.com/erc

Getting help through a Nortel distributor or reseller

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

System information

This document is a global document. Contact your system supplier or your Nortel representative to verify that the hardware and software described is supported in your area.

Subject

Use this document to perform upgrades on Meridian 1 Large Systems. This document also contains information on database transfers, Call Processor card upgrades, and network group upgrades.

This document also contains information on converting Release 19.0x or later software to CS 1000 Release 5.0 or later on Meridian 1 Options 51C, 61C, 81, 81C, CS 1000M SG and CS 1000M MG systems. For software conversion procedures prior to Release 19.xx, refer to the *Software conversion procedures* (553-2001-320) NTP for software Release 24.



IMPORTANT!

Database conversion for Meridian 1 Options 21E, 51, 61, 71, STE, NT, and XT must be completed by Nortel's Software Conversion Lab. Consult the current Nortel price book for cost and contact information.

Note on legacy products and releases

This NTP contains information about systems, components, and features that are compatible with Nortel Communication Server 1000 Release 5.0 software. For more information on legacy products and releases, click the **Technical Documentation** link under **Support** on the Nortel home page:

www.nortel.com/

Applicable systems

This document applies to the following systems:

- Communication Server 1000M Half Group (CS 1000M HG)
- Communication Server 1000M Single Group (CS 1000M SG)
- Communication Server 1000M Multi Group (CS 1000M MG)
- Meridian 1 PBX 51C
- Meridian 1 PBX 61C
- Meridian 1 PBX 81
- Meridian 1 PBX 81C

Note: When upgrading software, memory upgrades may be required on the Signaling Server, the Call Server, or both.

System migration

When particular Meridian 1 systems are upgraded to run CS 1000 Release 5.0 software and configured to include a Signaling Server, they become CS 1000M systems. Table 1 lists each Meridian 1 system that supports an upgrade path to a CS 1000M system.

Table 1
Meridian 1 systems to CS 1000M systems

This Meridian 1 system...	Maps to this CS 1000M system
Meridian 1 PBX 51C	CS 1000M Half Group
Meridian 1 PBX 61C	CS 1000M Single Group
Meridian 1 PBX 81	CS 1000M Multi Group
Meridian 1 PBX 81C	CS 1000M Multi Group

Signaling Server configuration

Meridian 1 Large Systems can be configured to run one or more Signaling Servers. The following Signaling Servers are supported in a Large System configuration for CS 1000 release 5.0:

- CP PM Signaling Server
- Commercial Off the Shelf (COTS) Signaling Server
- Intel ISP1100 Signaling Server

For detailed Signaling Server configuration information see Appendix : “Installing a Signaling Server” on [page 107](#).

Upgrade paths

This document contains information on the following Large System upgrades:

- Meridian 1 Options 51, 61, 71, 51C, 61C, 81C, CS 1000M SG, and CS 1000M MG
- upgrades to FNF
- software upgrades
- network additions

The upgrades documented in this NTP are structured as source platform to target platform upgrades.

Intended audience

This document is intended for individuals responsible for upgrading Large Systems.

This document is intended for individuals responsible for software conversion and memory upgrades.

Conventions

Terminology

The following systems are referred to generically as “Large System”:

- Communication Server 1000M Half Group (CS 1000M HG)
- Communication Server 1000M Single Group (CS 1000M SG)
- Communication Server 1000M Multi Group (CS 1000M MG)
- Meridian 1 PBX 51C
- Meridian 1 PBX 61C
- Meridian 1 PBX 81
- Meridian 1 PBX 81C

NTP feedback

Nortel strives to provide accurate documentation for our customers. However, if you feel there are errors or omissions in this document, your feedback is welcome.

Send comments via email to gntsdoc@nortel.com or open a problem report via the normal procedures.

Please provide as much information as possible including the NTP number, standard version and date of the document, as well as the page, problem description, and any supporting documentation and capture files.

Related information



CAUTION — Data Loss

Only personnel who are familiar with the system and with conversion procedures should perform the conversion.

Read the applicable procedures carefully before beginning any the conversion.

Note: Converting software on single CPU systems disrupts call processing and allows service only to those telephones connected to Power Failure Transfer Units (PFTU).



CAUTION WITH ESDS DEVICES

To avoid damaging equipment from electrostatic discharge, wear a properly connected antistatic wrist strap when working on system equipment.

Follow pre-conversion and post-conversion procedures for every system conversion.

Throughout this document the term *media* refers to tape, disk, CD-ROM or Compact Flash (CF), whichever applies to the system.

The term **source** refers to the hardware and software that is currently running. The term **target** refers to the new hardware and software to which the system is converting.



CAUTION — Data Loss

Read “General software conversion information” in *CS 1000M and Meridian 1 Large System Upgrades Overview* (NN43021-458) before performing any operations.

It contains information vital to the conversion process.

NTPs

The following NTPs are referenced in this document:

- *Product Compatibility* (NN43001-256)
- *Converging the Data Network with VoIP* (NN43001-260)
- *Circuit Card: Description and Installation* (NN43001-311)
- *Signaling Server: Installation and Commissioning* (NN43001-312)
- *IP Peer Networking: Installation and Commissioning* (NN43001-313)
- *Features and Services* (NN43001-106)
- *Software Input/Output: Administration* (NN43001-611)
- *Element Manager: System Administration* (NN43001-632)
- *IP Trunk: Description, Installation, and Operation* (NN43001-563)
- *IP Line: Description, Installation, and Operation* (NN43100-500)
- *ISDN Basic Rate Interface: Features* (NN43001-580)
- *Software Input/Output: Maintenance* (NN43001-711)
- *Communication Server 1000M and Meridian 1: Large System Planning and Engineering* (NN43021-220)
- *Communication Server 1000M and Meridian 1: Large System Installation and Commissioning* (NN43021-310)
- *Communication Server 1000M and Meridian 1: Large System Maintenance* (NN43021-700)
- *Communication Server 1000M and Meridian 1 Large System Upgrade NTPs* (NN43021-458 – NN43021-475)

Online

To access Nortel documentation online, click the **Technical Documentation** link under **Support** on the Nortel home page:

www.nortel.com

CD-ROM

To obtain Nortel documentation on CD-ROM, contact your Nortel customer representative.

Technical support

For technical support contact information, see “Technical Assistance service” on [page 207](#).

Preparing and planning for the upgrade

Contents

This section contains information on the following topics:

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Introduction

This document implements a “source- to-target” approach to performing an upgrade. It is important to correctly identify the source platform, target platform, and maintenance window required to perform the upgrade.



IMPORTANT!
This upgrade requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

Each section features check boxes indicating what state the system should be in at that stage of the upgrade. If the system is not in the proper state steps should be taken to correct this.

Each section is written to maintain Dial Tone where possible and limit service interruptions.

Before attempting any software or hardware upgrade field personnel should follow the steps in Table 2:

Table 2
Prepare for upgrade steps (Part 1 of 2)

Procedure Step	Page
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Table 2
Prepare for upgrade steps (Part 2 of 2)

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Planning

Planning for an upgrade involves the following tasks:

- Read and understand the current release Product Bulletin.
- Conduct a site inspection to determine proper power and grounding.
- Review the site profile to determine proper foot space if adding new columns or modules.
- Ensure sufficient power for new columns/modules or applications.
- Identify all applications (CallPilot, SCCS, IP, Meridian Mail, etc.) that are currently installed on the source platform.
- Identify and correct outstanding service problems.
- Verify the site log is updated with current trunking, call routing, application notes, and site contact information.
- Review all product bulletins and Nortel Alerts that impact the site.
- Determine if software can be converted on site or must be sent to Nortel.
- Prepare a contingency plan for backing out of the upgrade.



DANGER OF ELECTRIC SHOCK

In a DC-powered system, power to the column can remain on during the following procedures. In an AC-powered system, however, power to the entire column *must* be shut down throughout the procedures.

Upgrade Checklists

Upgrade checklists can be found in “Upgrade checklists” on [page 195](#). Engineers may print this section for reference during the upgrade.

Preparing

Preparing for an upgrade involves the following tasks:

- Identify and become familiar with all procedures.
- Verify that all installed applications meet the minimum software requirements for the target platform (see *Communication Server 1000M and Meridian 1: Large System Planning and Engineering* (NN43021-220)).
- Verify proper cable lengths for the target platform.
- Determine and note current patch or Dep lists installed at the source platform.
- Determine required patch or Dep lists at the target platform for all system-patchable components (Call Server, Voice Gateway Media Cards, Signaling Servers and so on).
- Determine the required patches or DEP lists installed on all applications (CallPilot, Symposium Call Center Server, TM, and so on).
- Determine and communicate the required maintenance window, contingency plan and the impact to the customer to complete the procedure.
- Perform an inventory on required software and hardware.
- Secure the source software and key code.
- Secure the target software and key code.
- Verify the new key code using the DKA program.
- Print site data.

Identifying the proper procedure

Each procedure has been written in a “source- to-target” format. Each procedure features warning boxes and check boxes placed at critical points. Changing the procedure or ignoring the warning boxes could cause longer service interruptions.

Connecting a terminal

Procedure 1 **Connecting a terminal**

A maintenance terminal is required to access the Core or Core/Net modules during the upgrade procedure.

- 1 Connect a terminal to the J25 port on the I/O panel in the *inactive* Core or Core/Net module.
- 2 The settings for the terminal are:
 - a. 9600 baud
 - b. 8 data
 - c. parity none
 - d. 1 stop bit
 - e. full duplex
 - f. XOFF
- 3 If only one terminal is used for both Core or Core/Net modules, the terminal must be connected from side-to-side to access each module. An “A/B” switch box can also be installed to switch the terminal from side to side.

End of Procedure

Printing site data

Print site data to preserve a record of the system configuration (see Table 3). Verify that all information is correct. Make corrections as necessary.

Note: Items marked with an asterisk (*) are required. Other items are recommended for a total system status.

Table 3
Print site data (Part 1 of 3)

Site data	Print command	
Terminal blocks for all TNs	LD 20	
	REQ	PRT
	TYPE	TNB
	CUST	<cr>
Directory Numbers	LD 20	
	REQ	PRT
	TYPE	DNB
	CUST	<cr>
Attendant Console data block for all customers	LD 20	LD 20
	REQ	PRT
	TYPE	ATT, 2250
	CUST	<cr>
*Customer data block for all customers	LD 21	LD 21
	REQ	PRT
	TYPE	CDB
	CUST	<cr>
Route data block for all customers	LD 21	
	REQ	PRT
	TYPE	RDB
	CUST	Customer number
	ROUT	<cr>
	ACOD	<cr>
*Configuration Record	LD 22	
	REQ	PRT
	TYPE	CFN

Table 3
Print site data (Part 2 of 3)

Site data	Print command	
*Software packages	LD 22	
	REQ	PRT
	TYPE	PKG
*Software issue, ROM and tape ID	LD 22	
	REQ	ISS
	REQ	ROM
	REQ	TID
* Peripheral software versions	LD 22	
	REQ	PRT
	TYPE	PSWV
ACD data block for all customers	LD 23	
	REQ	PRT
	TYPE	ACD
	CUST	Customer Number
	ACDN	ACD DN (or <CR>)
Superloop card IDs and software version (peripheral controller, superloop network and controller cards)	LD 32	
		IDC loop
Multi-purpose ISDN Signaling Processor (MISP) card	LD 27	
	REQ	PRT
	TYPE	MISP
	LOOP	loop number (0-158)
	APPL	<cr>
	PH	<cr>
DTI/PRI data block for all customers	LD 73	
	REQ	PRT
	TYPE	DDB

Table 3
Print site data (Part 3 of 3)

Site data	Print command	
Print the configured host information	LD 117	PRT HOST (provides system IP addresses)
Superloops and XPEs	LD 97	
	REQ	CHG
	TYPE	SUPL
	SUPL	Vxxx
		V stands for a virtual superloop and xxx is the number of the virtual superloop.
		xxx = 0-252 in multiples of four for MG 1000E
		xxx = 96-112 in multiples of four for MG 1000T (See Table 29)
Note: Items marked with asterisks (*) are required printout for conversion. Other items are recommended for a total system status.		

Performing a template audit

A template audit (LD 01) reviews the templates in your system. Corrupted and duplicate templates are cleaned up. An example of the information generated during the audit is listed below.

Note: The template audit may take an extended period of time on large systems. Run the audit during a low traffic period.



CAUTION — Service Interruption

Loss of Data

Do not abort this overlay until the audit is complete. If the overlay is interrupted, data will be corrupted.

LD 01 The audit begins as soon as LD 01 is entered.

TEMPLATE AUDIT

STARTING PBX TEMPLATE SCAN

TEMPLATE 0001 USER COUNT	CHECKSUM
LOW	OK

TEMPLATE 0002 USER COUNT	CHECKSUM
HIGH	OK

TEMPLATE 0003 NO USERS FOUND

STARTING SL1 TEMPLATE SCAN

TEMPLATE 0001 USER COUNT OK	CHECKSUM
	OK

•

•

TEMPLATE 0120 USER COUNT OK	CHECKSUM
	OK

TEMPLATE AUDIT COMPLETE

Backing up the database (data dump)

To back up system data, perform a data dump to save all system memory to the hard disk.

Procedure 2

Performing a data dump

- 1 Log into the system.
- 2 Load the Equipment Data Dump Program (LD 43). At the prompt, enter:

LD 43 Load program

- 3 When “EDD000” appears on the terminal, enter:

EDD Begin the data dump



CAUTION — Service Interruption

Loss of Data

If the data dump does not succeed, do not continue. Contact your technical support organization. You must correct a data dump problem before the system can be upgraded.

- 4 The messages “DATADUMP COMPLETE” and “DATABASE BACKUP COMPLETE” will appear once the data dump is complete.

******** Exit program

- 5 Remove and label the floppy disk.



IMPORTANT!

Preserve database backup information for a minimum of 5 days.

End of Procedure

Making the RMD bootable



CAUTION — Data Loss

The PC utility used in the following procedure (mkbootrmd.exe) does not validate whether the drive letter entered is a valid RMD CF card. You must enter the correct RMD drive letter when prompted or risk formatting the incorrect drive.

Note: This utility is supported by all versions of Microsoft Windows.

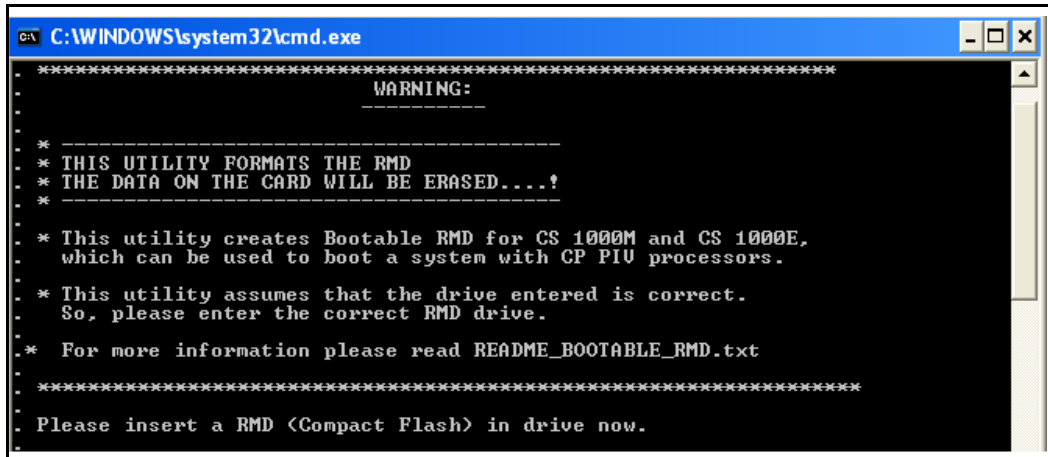
The installation RMD CF card must come pre-formatted and bootable from Nortel . Consumer CF cards are not bootable by default and must be made bootable as outlined in Procedure 3.

Procedure 3 **Making the RMD bootable**

- 1** After downloading the software image file, unzip it to a directory on your PC.
- 2** Open the utilities folder.

- 3 Double click the mkbootrmd.bat file. Insert a blank 512 MByte CF card (see Figure 1).

Figure 1
mkbootrmd.bat



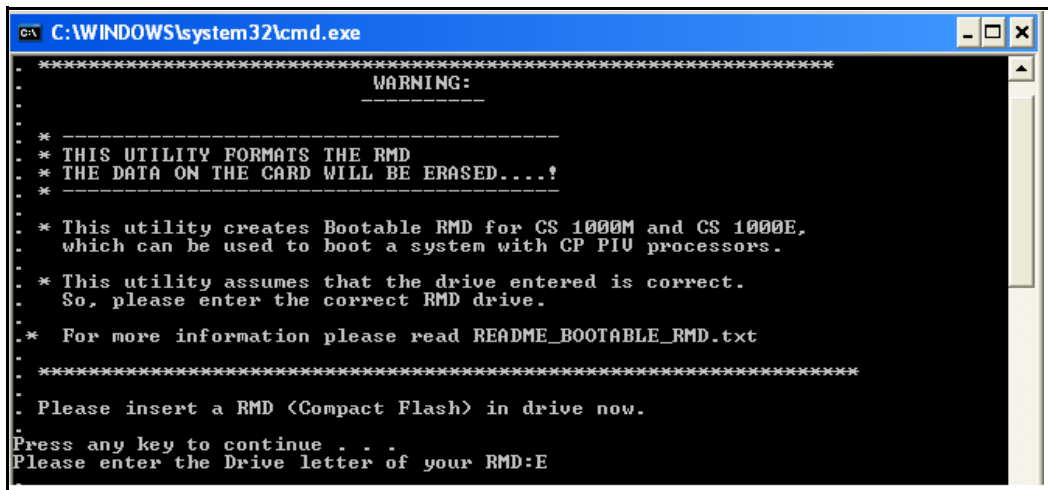
```

C:\WINDOWS\system32\cmd.exe
*****
                        WARNING:
                        -----
*
* -----
* THIS UTILITY FORMATS THE RMD
* THE DATA ON THE CARD WILL BE ERASED....!
* -----
*
* This utility creates Bootable RMD for CS 1000M and CS 1000E,
* which can be used to boot a system with CP PIU processors.
*
* This utility assumes that the drive entered is correct.
* So, please enter the correct RMD drive.
*
* For more information please read README_BOOTABLE_RMD.txt
*
*****
Please insert a RMD <Compact Flash> in drive now.

```

- 4 Enter the correct drive letter of the RMD (see Figure 2).

Figure 2
mkbootrmd.bat



```

C:\WINDOWS\system32\cmd.exe
*****
                        WARNING:
                        -----
*
* -----
* THIS UTILITY FORMATS THE RMD
* THE DATA ON THE CARD WILL BE ERASED....!
* -----
*
* This utility creates Bootable RMD for CS 1000M and CS 1000E,
* which can be used to boot a system with CP PIU processors.
*
* This utility assumes that the drive entered is correct.
* So, please enter the correct RMD drive.
*
* For more information please read README_BOOTABLE_RMD.txt
*
*****
Please insert a RMD <Compact Flash> in drive now.
Press any key to continue . . .
Please enter the Drive letter of your RMD:E

```


- 5 The boot sector files (bootrom.sys and nvram.sys) are successfully copied making the CF card bootable (see Figure 3).

Figure 3
Boot sector successfully installed

```
. RMD format Successful ...
. Installing Boot sector ...
.
. Copying files . . .
. bootrom.sys copied OK.
. Check whether the following output shows
. "All the specified file(s) are contiguous"
.
.      * * * WARNING * * *
. IF THE FILES ARE NOT CONTIGUOUS,
. PLEASE RECREATE THE RMD
.      * * * * *
Press any key to continue . . .
The type of the file system is FAT.
Volume CS1000BOOT created 4/12/2006 12:22 PM
Volume Serial Number is 389E-1E98
Windows is verifying files and folders...
File and folder verification is complete.
Windows has checked the file system and found no problems.

512,180,224 bytes total disk space.
352,256 bytes in 1 files.
511,827,968 bytes available on disk.

8,192 bytes in each allocation unit.
62,522 total allocation units on disk.
62,479 allocation units available on disk.
All specified files are contiguous.
```

End of Procedure

Transferring the database from floppy disk to CF (customer database media converter tool)



IMPORTANT!

This upgrade requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

The floppy disk that contains the backed up customer database needs to be transferred to a CF card. This procedure converts the customer database from a 2 MByte floppy disk to CF card, which is restored during the CS 1000

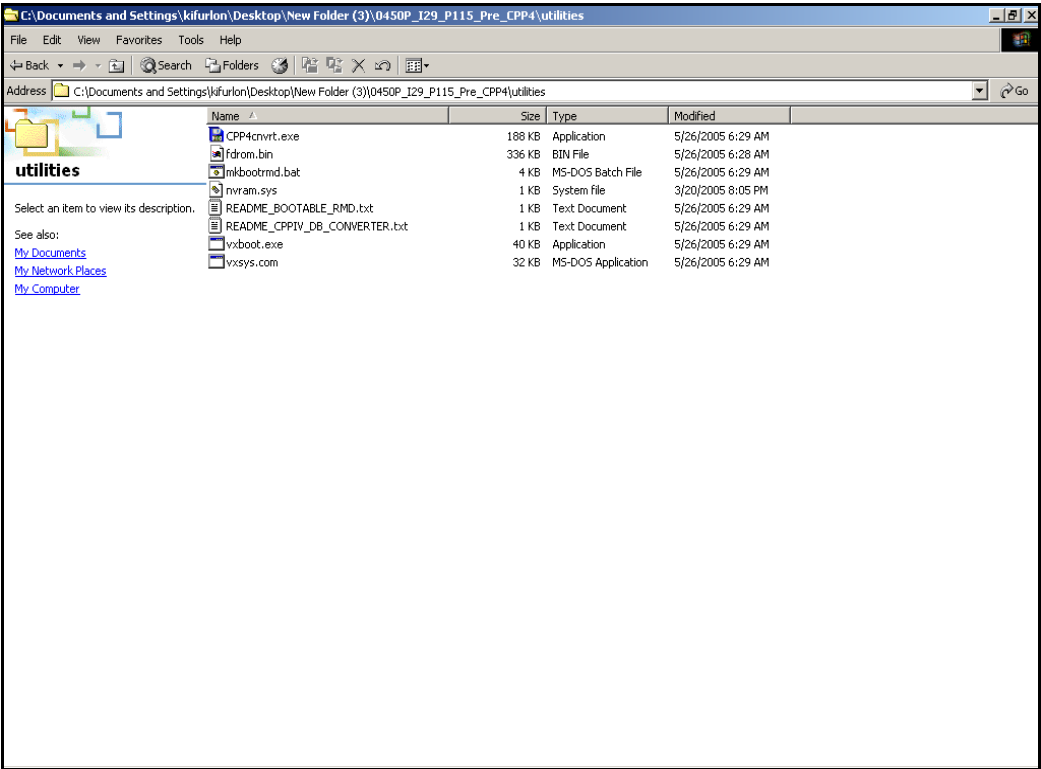
Release 5.0 software upgrade later in this section. Nortel recommends using the extra CF card included with the Software Install Kit.

Procedure 4
Transferring the customer database from floppy disk to CF

This procedure requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

- 1 After downloading the software image file, unzip it to a directory on your PC.
- 2 Open the Utilities folder. See Figure 4.

Figure 4
Utilities folder



- 3 Insert the floppy disk containing the backed up customer database from Procedure 2.
- 4 Insert a CF card (there is one included in the Software Install Kit) into the CF reader or PCMCIA CF adapter.
- 5 Start the Database Media Converter utility by double clicking the CPP4cnvrt.exe file. The first screen (Figure 5) prompts you to select the correct drive letter for the floppy disk drive.

Figure 5
Select the floppy disk drive



- 6 The utility then prompts you to insert the floppy disk (diskette 1) and click OK (see Figure 6).

Figure 6
Insert diskette 1



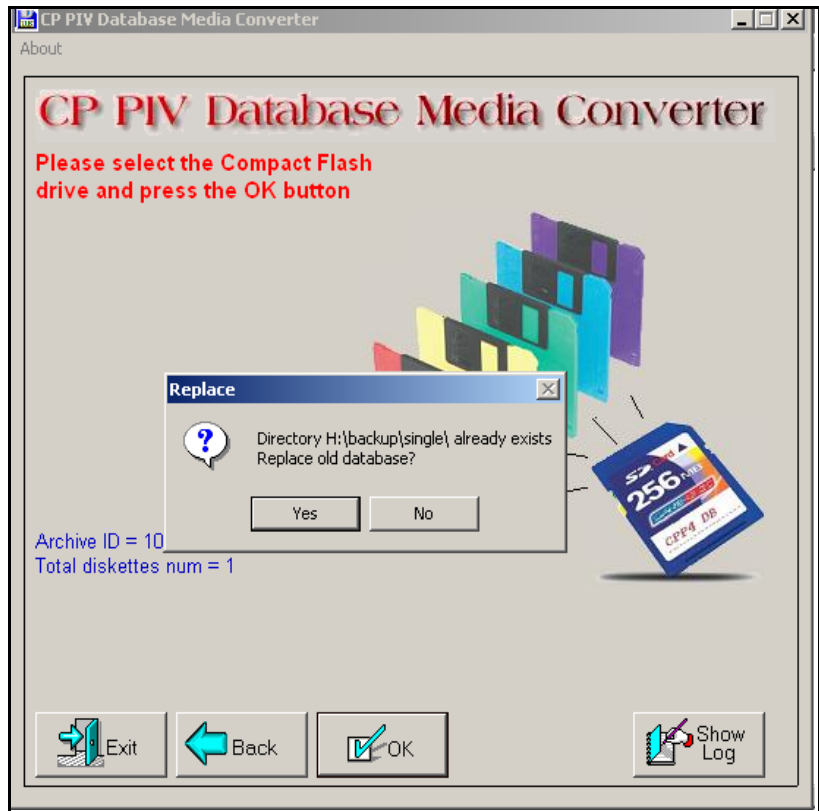
- 7 After verifying the database on the floppy disk, the utility prompts you to select the CF drive (see Figure 7).

Figure 7
Select the CF drive



- 8** At this point, 2 options are available:
- If the CF card already contains a previously backed-up database, a dialog box appears (see Figure 8 on [page 38](#)). Click yes to replace old database.
 - If the CF card is blank, the database is backed up to the CF card.

Figure 8
Replace database on CF drive



- 9 The utility completes the transfer to CF and prompts you to copy another or EXIT.

Figure 9
Copy another or exit



End of Procedure

Performing the upgrade

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This section contains information on the following topics:

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Making the system redundant	94
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Reviewing upgrade requirements

Upgrading to CS 1000M

The upgrade to CS 1000M (installing a Signaling Server) occurs after completing the procedures in this section. See Appendix : “Installing a Signaling Server” on [page 107](#).

This section describes the *minimum* hardware and software required for CP PIV. Additional equipment can also be installed during the upgrade. Verify that *all* hardware and software has been received.

Before the upgrade, check that items on the order form are also on the packing slip. Check that all items been received. If any items are missing, contact your supplier for replacements before you begin the upgrade.



WARNING

Service Interruption

DO NOT proceed with the upgrade if any of the required items are missing. All items must be received to complete the upgrade.



IMPORTANT!

This upgrade requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

Check required software

Compact Flash Software Install Kit (CP PIV)

The Compact Flash Software Install Kit contains the following items:

- One CF (512 MByte) card containing:
 - Install Software files
 - CS 1000 Release 5.0 software
 - Dep. Lists (PEPs)
 - Key code File

- One blank CF card for database backup
- One Nortel CS 1000 Release 5.0 Documentation CD

**IMPORTANT!**

Systems and components delivered to customer sites may include pre-installed software. However, the pre-installed software versions are typically older and are included only for manufacturing and order management purposes. **Do not attempt to operate the system with the pre-installed software.** The latest software must be downloaded from the Nortel Software Downloads web site and installed as part of the upgrade process.

Check required hardware

Meridian 1 Option 61C CP PIV hardware is configured at the factory according to customer requirements. Table 4 lists the hardware required for the upgrade.

Table 4
Hardware requirements for Meridian 1 Option 61C CP PIV upgrade

Order number	Description	Quantity per system
NT4N39	Control Processor Pentium IV	2
N0026096	MMDU replacement faceplate	2

Figure 10 on [page 44](#) shows the CP PIV processor card side view. Figure 11 on [page 45](#) shows the CP PIV processor card front view.

Figure 10
CP PIV call processor card (side)

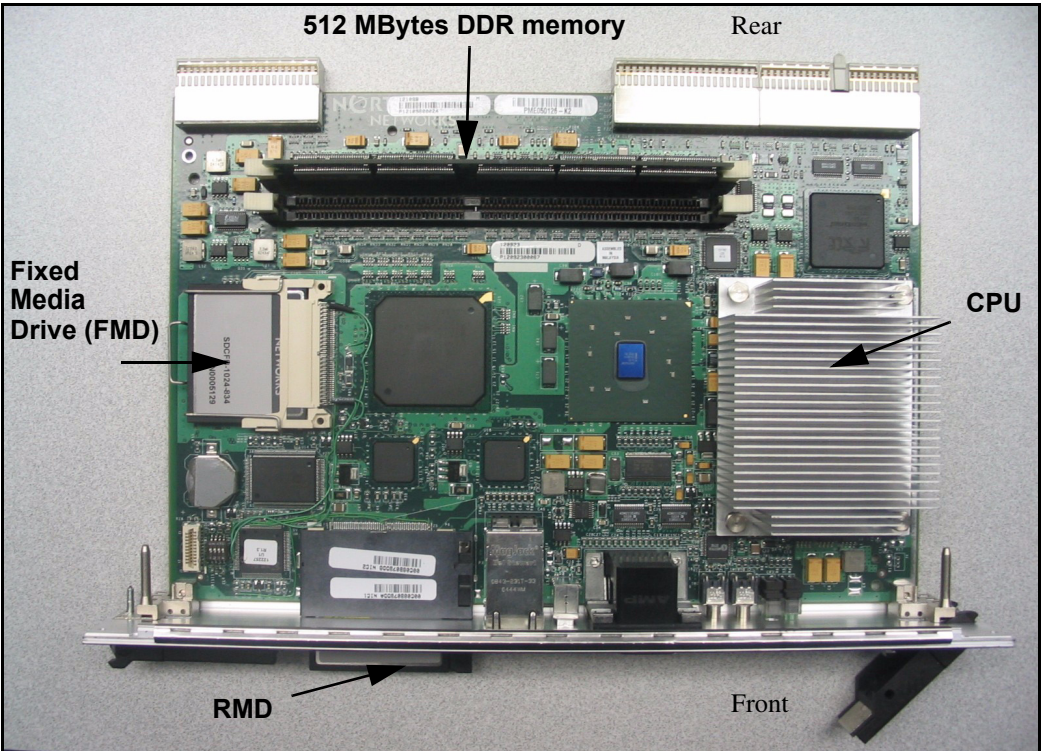


Figure 11
CP PIV call processor card (front)

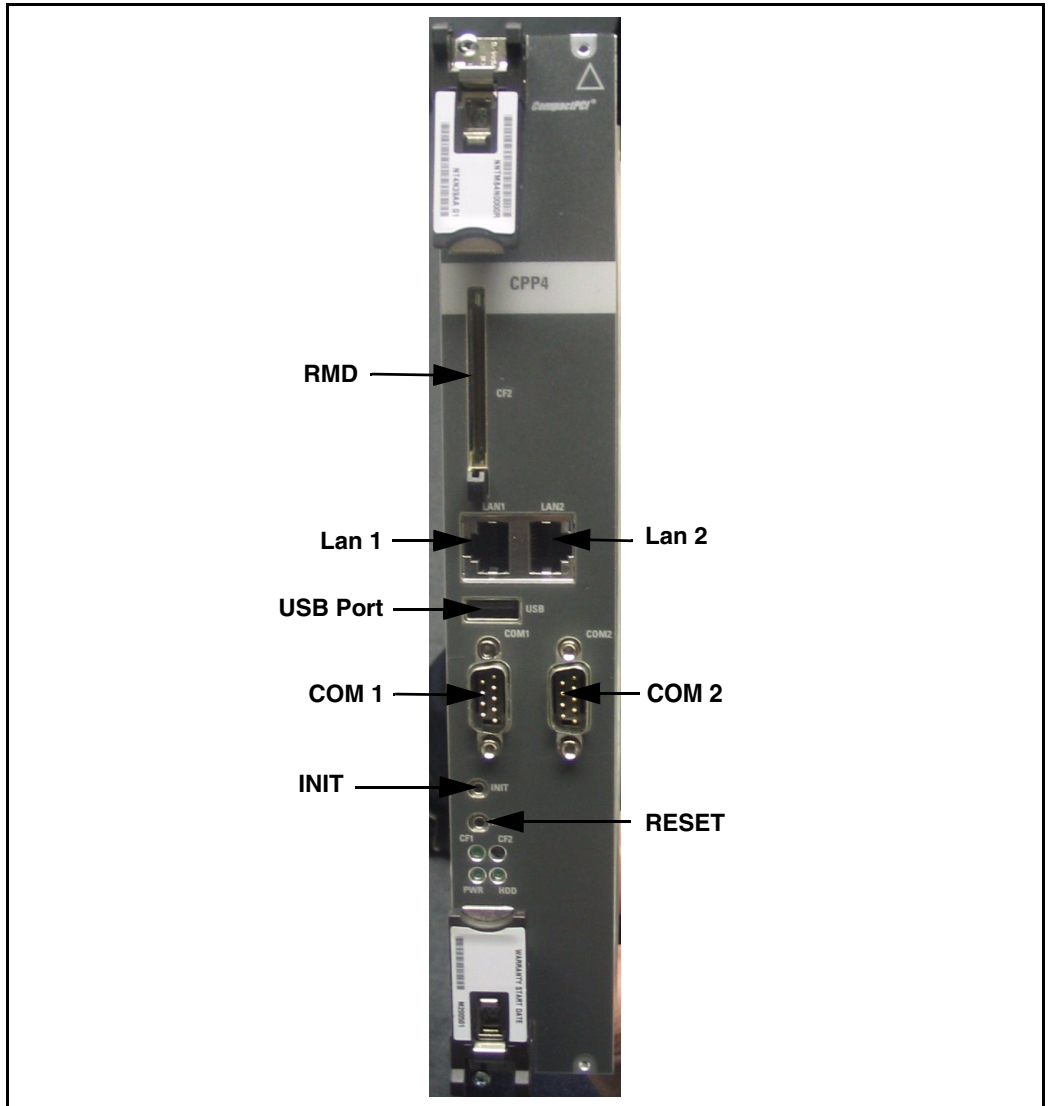
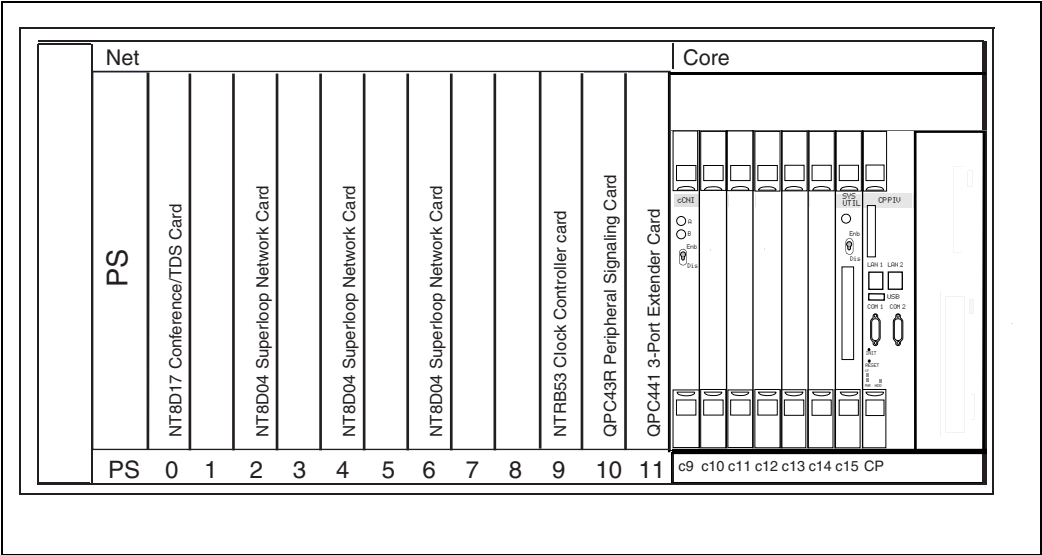


Figure 12
CP PIV NT4N41 Core/Net Module



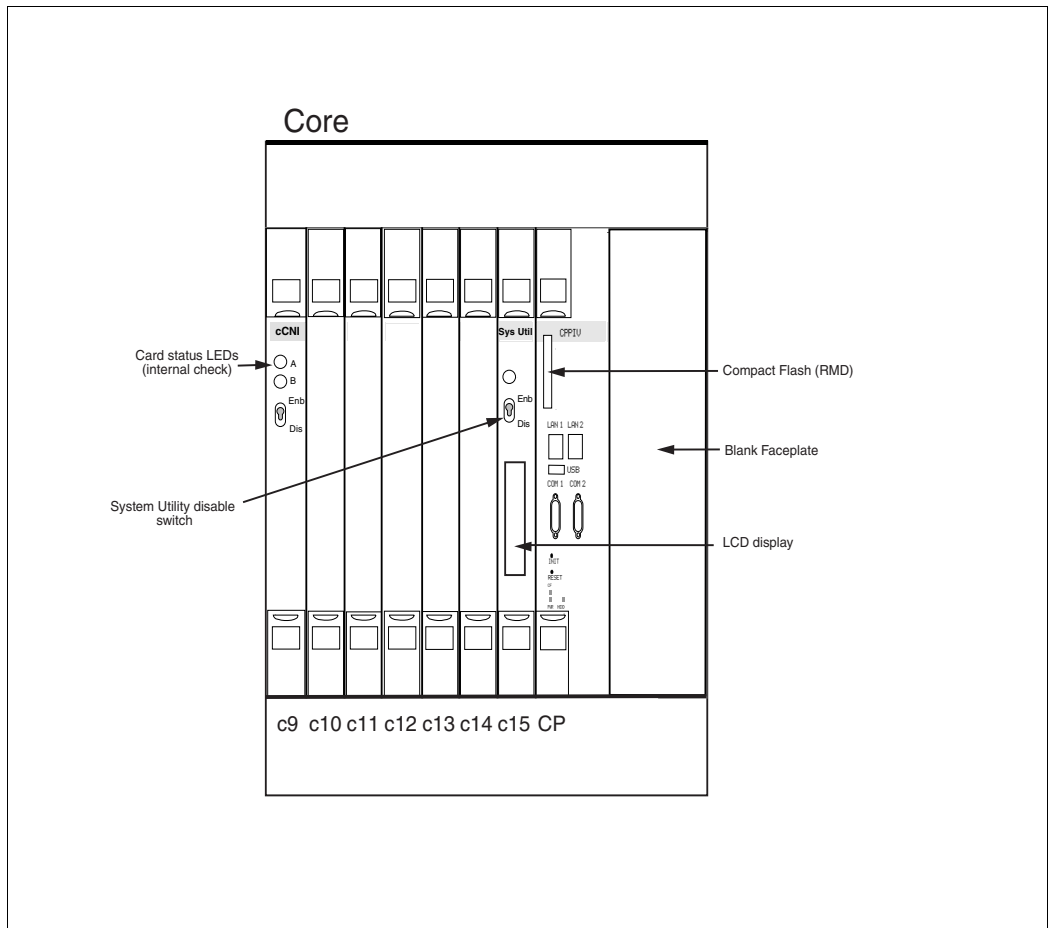
Verify CP PIV hardware

Verifying CP PIV card location

The NT4N39 CP PIV card is located in the Call Processor slot (see Figure 13 on [page 47](#)).

The N0026096 blank faceplate is located in the extreme right-hand slot next to the CP PIV card.

Figure 13
CP PIV Card location



Upgrading Core 1

Procedure 5

Checking that Core 0 is active

To upgrade Core 1, verify that Core 0 is the active side performing call processing:

- 1 Verify that Core 0 is active.

LD 135 Load program

STAT CPU Get the status of the CPUs

- 2 If Core 1 is active, make Core 0 active:

SCPU Switch to Core 0 (if necessary)

******** Exit program

End of Procedure

Procedure 6

Checking that Clock Controller 0 is active

- 1 Check the status of the Clock Controllers:

LD 60 Load program

SSCK 0 Get the status of Clock Controller 0

SSCK 1 Get the status of Clock Controller 1

- 2 If Clock Controller 1 is active, switch to Clock Controller 0.

SWCK Switch to Clock Controller 0 (if necessary)

******** Exit program

End of Procedure

Procedure 7
Splitting the Cores

- 1** In Core/Net 0, enter the SPLIT command from LD 135.

LD 135 Load program

SPLIT Split the Cores

******** Exit program

- 2** Hardware disable all CNI cards in Core 1.



The system is now in split mode, with call processing on Core 0.

End of Procedure

Remove Core 1 CP PII card and MMDU

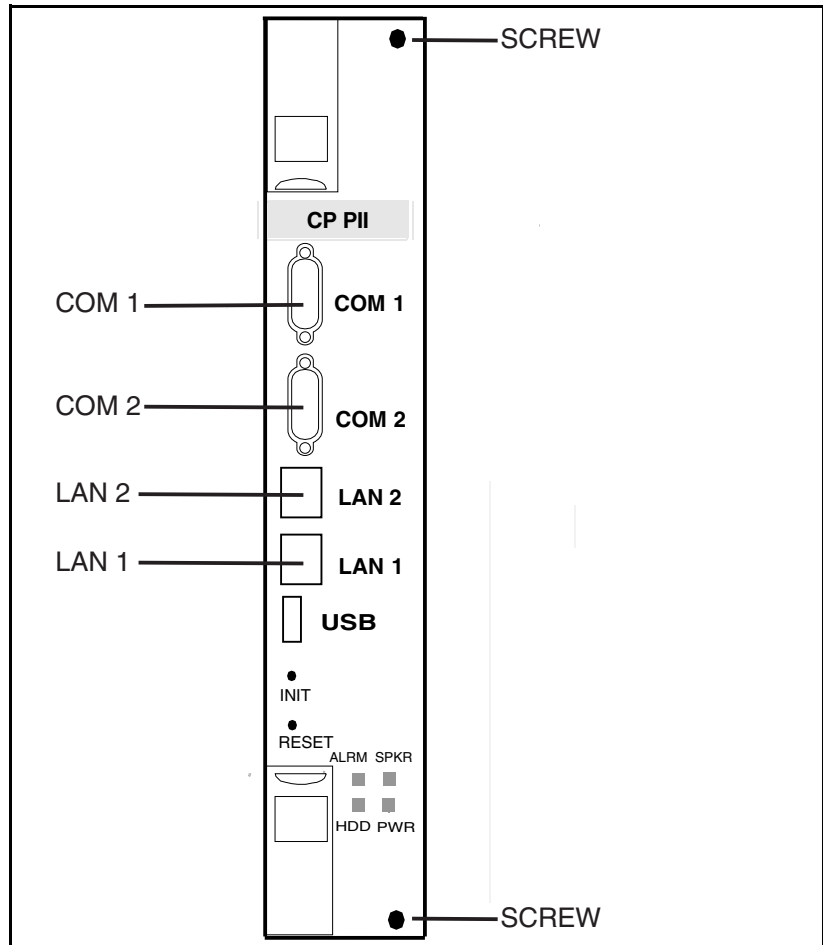
Procedure 8

Removing the Core 1 CP PII processor and MMDU

- 1 Disconnect and label the LAN1 and LAN 2 cables from the Core 1 CP PII card faceplate. See Figure 14.

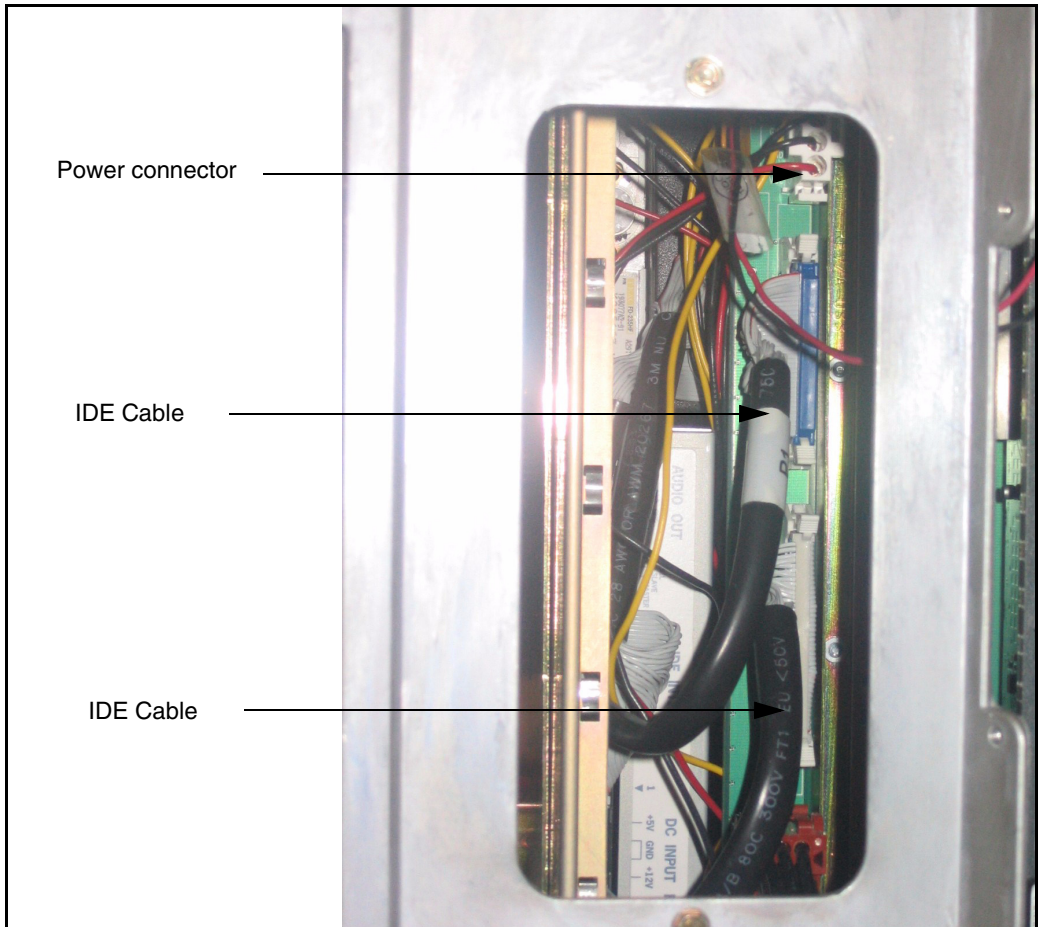
Figure 14

CP PII faceplate connections



- 2 Disconnect and label the COM 1 and COM 2 cables from the Core 1 CP PII card faceplate. See Figure 14 on [page 50](#).
- 3 Unscrew and unlatch the Core 1 CP PII card. See Figure 14 on [page 50](#).
- 4 Pull the Core 1 CP PII card from its slot.
- 5 Remove the rear access plate on the left side of the Core 1 module. See Figure 15.

Figure 15
NT4N46 Core/Net module



- 6 From the rear access point of the Core 1 shelf, remove the MMDU power cable from the backplane.
- 7 From the rear access point of the Core 1 shelf (, remove the two IDE cables from the backplane. See Figure 15 on [page 51](#).
- 8 Unscrew the MMDU from the front of Core 1.
- 9 Slowly pull the MMDU from its slot. Ensure the IDE and power cables do not catch on other equipment as you remove the MMDU.
- 10 Retain the MMDU (and database backup) in a safe and secure location until the successful completion of this upgrade.



IMPORTANT!

Database backup information, the MMDU, and original CP PII card should be preserved for a minimum of 5 days.

End of Procedure

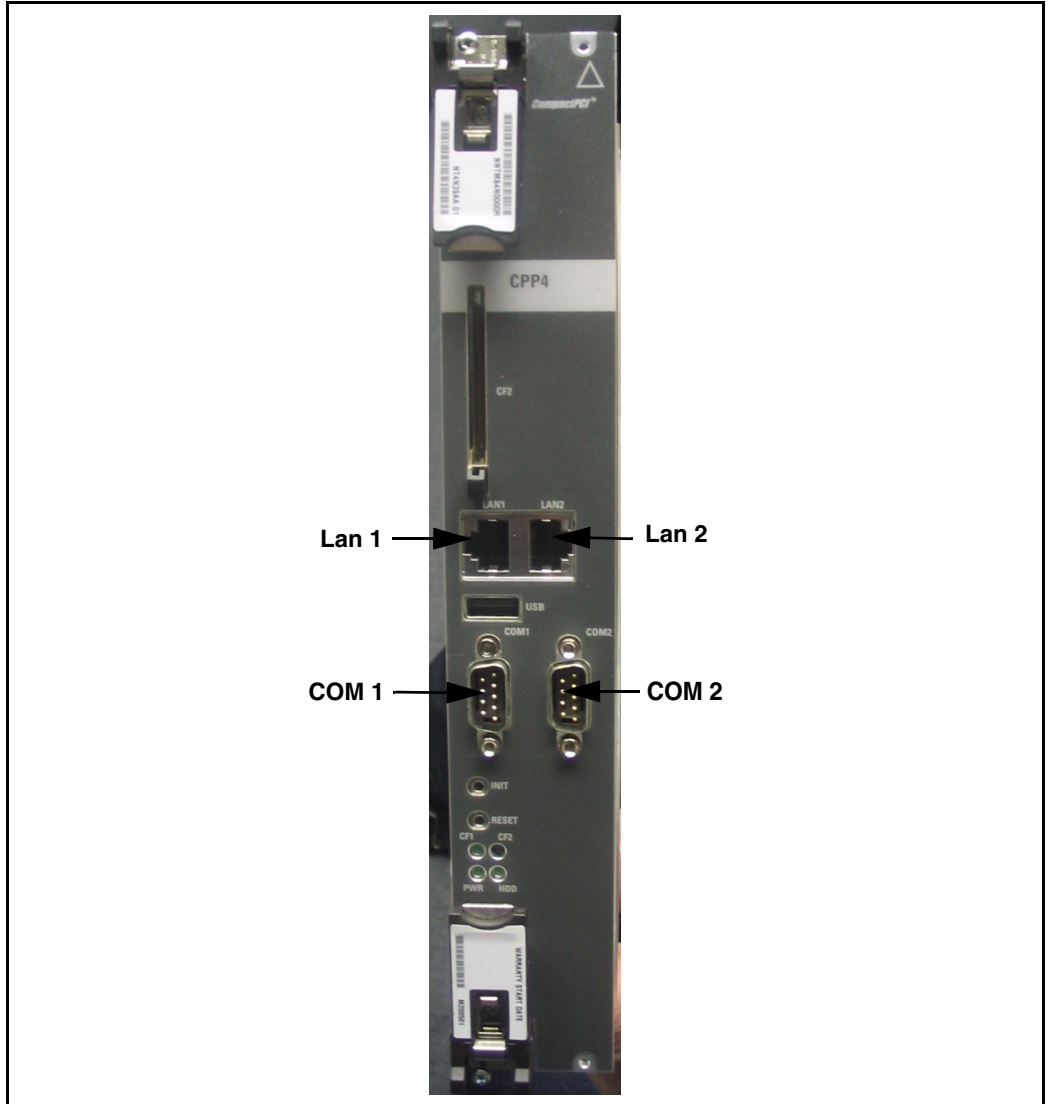
Install Core 1 CP PIV card and blank faceplate

Procedure 9

Installing the Core 1 CP PIV processor and blank faceplate

- 1 Attach the blank faceplate to the empty MMDU slot using the supplied screws.
- 2 Insert the CP PIV card into the empty CP slot in Core 1. Seat the card and secure the latches and screws.
- 3 Attach the COM 1 and COM 2 cables to the CP PIV card faceplate. See Figure 16 on [page 53](#).
- 4 Attach the LAN 2 cable to the CP PIV faceplate connector on Core 1. Do not connect the LAN 1 cable at this point.

Figure 16
CP PIV faceplate connections



- 5 Do not attach the LAN 1 and LAN 2 cables to the CP PIV card faceplate at this point in the upgrade. These cables are attached once both Cores are upgraded.

End of Procedure

CS 1000 Release 5.0 upgrade

Upgrading the software on Core 1

Procedure 10 outlines the steps involved in installing CS 1000 Release 5.0 for the CP PIV processor.

Procedure 10

Upgrading the software

- 1 Check that a terminal is now connected to COM 1.
- 2 Insert the RMD into the CF card slot.


```
Communication Server 1000 Software/Database/BOOTROM RMD Install Tool
=====
```

M A I N M E N U

The Software Installation Tool will install or upgrade
Communication Server 1000 Software, Database and the CP-BOOTROM.

You will be prompted throughout the installation and given the
opportunity to quit at any time.

Please enter:

```
<CR> -> <u> - To Install Menu.
<u> - To Install Menu.
<t> - To Tools Menu.
<q> - Quit.
```

Enter choice> u

The following keycode files are available on the removable media:

Name	Size	Date	Time
-----	-----	-----	-----
<CR> -> <1> - 491L_PIV.KCD	1114	Dec-04-2006	16:07
<q> - Quit			

Enter choice> 1

The system searches for available keycode files in the “keycode” directory on the RMD. If no keycode file is found, the system displays the following menu:

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

No keycode files are available on the removable media.

Please replace the RMD containing the keycode file(s).

Please enter:

<CR> -> <a> - RMD is now in the drive.

<q> - Quit.

Enter choice>

At this point, either replace the RMD or quit the installation. If you select option “<q> - Quit.”, the system requires confirmation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

You selected to quit. Please confirm.

Please enter:

<CR> -> <y> - Yes, quit.

<n> - No, DON'T quit.

Enter choice>

If “y” (quit) is selected, the system prints “INST0127 Keycode file is corrupted. Check Keycode file.” and returns to the installation main menu.

After accessing the RMD containing the valid keycode(s), press <CR>. The system displays the keycode file(s) available as in the following example:

```
The following keycode files are available on the
removable media:

Name                               Size   Date       Time
-----
<CR> -> <1> -keycode.kcd 1114 mon-d-year hr:min
<2> - KCport60430m.kcd   1114 mon-d-year hr:min
<q> - Quit
Enter choice> 2
```

Note: A maximum of 20 keycode files can be stored under the “keycode” directory on the RMD. The keycode files must have the same extension “.kcd”.

- 7 Select the keycode to be used on the system. The system validates the selected keycode and displays the software release and machine type authorized.

```
Validating keycode ...

Copying "/cf2/keycode/KCport60430m.kcd" to "/u/
keycode" -

Copy OK: 1114 bytes copied

The provided keycode authorizes the install of
xxxx software (all subissues) for machine type
xxxx (CPP4 processor on xxxx).
```

Note: The software release displayed depends on the keycode file content. The machine type displayed can be one of the following, according to the keycode content.

- 3521 (CP PIV processor on CS 1000M SG) for Meridian 1 Option 61C CP PIV
- 3621 (CP PIV processor on CS 1000M MG) for CS 1000E and Meridian 1 Option 81C CP PIV systems

8 The system requests keycode validation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Please confirm that this keycode matches the
System S/W on the RMD.

Please enter:

        <CR> -> <y> - Yes, the keycode matches.
Go on to Install Menu.

        <n> - No, the keycode does not match.
Try another keycode.

Enter choice>

```

9 If the keycode matches, enter <CR> to continue the installation. The system displays the Install Menu. Select option "".

```

Communication Server 1000 Software/Database/BOOTROM RMD Install Tool
=====

                I N S T A L L   M E N U

The Software Installation Tool will install or upgrade
Communication Server 1000 Software, Database and the CP-BOOTROM.

You will be prompted throughout the installation and given the
opportunity to quit at any time.

Please enter:
<CR> -> <a> - To install Software, CP-BOOTROM.
        <b> - To install Software, Database, CP-BOOTROM.
        <c> - To install Database only.
        <d> - To install CP-BOOTROM only.
        <t> - To go to the Tools Menu.
        <k> - To install Keycode only.
                For Feature Expansion, use OVL143.
        <p> - To install 3900 Set Languages.
        <q> - Quit.

Enter choice>

Communication Server 1000 Software/Database/BOOTROM RMD Install Tool
=====

```

- 10 The system requires the insertion of the RMD containing the software to be installed.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

Please insert the Removable Media Device into the drive on Core x.

Please enter:

 <CR> -> <a> - RMD is now in drive.
Continue with s/w checking.

 <q> - Quit.

Enter choice> **<CR>**

- 11 If the RMD containing the software is already in the drive, select option "<a> - RMD is now in drive. Continue with s/w checking." (or simply press <CR>) to continue. If the RMD is not yet in the drive, insert it and then press <CR>.

- 12** The system displays the release of the software found on RMD under the “swload” directory and requests confirmation to continue the installation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

The RMD contains System S/W version xxxx.

Please enter:

<CR> -> <y> - Yes, this is the correct version. Continue.

<n> - No, this is not the correct version. Try another RMD or a different keycode.

Enter choice> **<CR>**

Note: If the RMD contains the correct software release, select option “<y> - Yes, this is the correct version. Continue.” (or simply press <CR>) to continue. If the software release is not correct and you want to replace the RMD, insert the correct RMD in the drive and then press <CR>. If you want to replace the keycode, select option “<n> - No, this is not the correct version”.

- 13** The Dependency List menus appear.

```
Do you want to install Dependency Lists?  
  
Please enter:  
  
<CR> -> <y> - Yes, Do the Dependency Lists  
installation  
  
<n> - No, Continue without Dependency Lists  
installation  
  
Enter choice> y  
  
>Processing the install control file ...  
  
>Installing release xxxx
```

14 The Installation Status Summary appears.

```

-----
                INSTALLATION STATUS SUMMARY
-----

+=====+=====+=====+=====+
| Option | Choice | Status | Comment |
+-----+-----+-----+-----+
| SW: RMD to FMD | yes | | install for rel xxxxx |
+-----+-----+-----+-----+
| Dependency Lists| yes | | |
+-----+-----+-----+-----+
| IPMG Software: | yes | | install for rel xxxxx |
+-----+-----+-----+-----+
| Database | yes | | |
+-----+-----+-----+-----+
| CP-BOOTROM | yes | | |
+-----+-----+-----+-----+

Please enter:
<CR> -> <y> - Yes, start installation.
      <n> - No, stop installation. Return to the Main Menu.

Enter choice>
>Checking system configuration

```

- 15 Enter <CR> to confirm and continue installation.

Note: After entering yes below, the system copies the software from RMD to FMD (the files copied are listed).

```

Please enter:
<CR> -> <y> - Yes, start installation.
        <n> - No, stop installation. Return to the Main Menu.

Enter choice>
>Checking system configuration

Communication Server 1000 Software/Database/BOOTROM RMD Install Tool
=====

You selected to upgrade the system from release: 450W
to release: 0491L.

This will erase all old system files.
Database files will NOT be erased. You may continue installing
the software or quit now and leave your system unchanged.

Please enter:
<CR> -> <a> - Continue with upgrade.
        <q> - Quit.

Enter choice>

```

- 16 Successful installation confirmation appears, enter <CR> to continue.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Software release xxxx was installed successfully
on Core x.

All files were copied from RMD to FMD.

Please press <CR> when ready ...

```

- 17 The customer database installation from RMD is employed when upgrading CP PIV systems. Select option "<a> - Install CUSTOMER database." from the database installation main menu.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

You will now perform the database installation.

Please enter:

<CR> -> <a> - Install CUSTOMER database.

(The Removable Media Device containing the customer database must be in the drive.

 - Install DEFAULT database.

(The System S/W media must be in drive.)

<c> - Transfer the previous system database. (The floppy disk containing the customer database must be in the floppy drive of the MMDU pack.

<e> - Check the database that exists on the Fixed Media Device.

<q> - Quit.

Enter choice> **a or <CR>**

The system verifies which customer databases are available on the RMD under directory 'backup' and displays them.

```
The following databases are available on the  
removable media:  
  
    <CR> -> <s> - Single database  
              created: mon-day-year hour:min  
  
    <q>-Quit  
  
Enter choice> s or <CR>
```


18 Continue with database installation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

You selected to transfer single database from RMD
to FMD on Core x.

The database will be converted from release xxxx.

If you quit now, the database will be left
unchanged.

Please enter:

          <CR> -> <a> - Continue with database
install.

          <q> - Quit.

Enter choice> a or <CR>

```

The installation summary screen appears. Verify successful installation and enter <CR> when ready.

```

-----
                    INSTALLATION STATUS SUMMARY
-----

```

option	choice	status	comment
Sw: RMD to FMD	yes	OK	install for rel 04xxx
Dependency Lists	yes	OK	
AUTO-CSU Feature	no		AUTO-CSU Disabled
IPMG Software:	no		
Database	yes	OK	conversion from xxxx
CP-BOOTROM	yes	OK	

Please press <CR> when ready ...

- 19 Upon returning to the main install menu, enter **q** to quit.

```

                I N S T A L L   M E N U

The Software Installation Tool will
install or upgrade Succession Enterprise System
Software, Database and the CP-BOOTROM. You will be
prompted throughout the installation and given the
opportunity to quit at any time.

Please enter:

<CR> -> <a> - To install Software, CP-BOOTROM.
        <b> - To install Software, Database,
CP-BOOTROM.
        <c> - To install Database only.
        <d> - To install CP-BOOTROM only.
        <t> - To go to the Tools menu.
        <k> - To install Keycode only.

        For Feature Expansion, use OVL143.
        <p> - To install 3900 set Languages.
        <q> - Quit.

Enter Choice> q
```

- 20** The system then prompts you to confirm and reboot. Enter <CR> to quit. Enter <CR> again to reboot.

```
You selected to quit. Please confirm.

    Please enter:

<CR> -> <y> - Yes, quit.

        <n> - No, DON'T quit.


    Enter choice> <CR>

You selected to quit the Install Tool.

You may reboot the system or return to the Main
Menu.


-----

DO NOT REBOOT USING BUTTON!!!

-----


    Please enter:

<CR> -> <a> - Reboot the system.

        <m> - Return to the Main menu.

    Enter Choice> <CR>

>Removing temporary file "/u/disk3521.sys"
>Removing temporary file "/u/disk3621.sys"
>Rebooting system ...
```

At this point the system reloads and initializes.

End of Procedure

Verify the upgraded database

Procedure 11

Verifying the upgraded database

- 1 Print ISSP (system software issue and patches)

LD 22 Load program

REQ ISSP

******** Exit program

- 2 Print the system configuration record in LD 22 and compare the output with the pre-upgraded configuration record.

LD 22 Load program

REQ PRT

TYPE CFN

******** Exit program

- 3 Print the SLT in LD 22. This output provides used and unused ISM parameters. Compare with pre-upgrade SLT output.

LD 22 Load program

REQ SLT

******** Exit program

4 Print the customer data block(s) in LD 21.

LD 21	Load program
REQ	PRT
TYPE	CDB
CUST	xx
****	Exit program

Check for Peripheral Software Download to Core 1

Enter LD 22 and print Target peripheral software version. The Source peripheral software version was printed in “Printing site data” on [page 25](#). If there is a difference between the Source and Target peripheral software version:

- A forced download occurs during initialization when coming out of parallel reload.
- System initialization takes longer.
- The system drops established calls on IPE.

Access LD 22 and print Target peripheral software version.

LD 22	Load program
REQ	PRT
TYPE	PSWV
ISSP	Print System, DepList, and Patch information
SLT	Print System Limits
TID	Print the Tape ID
****	Exit program

Reconfigure I/O ports and call registers

Procedure 12

Reconfiguring I/O ports and call registers

- 1 Evaluate the number of call registers and 500 telephone buffers that are configured for the system (suggested minimum values are 20,000 and 1000 respectively). If changes are required, reconfigure the values in LD 17:

LD 17 Load program

CHG

CFN

PARM YES

500B 1000 Use 1000 as a minimum value

NCR 20000 Use 20000 as a minimum value

******** Exit program

- 2 Print the Configuration Record to confirm the changes made above:

LD 22 Load program

REQ PRT Set the print Option

TYPE CFN Print the configuration

******** Exit program

End of Procedure

Connect LAN 1

Attach the LAN 1 cable to the CP PIV faceplate connector on Core 1.



At this point, all applications must be shut down (CallPilot, Symposium, and so on). LAN 1 and LAN 2 cables are now connected.

Switch call processing to Core/Net 1



CAUTION — Service Interruption

Service Interruption

The following procedure interrupts call processing. All active calls are lost.

Procedure 13 Switching call processing

- 1 Enter LD 135 on Core/Net 0 and issue the CUTOVR command. Call processing switches to Core/Net 1 and service is interrupted.

LD 135

CUTOVR Transfer call processing from active Core/Net to standby Core/Net

**** Exit program

- 2 After Core/Net 1 initializes. log in to Core/Net 1 and verify that the cutover was successful and that all hardware is operational. Perform acceptance testing as required.

End of Procedure

Test Core/Net 1

Procedure 14 Testing Core/Net 1

- 1 Check dial-tone.
- 2 Stat D-channels:

LD 96

STAT DCH	Stat all D-channels
****	Exit program

- 3 Stat all T1 interfaces:

LD 60

STAT	Stat all DTI and PRI
****	Exit program

- 4 Stat network cards:

LD 32

STAT x	x = loop number
****	Exit program

- 5 Print status of all controllers:

LD 97

REQ	PRT
TYPE	XPE (returns status of all controller cards)
****	Exit program

- 6 Make internal, external and network calls.
- 7 Check attendant console activity.
- 8 Check DID trunks.

- 9 Check applications (CallPilot, Symposium, Meridian Mail, and so on).



Call processing should be active on Core/Net 1.

End of Procedure

Upgrading Core 0

Procedure 15

Checking that Core 1 is active

To upgrade Core 0, verify that Core 1 is the active side performing call processing:

- 1 From Core 1, verify that Core 0 is inactive.

LD 135 Load program

STAT CPU Get the status of the CPUs

End of Procedure

Procedure 16
Hardware disable CNI cards

- 1 Hardware disable all CNI cards in Core 0.

End of Procedure

Remove Core 0 CP PII card and MMDU

Procedure 17
Removing the Core 0 CP PII processor and MMDU

- 1 Disconnect and label the LAN1 and LAN 2 cables from the Core 0 CP PII card faceplate. See Figure 17 on [page 75](#).
- 2 Disconnect and label the COM 1 and COM 2 cables from the Core 0 CP PII card faceplate. See Figure 17 on [page 75](#).
- 3 Unscrew and unlatch the Core 0 CP PII card. See Figure 17 on [page 75](#).
- 4 Pull the Core 0 CP PII card from its slot.
- 5 Remove the rear access plate on the left side of the Core 0 module. See Figure 18.

Figure 17
CP PII faceplate connections

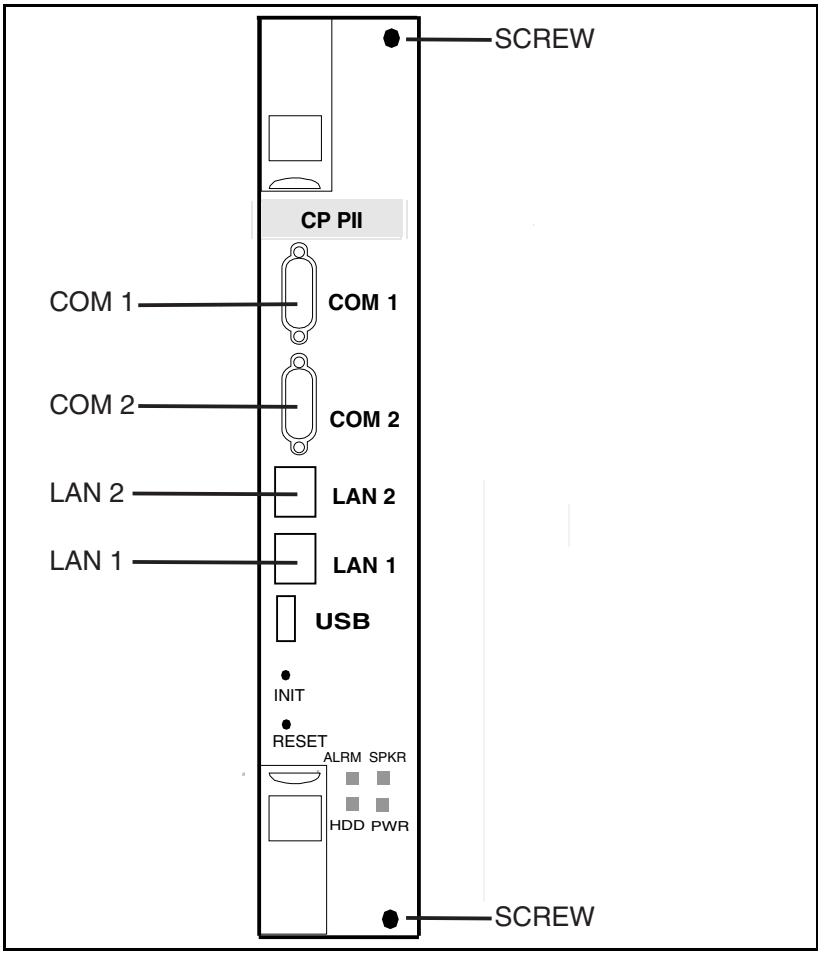
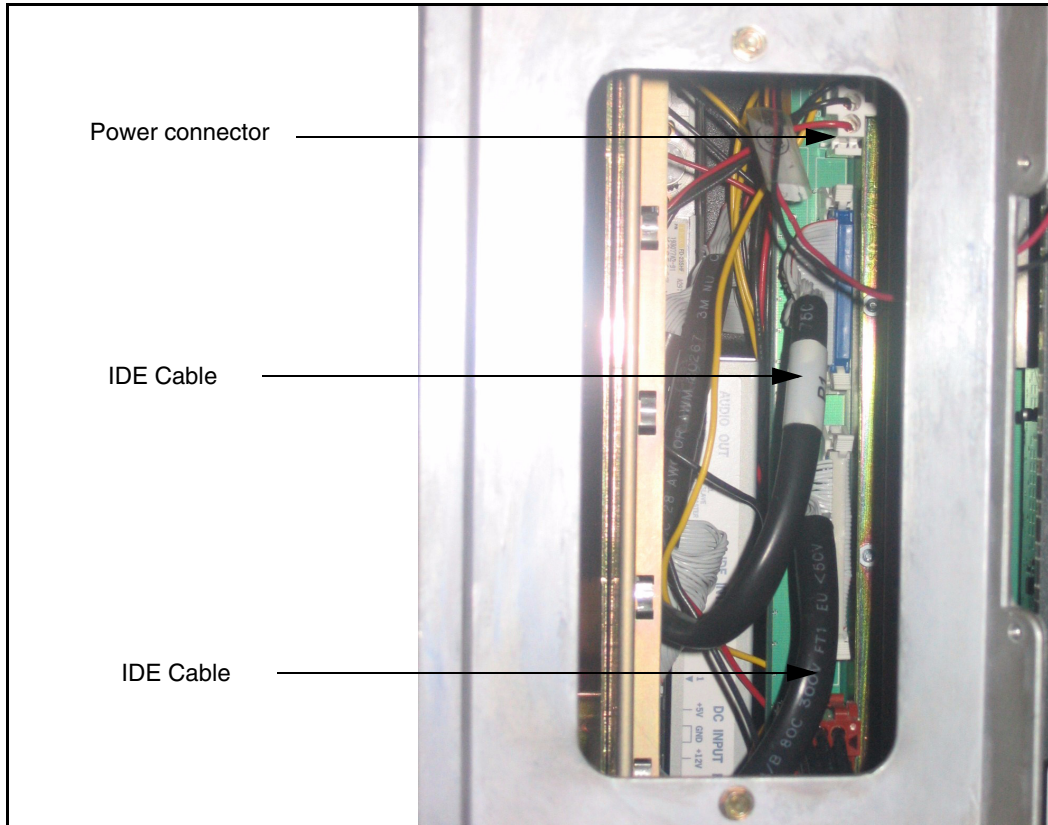


Figure 18
NT4N46 Core/Net module



- 6 From the rear access point of the Core 0 shelf, remove the MMDU power cable from the backplane.
- 7 From the rear access point of the Core 0 shelf, remove the two IDE cables from the backplane.
- 8 Unscrew the MMDU from the front of Core 0. See Figure 18 on [page 76](#).
- 9 Slowly pull the MMDU from its slot. Ensure the IDE and power cables do not catch on other equipment as you remove the MMDU.

- 10 Retain the MMDU (and database backup) in a safe and secure location until the successful completion of this upgrade.



IMPORTANT!

Database backup information and MMDU should be preserved for a minimum of 5 days.

End of Procedure

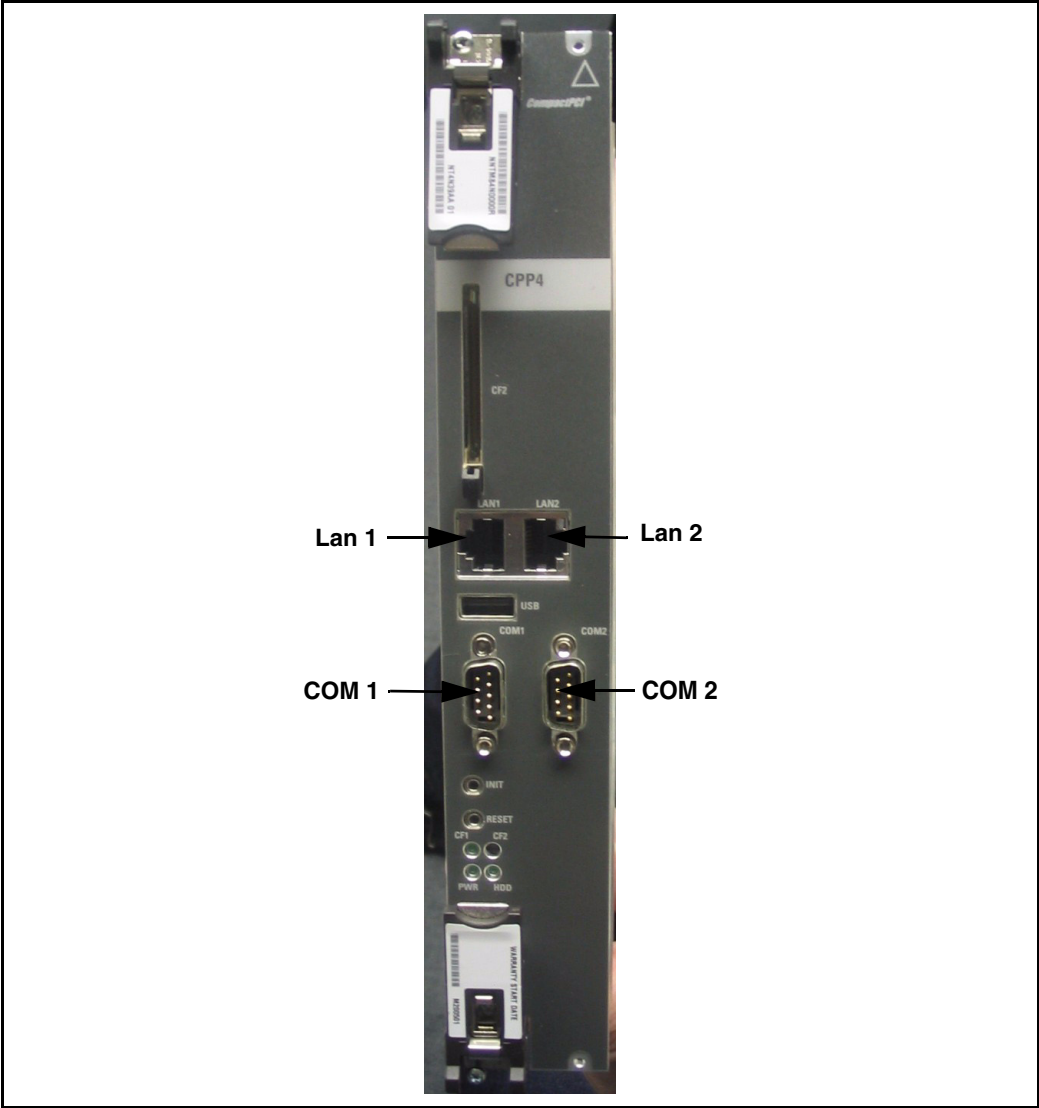
Install Core 0 CP PIV card and blank faceplate

Procedure 18

Installing the Core 0 CP PIV processor and blank faceplate

- 1 Attach the blank faceplate to the empty MMDU slot using the supplied screws.
- 2 Insert the CP PIV card into the empty CP slot in Core 0. Seat the card and secure the latches and screws.
- 3 Attach the COM 1 and COM 2 cables to the CP PIV card faceplate. See Figure 19 on [page 78](#).

Figure 19
CP PIV faceplate connections



- 4 Attach the LAN 1 and LAN 2 cables to the CP PIV card faceplate at this point in the upgrade.

End of Procedure

CS 1000 Release 5.0 upgrade

Upgrading the software on Core 0

Procedure 19 outlines the steps involved in installing CS 1000 Release 5.0 for the CP PIV processor.

Procedure 19

Upgrading the software

- 1 Check that a terminal is now connected to COM 1.
- 2 Insert the RMD into the CF card slot.

- 3 Press the manual RESET button on the CP PIV card faceplate.
- 4 Enter <CR> at the Install Tool Menu.

[illegible]

Please press <CR> when ready ...

/d/ - Volume is OK

- 5 The system attempts to validate and format the FMD partitions. The following format will occur only if the on-board 1 GByte FMD is blank.
- 6 The system then enters the **Main Menu** for keycode authorization.


```
Communication Server 1000 Software/Database/BOOTROM RMD Install Tool
=====
```

```
      M A I N      M E N U
```

```
The Software Installation Tool will install or upgrade
Communication Server 1000 Software, Database and the CP-BOOTROM.
```

```
You will be prompted throughout the installation and given the
opportunity to quit at any time.
```

```
Please enter:
```

```
<CR> -> <u> - To Install Menu.
          <t> - To Tools Menu.
          <q> - Quit.
```

```
Enter choice> u
```

```
The following keycode files are available on the removable media:
```

Name	Size	Date	Time
-----	-----	-----	-----
<CR> -> <1> - 491L_PIV.KCD	1114	Dec-04-2006	16:07
<q> - Quit			

```
Enter choice> 1
```

The system searches for available keycode files in the “keycode” directory on the RMD. If no keycode file is found, the system displays the following menu:

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

No keycode files are available on the removable
media.

Please replace the RMD containing the keycode
file(s).

Please enter:

    <CR> -> <a> - RMD is now in the drive.

    <q> - Quit.

Enter choice>
```

At this point, either replace the RMD or quit the installation. If you select option “<q> - Quit.”, the system requires confirmation.

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

You selected to quit. Please confirm.

Please enter:

    <CR> -> <y> - Yes, quit.

    <n> - No, DON'T quit.

Enter choice>
```

If “y” (quit) is selected, the system prints “INST0127 Keycode file is corrupted. Check Keycode file.” and returns to the installation main menu.

After accessing the RMD containing the valid keycode(s), press <CR>. The system displays the keycode file(s) available as in the following example:

```
The following keycode files are available on the
removable media:

Name                               Size   Date       Time
-----
<CR> -> <1> -keycode.kcd 1114 mon-d-year hr:min
<2> - KCport60430m.kcd   1114 mon-d-year hr:min
<q> - Quit
Enter choice> 2
```

Note: A maximum of 20 keycode files can be stored under the “keycode” directory on the RMD. The keycode files must have the same extension “.kcd”.

- 7** Select the keycode to be used on the system. The system validates the selected keycode and displays the software release and machine type authorized.

```
Validating keycode ...

Copying "/cf2/keycode/KCport60430m.kcd" to "/u/
keycode" -

Copy OK: 1114 bytes copied

The provided keycode authorizes the install of
xxxx software (all subissues) for machine type
xxxx (CPP4 processor on xxxx).
```

Note: The software release displayed depends on the keycode file content. The machine type displayed can be one of the following, according to the keycode content.

- 3521 (CP PIV processor on CS 1000M SG) for Meridian 1 Option 61C CP PIV
- 3621 (CP PIV processor on CS 1000M MG) for CS 1000E and Meridian 1 Option 81C CP PIV systems

8 The system requests keycode validation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Please confirm that this keycode matches the
System S/W on the RMD.

Please enter:

        <CR> -> <y> - Yes, the keycode matches.
Go on to Install Menu.

        <n> - No, the keycode does not match.
Try another keycode.

Enter choice>

```

9 If the keycode matches, enter <CR> to continue the installation. The system displays the Install Menu. Select option "".

```

Communication Server 1000 Software/Database/BOOTROM RMD Install Tool
=====

                I N S T A L L   M E N U

The Software Installation Tool will install or upgrade
Communication Server 1000 Software, Database and the CP-BOOTROM.

You will be prompted throughout the installation and given the
opportunity to quit at any time.

Please enter:
<CR> -> <a> - To install Software, CP-BOOTROM.
        <b> - To install Software, Database, CP-BOOTROM.
        <c> - To install Database only.
        <d> - To install CP-BOOTROM only.
        <t> - To go to the Tools Menu.
        <k> - To install Keycode only.
                For Feature Expansion, use OVL143.
        <p> - To install 3900 Set Languages.
        <q> - Quit.

Enter choice>

Communication Server 1000 Software/Database/BOOTROM RMD Install Tool
=====

```

- 10** The system requires the insertion of the RMD containing the software to be installed.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

Please insert the Removable Media Device into the drive on Core x.

Please enter:

 <CR> -> <a> - RMD is now in drive.
Continue with s/w checking.

 <q> - Quit.

Enter choice> **<CR>**

- 11** If the RMD containing the software is already in the drive, select option "<a> - RMD is now in drive. Continue with s/w checking." (or simply press <CR>) to continue. If the RMD is not yet in the drive, insert it and then press <CR>.

- 12 The system displays the release of the software found on RMD under the “swload” directory and requests confirmation to continue the installation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

The RMD contains System S/W version xxxx.

Please enter:

 <CR> -> <y> - Yes, this is the correct
version. Continue.

 <n> - No, this is not the correct version.
Try another RMD or a different keycode.

Enter choice> **<CR>**

Note: If the RMD contains the correct software release, select option “<y> - Yes, this is the correct version. Continue.” (or simply press <CR>) to continue. If the software release is not correct and you want to replace the RMD, insert the correct RMD in the drive and then press <CR>. If you want to replace the keycode, select option “<n> - No, this is not the correct version”.

- 13 The Dependency List menus appear.

```
Do you want to install Dependency Lists?  
  
Please enter:  
  
<CR> -> <y> - Yes, Do the Dependency Lists  
installation  
  
          <n> - No, Continue without Dependency Lists  
installation  
  
Enter choice> y  
  
>Processing the install control file ...  
  
>Installing release xxxx
```

14 The Installation Status Summary appears.

```

-----
                INSTALLATION STATUS SUMMARY
-----

+-----+-----+-----+-----+
| Option | Choice | Status | Comment |
+-----+-----+-----+-----+
| SW: RMD to FMD | yes | | install for rel xxxxx |
+-----+-----+-----+-----+
| Dependency Lists | yes | | |
+-----+-----+-----+-----+
| IPMG Software: | yes | | install for rel xxxxx |
+-----+-----+-----+-----+
| Database | yes | | |
+-----+-----+-----+-----+
| CP-BOOTROM | yes | | |
+-----+-----+-----+-----+

Please enter:
<CR> -> <y> - Yes, start installation.
        <n> - No, stop installation. Return to the Main Menu.

Enter choice>
>Checking system configuration

```

- 15 Enter <CR> to confirm and continue installation.

Note: After entering yes below, the system copies the software from RMD to FMD (the files copied are listed).

```

Please enter:
<CR> -> <y> - Yes, start installation.
      <n> - No, stop installation. Return to the Main Menu.

Enter choice>
>Checking system configuration

Communication Server 1000 Software/Database/BOOTROM RMD Install Tool
=====

You selected to upgrade the system from release: 450W
to release: 0491L.

This will erase all old system files.
Database files will NOT be erased. You may continue installing
the software or quit now and leave your system unchanged.

Please enter:
<CR> -> <a> - Continue with upgrade.
      <q> - Quit.

Enter choice>

```

- 16 Successful installation confirmation appears, enter <CR> to continue.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Software release xxxx was installed successfully
on Core x.

All files were copied from RMD to FMD.

Please press <CR> when ready ...

```


- 17** The customer database installation from RMD is employed when upgrading CP PIV systems. Select option "<a> - Install CUSTOMER database." from the database installation main menu.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

You will now perform the database installation.

Please enter:

        <CR> -> <a> - Install CUSTOMER database.

(The Removable Media Device containing the
customer database must be in the drive.

        <b> - Install DEFAULT database.

(The System S/W media must be in drive.)

        <c> - Transfer the previous system
database.(The floppy disk containing the customer
database must be in the floppy drive of the MMDU
pack.

        <e> - Check the database that exists on
the Fixed Media Device.

        <q> - Quit.

Enter choice> a or <CR>

```

The system verifies which customer databases are available on the RMD under directory 'backup' and displays them.

```

The following databases are available on the
removable media:

        <CR> -> <s> - Single database
        created: mon-day-year hour:min

        <q>-Quit

Enter choice> s or <CR>

```

18 Continue with database installation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

You selected to transfer single database from RMD
to FMD on Core x.

The database will be converted from release xxxx.

If you quit now, the database will be left
unchanged.

Please enter:

          <CR> -> <a> - Continue with database
install.

          <q> - Quit.

Enter choice> a or <CR>

```

The installation summary screen appears. Verify successful installation and enter <CR> when ready.

```

-----
                     INSTALLATION STATUS SUMMARY
-----
+-----+-----+-----+-----+
| option | choice | status | comment |
+-----+-----+-----+-----+
| Sw: RMD to FMD | yes | OK | install for rel 04xxx |
+-----+-----+-----+-----+
| Dependency Lists | yes | OK | |
+-----+-----+-----+-----+
| AUTO-CSU Feature | no | | AUTO-CSU disabled |
+-----+-----+-----+-----+
| IPMG Software: | no | | |
+-----+-----+-----+-----+
| Database | yes | OK | conversion from xxxx |
+-----+-----+-----+-----+
| CP-BOOTROM | yes | OK | |
+-----+-----+-----+-----+

Please press <CR> when ready ...

```

- 19** Upon returning to the main install menu, enter **q** to quit.

```

      I N S T A L L   M E N U

      The Software Installation Tool will
      install or upgrade Succession Enterprise System
      Software, Database and the CP-BOOTROM. You will be
      prompted throughout the installation and given the
      opportunity to quit at any time.

      Please enter:

      <CR> -> <a> - To install Software, CP-BOOTROM.

      <b> - To install Software, Database,
      CP-BOOTROM.

      <c> - To install Database only.

      <d> - To install CP-BOOTROM only.

      <t> - To go to the Tools menu.

      <k> - To install Keycode only.

      For Feature Expansion, use OVL143.

      <p> - To install 3900 set Languages.

      <q> - Quit.

      Enter Choice> q
```

- 20 The system then prompts you to confirm and reboot. Enter <CR> to quit. Enter <CR> again to reboot.

```
You selected to quit. Please confirm.

    Please enter:

<CR> -> <y> - Yes, quit.

        <n> - No, DON'T quit.

    Enter choice> <CR>

You selected to quit the Install Tool.

You may reboot the system or return to the Main
Menu.

-----

DO NOT REBOOT USING BUTTON!!!

-----

    Please enter:

<CR> -> <a> - Reboot the system.

        <m> - Return to the Main menu.

    Enter Choice> <CR>

>Removing temporary file "/u/disk3521.sys"
>Removing temporary file "/u/disk3621.sys"
>Rebooting system ...
```

At this point the system reloads and initializes.

End of Procedure

Verify the upgraded database

Procedure 20

Verifying the upgraded database

- 1 Print ISSP (system software issue and patches)

LD 22 Load program

REQ ISSP

******** Exit program

- 2 Print the system configuration record in LD 22 and compare the output with the pre-upgraded configuration record.

LD 22 Load program

REQ PRT

TYPE CFN

******** Exit program

- 3 Print the SLT in LD 22. This output provides used and unused ISM parameters. Compare with pre-upgrade SLT output.

LD 22 Load program

REQ SLT

******** Exit program

- 4 Print the customer data block(s) in LD 21.

LD 21	Load program
REQ	PRT
TYPE	CDB
CUST	xx
****	Exit program



Core 1 is now active, clock 1 is active, FIJI 1 is active (if equipped), CNI is disabled in Core 0.

End of Procedure

Making the system redundant

At this point, Core/Net 0 is ready to be synchronized with Core/Net 1.

Procedure 21 Making the system redundant

- 1 Enable CNI card in Core 0.
- 1 From CP 1, enter LD 135 and issue the JOIN command. The high speed pipe (HSP) status is now up. This begins the synchronization of the Call Servers.

LD 135	Load program
JOIN	Join the 2 CPUs together to become redundant

- 2 Once the synchronization of memories and drives is complete, STAT the CPU and verify that the CPUs are in a true redundant state.

LD 135

STAT CPU Get status of CPU and memory

******** Exit the program

The following is an example only.

```
.stat cpu
```

```
cp 0 16 PASS -- STDBY
```

```
TRUE REDUNDANT
```

```
DISK STATE = REDUNDANT
```

```
HEALTH = 20
```

```
VERSION = Mar 3 2005, 16:26:40
```

```
Side = 0, DRAM SIZE = 512 MBytes
```

```
cp 1 16 PASS -- ENBL
```

```
TRUE REDUNDANT
```

```
DISK STATE = REDUNDANT
```

```
HEALTH = 20
```

```
VERSION = Mar 3 2005, 16:26:40
```

```
Side = 1, DRAM SIZE = 512 MBytes
```

- 3 Tier 1 and Tier 2 health of both Cores must be identical in order to successfully switch service from Core 1 to Core 0 CPUs.

LD 135

STAT HEALTH Get status of CPU and memory

**** Exit the program

The following is an example only.

```
.stat health
Local (Side 0, Active, Redundant):
Components without TIER 1 Health contribution:
=====

    disp 0 15 1:In Service
    sio2 0 15 1:In Service
        cp 0 16:In Service
            ipb 0:In Service
TIER 1 Health Count Breakdown:
=====

    sio8 0 16 1: 0002
    sio8 0 16 2: 0002
        sutl 0 15: 0002
            strn 0 15: 0002
    xsmp 0 15 1: 0002
    cmdu 0 16 1: 0008
        eth 0 16 0: 0002
Local TIER 1 Health Total: 20
```


TIER 2 Health Count Breakdown:

=====

ELAN 16 IP : 47.11.138.150 Health = 2

ELAN 17 IP : 47.11.138.153 Health = 2

Local AML over ELAN Total Health:4

Local Total IPL Health = 6

IPL connection history:3 3 3 3 3 3 3 3 3 3 3 3 3
3 3 3 3 3 3

Local TIER 2 Health Total:10

Remote (Side 1, Inactive, Redundant):

Components without TIER 1 Health contribution:

disp 1 15 1:In Service

sio2 1 15 1:In Service

cp 1 16:In Service

ipb 1:In Service

TIER 1 Health Count Breakdown:

sio8 1 16 1: 0002

sio8 1 16 2: 0002

sutl 1 15: 0002

strn 1 15: 0002

xsmp 1 15 1: 0002

cmdu 1 16 1: 0008

eth 1 16 0: 0002

Remote TIER 1 Health Total: 20

```
TIER 2 Health Count Breakdown:

=====

ELAN 16 IP : 47.11.138.150 Health = 2
ELAN 17 IP : 47.11.138.153 Health = 2

Remote AML over ELAN Total Health:4
Remote Total IPL health = 6

Remote TIER 2 Health Total:10
```



The system will now operate in full redundant mode with Core/Net 1 active.



At this point, all applications can be restarted (CallPilot, Symposium, and so on).

End of Procedure

Completing the CP PIV upgrade

LD 137

The CMDU/MMDU commands are not applicable to CP PIV. Instead, the following commands are used in LD 137.

- STAT FMD
display text: **Status of Fixed Media Device (FMD)**
command parameter: none

- **STAT RMD**
display text: **Status of Removable Media Device(RMD)**
command parameter: none

Testing the Cores

Procedure 22

Testing Core/Net 1

At this point in the upgrade, Core/Net 0 is tested from active Core/Net 1. Upon successful completion of these tests, call processing is switched and the same tests are performed on Core/Net 1 from active Core/Net 0. As a final step, call processing is then switched again to Core/Net 1.

From active Core/Net 1, perform the following tests on Core/Net 0:

- 1 Perform a redundancy sanity test:

LD 135

STAT CPU Get status of CPU and memory

TEST CPU Test the CPU

- 2 Check the LCD states

a. Perform a visual check of the LCDs.

b. Test and LCDs:

LD 135

DSPL ALL

c. Check that the LCD display matches the software check.

- 3 Test the System Utility card and the cCNI cards:

LD 135 Load program

STAT SUTL Get the status of the System Utility card

TEST SUTL Test the System Utility card

STAT CNI c s Get status of cCNI cards (core, slot)

TEST CNI c s Test cCNI (core, slot)

4 Test system redundancy and media devices:

LD 137 Load program

TEST RDUN Test redundancy

DATA RDUN Test database integrity

STAT FMD Status of Fixed Media Device (FMD)

STAT RMD Status of Removable Media Device (RMD)

5 Test that the system monitors are working:

LD 37 Load program

ENL TTY x x= system XMS

STAT XSM Check the system monitors

******** Exit program

6 Clear the display and minor alarms on both Cores:

LD 135 Load program

CDSP Clear the displays on the cores

CMAJ Clear major alarms

CMIN ALL Clear minor alarms

7 Test the clocks:

- a.** Verify that the clock controller is assigned to the *active* Core.

LD 60	Load program
SSCK <i>x</i>	To get the status of the clock controllers (<i>x</i> is “0” or “1” for Clock 0 or Clock 1)
SWCK	To switch the Clock (if necessary)
****	Exit program

- b.** Verify that the Clock Controllers are switching correctly.

SWCK	Switch the Clock
	Note: You must wait a minimum of one minute for clocks to synchronize.
SWCK	Switch the Clock again

8 Check dial tone.**9** Check applications (CallPilot, Symposium, Meridian Mail, etc.)

End of Procedure

Switching call processing

Procedure 23 Switching call processing

- 1 Enter LD 135 on Core/Net 1 and issue the SCPU command. Call processing switches to Core/Net 0.

LD 135

SCPU Transfer call processing from active Core/Net to standby Core/Net

******** Exit program

- 2 After Core/Net 0 initializes, log in to Core/Net 0 and verify that the cutover was successful and that all hardware is operational. Perform acceptance testing as required.



Core/Net 0 is now the active call processor.

End of Procedure

Procedure 24
Testing Core/Net 0

From active Core/Net 0, perform these tests on Core/Net 1:

- 1** Perform a redundancy sanity test:

LD 135	Load program
STAT CPU	Get status of CPU and memory
TEST CPU	Test the CPU

- 2** Test the System Utility card and the cCNI cards:

LD 135	Load program
STAT SUTL	Get the status of the System Utility card
TEST SUTL	Test the System Utility card
STAT CNI c s	Get status of cCNI cards (core, slot)
TEST CNI c s	Test cCNI (core, slot)

- 3** Test system redundancy and media devices:

LD 137	Load program
TEST RDUN	Test redundancy
DATA RDUN	Test database integrity
STAT FMD	Status of Fixed Media Device (FMD)
STAT RMD	Status of Removable Media Device (RMD)
****	Exit the program

- 4** Test that the system monitors are working:

LD 37	Load program
STAT XSM	Check the system monitors
****	Exit the program

5 Clear the display and minor alarms on both Cores:

LD 135	Load program
CDSP	Clear the displays on the cores
CMAJ	Clear major alarms
CMIN ALL	Clear minor alarms

6 Test the clocks:

a. Verify that the clock controller is assigned to the *active* Core.

LD 60	Load program
SSCK <i>x</i>	Get the status of the clock controllers (<i>x</i> is “0” or “1” for Clock 0 or Clock 1)
SWCK	Switch the Clock (if necessary)
****	Exit program

b. Verify that the Clock Controllers are switching correctly.

SWCK	Switch the Clock
	Note: You must wait a minimum of one minute for clocks to synchronize.
SWCK	Switch the Clock again

7 Check dial tone.

8 Check applications (CallPilot, Symposium, Meridian Mail, etc.)

End of Procedure

Perform a customer backup data dump (upgraded release)

Procedure 25

Performing a data dump to backup the customer database:

- 1 Log into the system.
- 2 Insert a CF card into the active Core/Net RMD slot to back up the database.
- 3 Load the Equipment Data Dump Program (LD 43). At the prompt, enter:

LD 43 Load program.

. EDD

- 4 When "EDD000" appears on the terminal, enter:

EDD Begin the data dump.



CAUTION — Service Interruption

Loss of Data

If the data dump is not successful, do not continue; contact your technical support organization. A data dump problem must be corrected before proceeding.

- 5 When "DATADUMP COMPLETE" and "DATABASE BACKUP COMPLETE" appear on the terminal, enter:

******** Exit program

The Meridian 1 Option 61C CP PII upgrade to Meridian 1 Option 61C CP PIV is complete.

Installing a Signaling Server

Contents

This section contains information on the following topics:

Introduction	108
Readiness checklist	109
Installing the CP PM Signaling Server hardware	111
Connections	135
Installing the Signaling Server software	145
First boot of a new Nortel CP PM Signaling Server	172
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Logging in to the Signaling Server	191
Verifying a successful configuration	193
Testing the Leader Signaling Server	193

Introduction

This chapter contains general instructions to install a Nortel CP PM server and detailed instructions to install a legacy Nortel ISP1100 server. This chapter contains no instructions to install an IBM X306m or HP DL320-G4 COTS 1U server. Please see the *IBM xSeries 306m Types 8848 and 8491 User Guide* or the *HP ProLiant DL320 Generation 4 Server User Guide* shipped with the COTS servers for detailed installation instructions. Of particular note, the IBM X306m and HP DL320-G4 servers require four-post

rack mounting, as opposed to two-post rack mounting for the Nortel ISP1100 server.

IMPORTANT!

Instructions to install an IBM X306m or HP DL320-G4 COTS 1U server are not included in this chapter. Detailed installation instructions can be found in the IBM xSeries 306m Types 8848 and 8491 User Guide or the HP ProLiant DL320 Generation 4 Server User Guide shipped with the server.

Readiness checklist

Before installing a Signaling Server in a CS 1000 system, complete the following checklist.

**WARNING**

Do not modify or use a supplied AC-power cord if it is not the exact type required in the region where the Signaling Server is installed and used. Be sure to replace the cord with the correct type.

Table 5
Readiness checklist (Part 1 of 2)

Have you:	
Read all safety instructions in <i>Communication Server 1000E: Installation and Commissioning</i> (NN43041-310) or <i>Communication Server 1000M and Meridian 1 Large System Installation and Commissioning</i> (NN43021-310), as appropriate for your CS 1000 system?	
Received all equipment and peripherals? For a Nortel ISP1100 (NTDU27AA), IBM X306m (NTDU99AAE5), and HP DL320-G4 (NTDU97AA) Signaling Servers: • installation accessories for rack-mounting the server • AC-power cord • a DTE-DTE null modem cable (supplied) For a CS 1000E Nortel CP PM Signaling Server (NTDW61BAE5): • NTDW6102E5 - CP PM Signaling Server Hard Drive kit • N0118766 - CP PM Signaling Server Hard Drive Installation instructions • NTAK19ECE6 - CP PM Signaling Server 2 port SDI Cable assembly kit • NTDU0606E6 - CP PM Signaling Server 25cm RJ45 Ethernet Cable kit • a DTE-DTE null modem cable (supplied) • for a CS 1000M Nortel CP PM Signaling Server (NTDW66AAE5 model) • NTDW6102E5 - CP PM Signaling Server Hard Drive kit • N0118766 - CP PM Signaling Server Hard Drive Installation instructions • NTAK19ECE6 - CP PM Signaling Server 2 port SDI Cable assembly kit • NTDW69AAE5 - CP PM Signaling Server Large System Cabling kit • N0106745 - CP PM Signaling Large System Cabling • a DTE-DTE null modem cable (supplied) Note: Save the packaging container and packing materials in case you must ship the product.	

Table 5
Readiness checklist (Part 2 of 2)

Have you:	
Made sure the area meets all environmental requirements?	
Checked for all power requirements?	
Checked for correct grounding facilities?	
Obtained the following: • screwdrivers • an ECOS 1023 POW-R-MATE or similar type of multimeter • appropriate cable terminating tools • a computer (maintenance terminal) to connect directly to the Signaling Server, with: — teletype terminal (ANSI-W emulation, serial port, 9600 bps) — a web browser for Element Manager (configure cache settings to check for new web pages) — every time the browser is invoked, and to empty the cache when the browser is closed)	
Prepared the network data as suggested in <i>Converging the Data Network with VoIP</i> (NN43001-260), <i>Communication Server 1000E: Planning and Engineering</i> (NN43041-220) or <i>Communication Server 1000M and Meridian 1 Large System Planning and Engineering</i> (NN43021-220), as appropriate for your CS 1000 system?	
Read all safety instructions in <i>Communication Server 1000E: Installation and Commissioning</i> (NN43041-310) or <i>Communication Server 1000M and Meridian 1 Large System Installation and Commissioning</i> (NN43021-310), as appropriate for your CS 1000 system?	

Installing the CP PM Signaling Server hardware

The Nortel CP PM server is a circuit card, and thus is not mounted in a rack. This section contains instructions for installing a Nortel CP PM Signaling Server in a CS 1000E and a CS 1000M system.

This section contains general instructions for installing the CP PM Signaling Server circuit cards in CS 1000E and CS 1000M systems. For more detailed installation instructions, refer to *Circuit Card: Description and Installation* (NN43001-311) and *Signaling Server: Installation and Commissioning* (NN43001-312).

IMPORTANT!

There are several switches on CP PM circuit cards. All switch settings must be factory defaults except for the switch labelled "S5". Switch S5 must be set to position 2 to support the internal hard drive used on the CP PM Signaling Server circuit cards only.

Installation in a CS 1000E system

The NTDW61BAE5 model of the Nortel CP PM server is designed for use in a CS 1000E system. The first task that must be performed is to install the hard drive shipped with the server. For instructions, see "Install the hard drive on a Nortel CP PM Signaling Server" in *Signaling Server: Installation and Commissioning* (NN43001-312).

You can insert the NTDW61BAE5 model of the Nortel CP PM server into any slot of a CS 1000E Media Gateway (MG 1000E or MG 1000B) or 11C cabinet or chassis, except slot 0. Slot 0 is reserved for a Small System Controller (SSC) card or a Media Gateway Controller (MGC) card. Keying prevents the NTDW61BAE5 model from being inserted into this slot.



CAUTION — Equipment Damage

Do not insert the NTDW61BAE5 model of the Nortel CP PM server into any slot of a CS 1000M Universal Equipment Module (UEM). Doing so can cause electrical shorts on adjacent circuit cards.

Installation in a CS 1000M system

The NTDW66AAE5 model of the Nortel CP PM server is designed for use in a CS 1000M system. The first task that must be performed is to install the hard drive shipped with the server. For instructions, see "Install the hard drive on a Nortel CP PM Signaling Server" in *Signaling Server: Installation and Commissioning* (NN43001-312).

You can insert the NTDW66AAE5 model into any slot of a CS 1000M Universal Equipment Module (UEM) except slot 7. The External Peripheral Equipment Controller (XPEC) is next to slot 7 and prevents the double wide faceplate of the NTDW66AAE5 model from seating into slot 7.

The next task that you must perform is to install ELAN and TLAN Ethernet ports on the back of the CS 1000M UEM. These ports are used to connect your Nortel CP PM Signaling Server to the ELAN and TLAN Ethernet subnets of your CS 1000M system.

Use the following procedure to install ELAN and TLAN Ethernet ports on the back of a CS 1000M UEM.

IMPORTANT!

Installing ELAN and TLAN Ethernet ports on the back of a CS 1000M Universal Equipment Module (UEM) is service-disrupting. Power to the shelf must be turned off during this procedure.

Procedure 26

Installing ELAN and TLAN Ethernet ports on the back of a CS 1000M UEM

- 1 Obtain the special cabling kit (NTDW69AAE5) shipped with the CS 1000M model of the Nortel CP PM Signaling Server (NTDW66AAE5). The NTDW69AAE5 cabling kit should include the items shown in Figure 20.

Figure 20

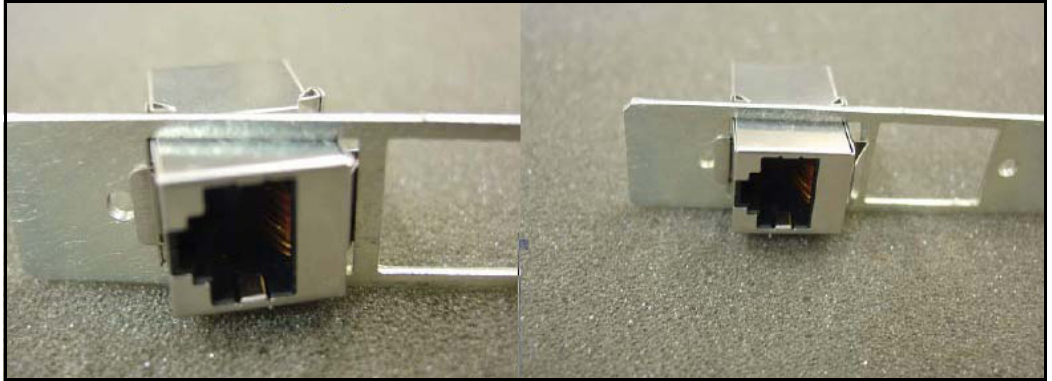
NTDW69AAE5 Cabling Kit contents



The following is a list of items in the NTDW69AAE5 cabling kit:

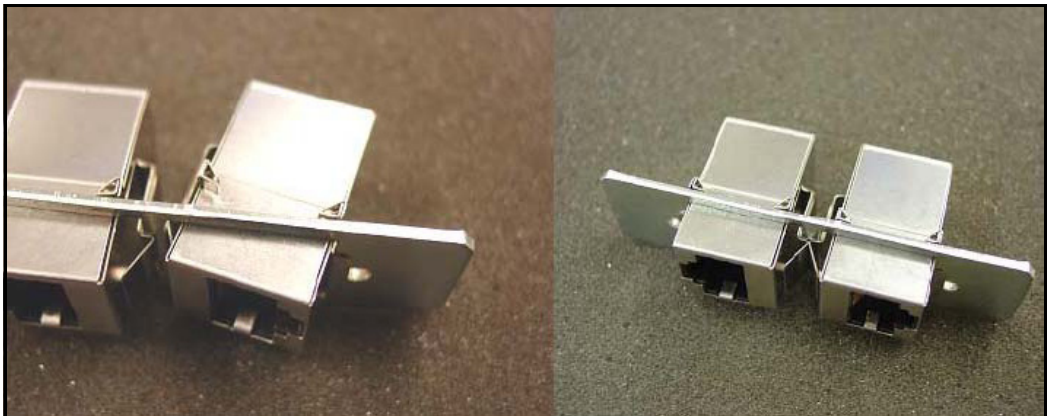
- two RJ-45 CAT5 Ethernet patch cables
 - two Ethernet port couplers
 - one Ethernet port adapter plate
 - two screws
 - two nuts
 - two washers
 - two ferrite beads
- 2 Insert an Ethernet port coupler into the adapter plate. See Figure 21.

Figure 21
One Ethernet port coupler in adapter plate



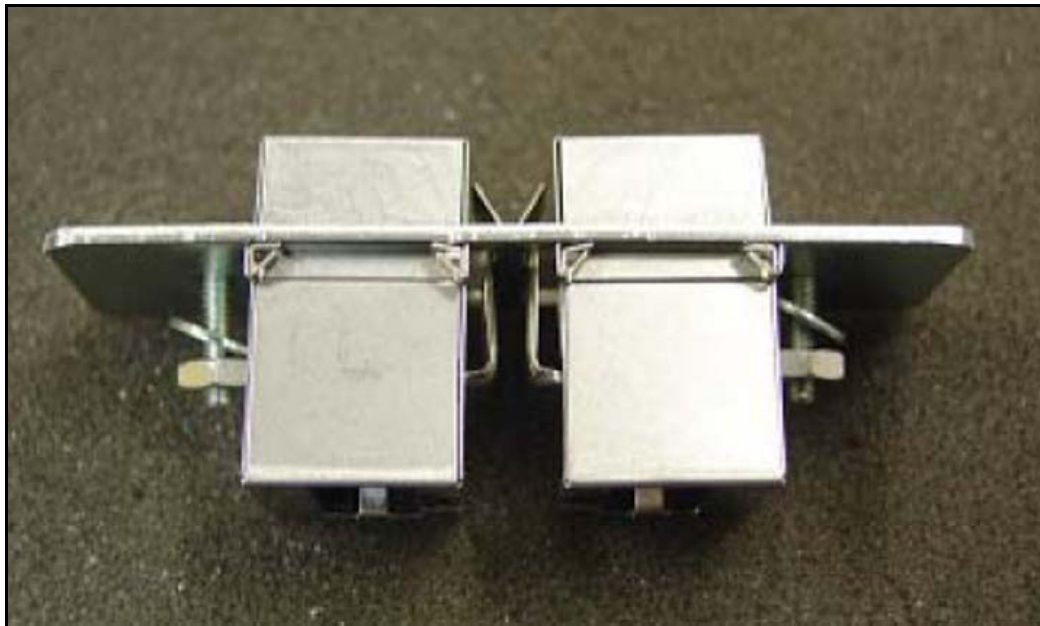
- 3** Insert the other Ethernet port coupler into the adapter plate. See Figure 22 on page 115.

Figure 22
Two Ethernet port couplers in adapter plate



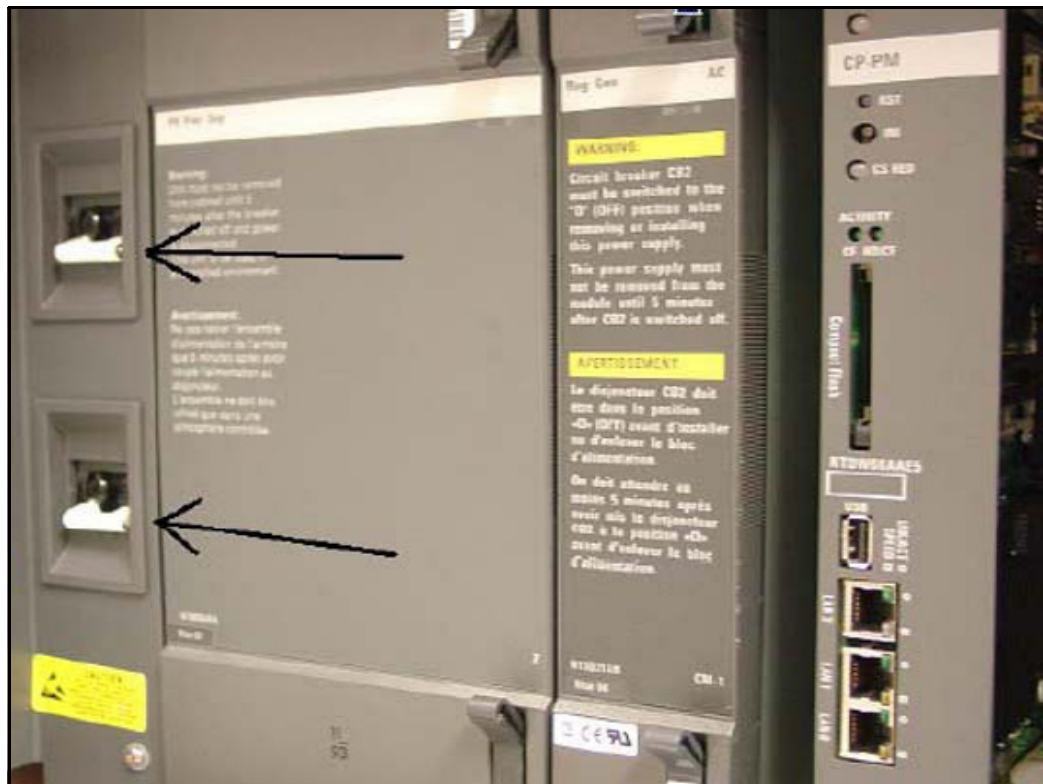
- 4** Loosely attach screws, washers, and nuts to the Ethernet port adapter plate. See Figure 23.

Figure 23
One Ethernet port coupler in adapter plate



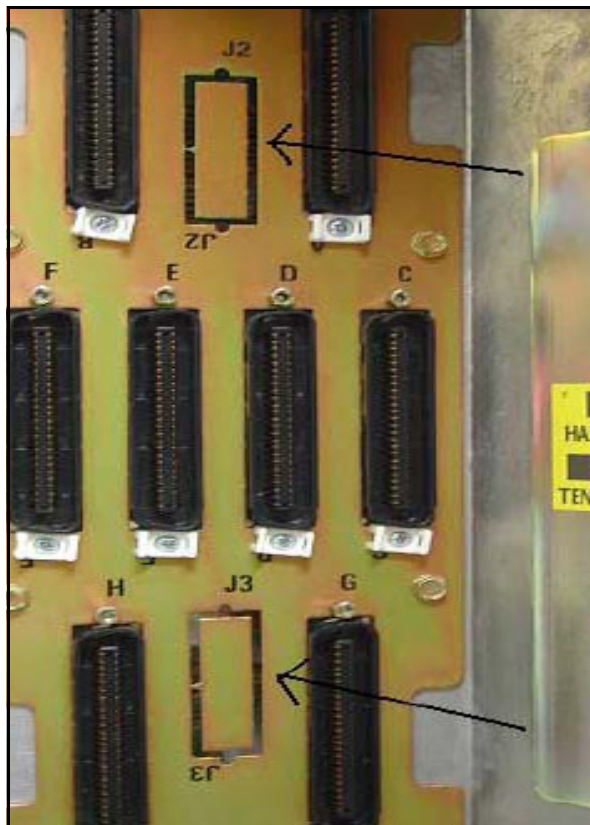
- 5 Switch off the UEM power supplies. See Figure 24.

Figure 24
Shut down UEM power supplies



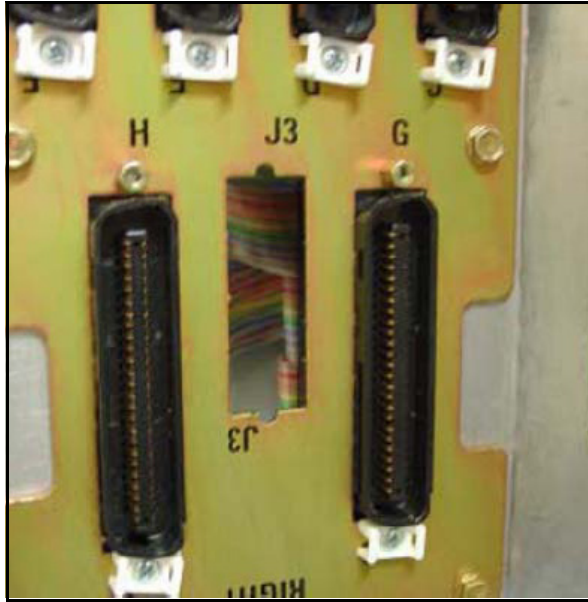
- 6 Select one of the J2-J5 knock-out plates on the back of the UEM. See Figure 25.

Figure 25
J2-J5 plates on back panel of UEM



- 7 Knock out the metal plate from selected J2-J5 location. This provides a hole through which the Ethernet patch cables are routed, and to which the Ethernet port adapter plate is attached. See Figure 26.

Figure 26
Selected J2-J5 plate on back panel of UEM



- 8** Establish an ELAN port on the back panel of the UEM.
 - a.** Insert the end of one of the RJ-45 CAT5 Ethernet patch cables (supplied) into the ELAN network interface (ELAN port) on the faceplate of the server.
 - b.** Route the Ethernet patch cable through the hole you made in the back panel of the UEM.
 - c.** Plug the other end of the Ethernet patch cable into one of the Ethernet port couplers mounted in the Ethernet port adapter plate.
 - d.** Label the Ethernet port coupler as ELAN.

See Figure 27 and Figure 28.

Figure 27
ELAN connection on faceplate



Figure 28
ELAN connection on Ethernet port coupler



- 9** Connect the server to the TLAN subnet.
 - a.** Insert one end of the remaining RJ-45 CAT5 Ethernet patch cable (supplied) into the TLAN network interface (TLAN port) on the faceplate of the server.
 - b.** Route the Ethernet patch cable through the hole you made in the back panel of the UEM.
 - c.** Plug the other end of the Ethernet patch cable into the remaining Ethernet port coupler mounted in the Ethernet port adapter plate.
 - d.** Label the Ethernet port coupler as TLAN.

See Figure 29 and Figure 30.

Figure 29
TLAN connection on faceplate



Figure 30
TLAN connection on Ethernet port coupler



- 10** Fit the Ethernet port adapter plate into the hole on the back of the UEM and tighten the screws. See Figure 31.

Figure 31
Installed Ethernet port adapter plate



11 Attach the ferrite beads to the Ethernet patch cables. See Figure 32.

Figure 32
Attached Ethernet patch cable ferrite beads



End of Procedure

Installing a Nortel ISP1100 Signaling Server

Complete Procedure 27 to install the ISP1100 Signaling Server hardware into the 19-inch rack. Refer to *Signaling Server: Installation and Commissioning* (NN43001-312) for additional information.

Note: Save the packaging container and packing materials in the event you need to package the server for shipment.

Accessories pouch

You require specific hardware to install the Nortel ISP1100 server in a 19-inch rack. This hardware is included in the Nortel ISP1100 server accessories pouch. The accessories pouch must contain the following items:

- Two support brackets (A)
- Two rack-mounting brackets (B)
- Six rack-mount bracket screws (ten 25 x 1/4 inch pan-head Phillips)

Refer to Figure 33.

Figure 33
ISP1100 Signaling Server mounting accessories



Procedure 27**Preparing an ISP1100 Signaling Server for rack-mounting**

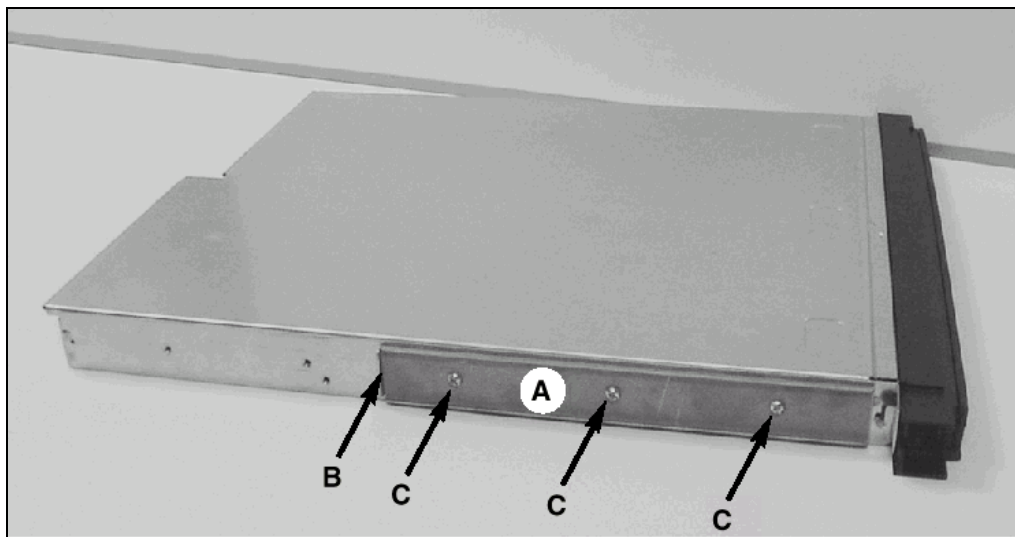
Note: The Front Mount Bracket assembly is not intended for use as a slide rail system. The ISP1100 Signaling Server must be firmly attached to the rack.

**WARNING**

The load rating for this mounting kit is 50 pounds. If you exceed this limit, damage or injury can occur.

- 1 Make sure the Nortel ISP1100 server is not plugged in to an electrical outlet.
- 2 Align the end of the rail with the flange (B) toward the rear of the ISP1100 Signaling Server. See Figure 34.

Figure 34
Nortel ISP1100 Support bracket



- 3 Align the screw holes in the rack-mount rail to the mating holes in the side of the ISP1100 Signaling Server chassis. Use three screws (C) on each side.

Note: Hand-tighten the screws to prevent cross-threading, then use a Phillips screwdriver to secure them.

- 4 Attach the bezel door to the faceplate of the Signaling Server, as shown in Figure 35 and Figure 36 on [page 129](#).

Figure 35
Left hinge mount

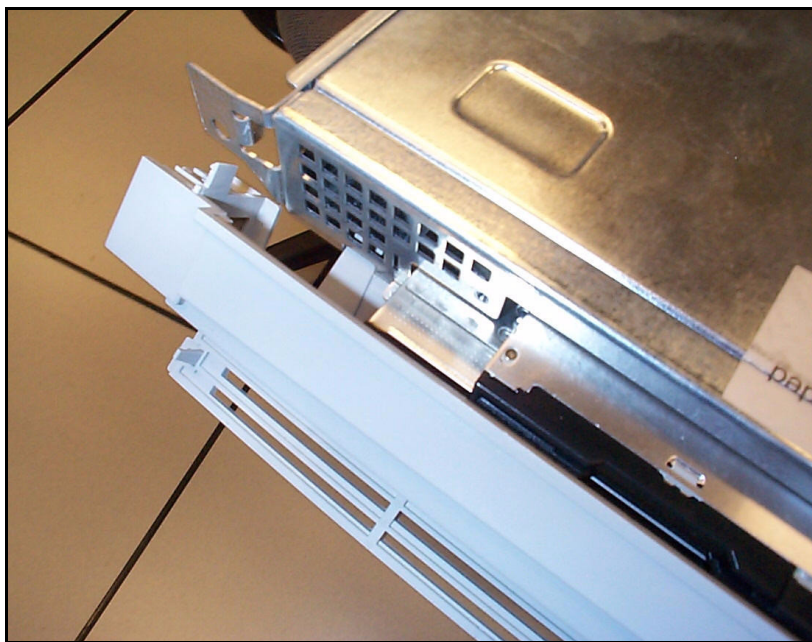
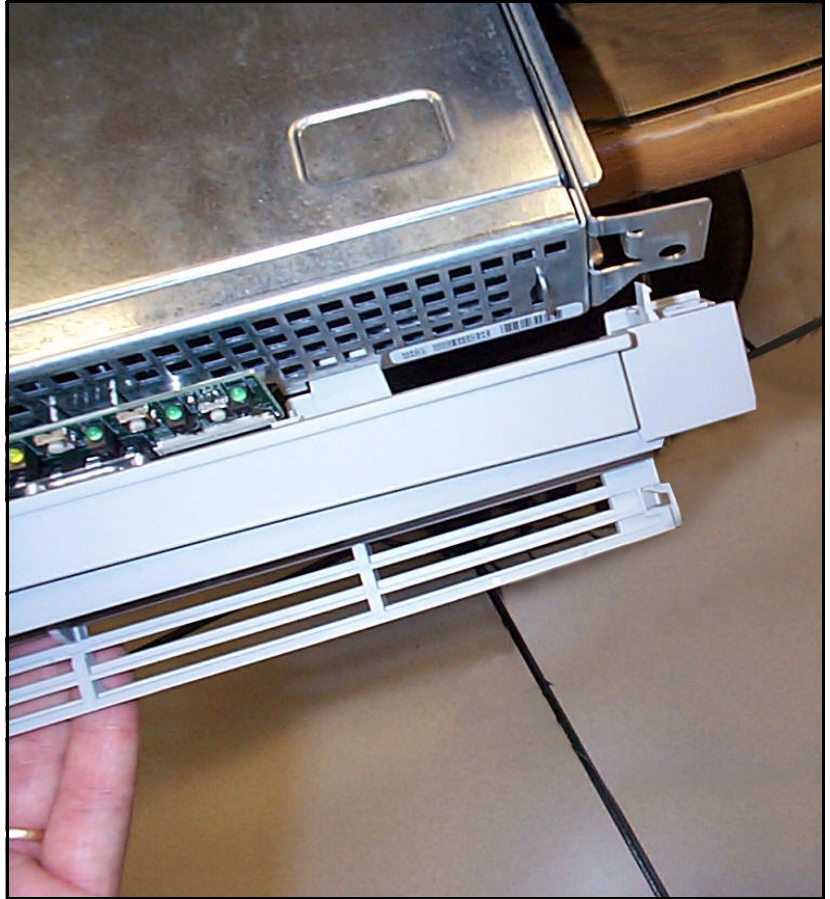
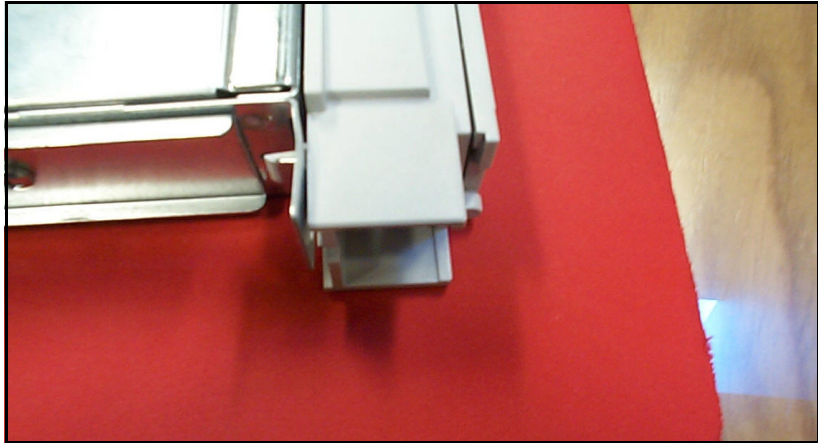


Figure 36
Right hinge mount



When the door is attached to the ISP1100 Signaling Server and rack-mount apparatus, it should appear as shown in Figure 37 on [page 130](#).

Figure 37
Snapped-in bezel door



End of Procedure

Rack-mounting the Nortel ISP1100 server

Procedure 28 **Rack-mounting a ISP1100 Signaling Server**

This procedure describes how to install the server in a rack.

Read the following warnings carefully before you begin installing the ISP1100 Signaling Server in the rack.

**DANGER OF ELECTRIC SHOCK****DISCONNECT AC POWER**

The ISP1100 Signaling Server must be completely disconnected from any AC power source before performing this procedure. Pressing the Power button **DOES NOT** turn off power to this Signaling Server. Some circuitry in the unit can continue to operate even though the front panel Power button is off.

Failure to disconnect the ISP1100 Signaling Server from its AC power source can result in personal injury or equipment damage.

**DANGER OF ELECTRIC SHOCK****GROUNDING THE RACK INSTALLATION**

To avoid the potential for an electrical shock hazard, include a third wire safety grounding conductor with the rack installation.

If the ISP1100 Signaling Server power cords are plugged into AC outlets that are part of the rack, then provide proper grounding for the rack itself.

If the ISP1100 Signaling Server power cords are plugged into wall AC outlets, the safety grounding conductor in each power cord provides proper grounding for the ISP1100 Signaling Server only. Provide additional, proper grounding for the rack and other devices installed in it.



WARNING

MAIN AC POWER DISCONNECT

A main AC power disconnect must be installed. The main AC power disconnect must:

- disconnect power to the entire rack unit
- be readily accessible
- be labeled as controlling power to the entire unit, not just to the ISP1100 Signaling Server(s)



WARNING

OVERCURRENT PROTECTION

The Nortel ISP1100 server is designed for an AC line voltage source with up to 20 amperes (A) of over-current protection. If you install the power system for the equipment rack on a branch circuit with more than 20 A of protection, provide supplemental protection for the Nortel ISP1100 server. If you install more than one server in the rack, the power source for each server must be from a separate branch circuit.

- 1 Attach the rack-mount brackets ("B" as shown in Figure 33 on [page 126](#)) to the equipment rack. Install the left and right side at an equal height. Use standard length screws from the accessories pouch, and screw them into the top and bottom drill holes of the bracket (see Figure 38 on [page 133](#)).

Figure 38
Installed rack-mount bracket



- 2** When both brackets are fixed in place:
 - a.** Align the rack-mount brackets on the ISP1100 Signaling Server with the slide rail system on the rack posts.
 - b.** Slide the ISP1100 Signaling Server in place. Refer to Figure 39 on [page 134](#).

Figure 39
Rack-mounting the ISP1100 Signaling Server



- 3** Tighten the screws through the faceplate of the ISP1100 Signaling Server to the rack-mount bracket.

Note: Do not apply excessive torque while tightening the bolts. The bezel door is plastic and does not require or withstand overtightening.

End of Procedure

Connections

Connection checklist



WARNING

Do not modify or use a supplied AC power cord if it is not the correct type required for the host region.

IMPORTANT!

Nortel CP PM servers are powered through the backplane of the Media Gateway, Universal Equipment Module or 11C cabinet into which they are installed and thus require no power cord.

Before connecting a Signaling Server, ensure that you have the following materials on-hand.

Table 6
Connections checklist

Have you:	
Obtained a serial cable (DTE-DTE null modem cable) to connect the server to a maintenance terminal?	
Obtained the NTA19EC cable (if you are connecting a Nortel CP PM server)? This cable adapts the 50-pin MDF connector on the back of the shelf of the Media Gateway, Universal Equipment Module, or 11C cabinet to a 25-pin DB connector.	
Obtained the CAT5 cables (or better) to connect the server to the ELAN and TLAN subnets?	

Connecting a Nortel CP PM Signaling Server

This section contains instructions for connecting the NTDW61BAE5 and NTDW66AAE5 models of the Nortel CP PM Signaling Server to the ELAN

and TLAN subnets of a CS 1000E and CS 1000M system respectively. It also contains instructions for connecting a maintenance terminal to the Nortel CP PM Signaling Server.

The NTDW61BAE5 model of the Nortel CP PM Signaling Server was designed for use in a CS 1000E system. As such, it is inserted into a slot of the Media Gateway (MG 1000E or MG 1000B). The Media Gateway also hosts the Media Gateway Controller (MGC) that has Ethernet ports for connecting to the ELAN and TLAN subnets of your CS 1000 system.

However, it is common in a CS 1000E system for the Call Server to be connected to the MGC through these ELAN and TLAN Ethernet ports. If the Call Server is not connected to the MGC through these Ethernet ports, the NTDW61BAE5 model of the CP PM Signaling Server uses them to connect to the ELAN and TLAN subnets of the CS 1000E system. If the Call Server is using the MGC ELAN and TLAN Ethernet ports, the Nortel CP PM Signaling Server is connected directly to the ELAN and TLAN Ethernet switches from the faceplate ELAN and TLAN Ethernet ports.

The NTDW66AAE5 model of the Nortel CP PM Signaling Server was designed for use in a CS 1000M system. As such, it is inserted into a slot of a Universal Equipment Module (UEM). UEMs do not have built-in ELAN and TLAN Ethernet ports. These Ethernet ports must be installed on the back of the UEM to enable the Nortel CP PM Signaling Server to connect to the ELAN and TLAN subnets of your CS 1000 system (see Procedure 26: "Installing ELAN and TLAN Ethernet ports on the back of a CS 1000M UEM" on [page 114](#).)

Figure 40 shows the faceplates of the two models of the Nortel CP PM Signaling Server with labeling for all components (NTDW61BAE5 on the left and NTDW66AAE5 on the right).

Procedure 29

Connecting a Nortel CP PM Signaling Server

Note: Refer to Figure 40 when performing the following procedure.

- 1 Establish a maintenance terminal connection at the back of the shelf of the IPMG, IPE cube, or 11C chassis. The com (SDI) port of the CP PM circuit card Signaling Server is routed through the backplane of the shelf to the 50 pin MDF connector on the back of the shelf. A special cable is shipped with the CP PM signaling server that adapts the 50 pin MDF connector to a 25 pin DB connector (NTAK19EC). A DTE-DTE null modem serial cable is required to adapt the SDI port to a typical PC serial port.
 - a. Connect the NTAK19EC cable (shipped with the CP PM Signaling Server) to the 50 pin MDF connector on the back of the desired shelf of the IPMG, IPE cube or 11C chassis.
 - b. Connect a DTE-DTE null modem serial cable to the 25 pin DB connector at the end of the NTAK19EC cable.
 - c. Connect the other end of the DTE-DTE null modem serial cable to the serial port on the maintenance terminal.
- 2 Insert the Signaling Server circuit card into an appropriate slot on the shelf of the IPMG, IPE cube, or 11C chassis. The CP PM Signaling Server is hot-pluggable so it may be inserted without powering off the system. The maintenance terminal now has access to the CP PM Signaling Server through the 50-pin MDF connector connected at the back of the shelf of the IPMG, IPE cube or 11C chassis.
- 3 Connect the Signaling Server to the TLAN subnet. Insert the RJ-45 CAT5 (or better) cable into the LAN1 port (TLAN network interface) on the front of the Signaling Server. The LAN1 port is the middle one of the three network interfaces.
- 4 Connect the Signaling Server to the ELAN subnet. Insert the RJ-45 CAT5 (or better) cable into the LAN0 port (ELAN network interface) on the front of the Signaling Server. The LAN0 port is the bottom one of the three network interfaces.

5 Set the COM port on the maintenance terminal as follows:

- Terminal type: VT100
- Speed: 9 600
- Data bits: 8
- Parity: none
- Stop bits: 1
- Flow control: none

Note: The CP PM Signaling Server is shipped with the Admin Serial port set to 9600 Bit/s. Other available speeds are 19 200, 38 400, and 115 200 Bits. You can change the port speed using the maintenance terminal. To verify or change the baud rate on a Nortel CP PM Signaling Server, see *Signaling Server: Installation and Commissioning* (NN43001-312).

6 Configure the Signaling Server maintenance terminal. Refer to *Signaling Server: Installation and Commissioning* (NN43001-312).

End of Procedure

Complete Procedure 30 to connect a Nortel CP PM Signaling Server (model NTDW61BAE5) to the ELAN and TLAN subnets of a CS 1000E system.

Procedure 30**Connecting a CP PM Signaling Server to the ELAN and TLAN subnets of a CS 1000E system****1** Connect the Signaling Server to the ELAN subnet.

- if the Call Server is not connected to the Media Gateway Controller (MGC)
 - Insert the end of one of the 25-cm RJ-45 CAT5 Ethernet cables shipped with the server (NTDU0606E6) into the ELAN network interface port (ELAN port) on the faceplate of the server
 - insert the other end of the 25-cm RJ-45 CAT5 Ethernet cable into the MGC ELAN Ethernet port
- if the Call Server is connected to the MGC

- Insert the end of a longer RJ-45 CAT5 Ethernet cable (not supplied) into the ELAN network interface port (ELAN port) on the faceplate of the server
 - Insert the other end of the RJ-45 CAT5 Ethernet cable into an Ethernet port on the ELAN Ethernet switch
- 2** Connect the Signaling Server to the TLAN subnet.
- if the Call Server is not connected to the Media Gateway Controller (MGC)
 - Insert the end of one of the 25-cm RJ-45 CAT5 Ethernet cables shipped with the server (NTDU0606E6) into the TLAN network interface port (TLAN port) on the faceplate of the server
 - Insert the other end of the 25-cm RJ-45 CAT5 Ethernet cable into the MGC TLAN Ethernet port
 - if the Call Server is connected to the MGC
 - Insert the end of a longer RJ-45 CAT5 Ethernet cable (not supplied) into the TLAN network interface port (TLAN port) on the faceplate of the server
 - Insert the other end of the RJ-45 CAT5 Ethernet cable into an Ethernet port on the TLAN Ethernet switch

End of Procedure

Note: If the Call Server is connected to the Media Gateway Controller, you can not use the 25-cm CAT5 Ethernet cables shipped with the Signaling Server (NTDU0606E6). You must obtain CAT5 Ethernet cables that are long enough to connect the Signaling Server directly to the ELAN and TLAN Ethernet switches from the faceplate ELAN and TLAN Ethernet ports.

Complete Procedure 31 to connect a Nortel CP PM Signaling Server (model NTDW66AAE5) to the ELAN and TLAN subnets of a CS 1000M system.

IMPORTANT!

Connecting a Nortel CP PM Signaling Server to the ELAN and TLAN subnets of a CS 1000M system causes a service disruption.

Procedure 31**Connecting a CP PM Signaling Server to the ELAN and TLAN subnets of a CS 1000M system**

- 1** Insert the end of an RJ-45 CAT5 Ethernet cable (not supplied) into the ELAN network interface port (ELAN port) on the back of the CS 1000M UEM. (You installed this ELAN port at the back of the UEM when you installed the Signaling Server in the UEM. See “Installing ELAN and TLAN Ethernet ports on the back of a CS 1000M UEM” on [page 114](#).)
- 2** Insert the other end of the RJ-45 CAT5 Ethernet cable into an Ethernet port on the ELAN Ethernet switch.
- 3** Insert the end of another RJ-45 CAT5 Ethernet cable (not supplied) into the TLAN network interface port (TLAN port) on the back of the CS 1000M UEM. (You installed this TLAN port at the back of the UEM when you installed the Signaling Server in the UEM (see “Installing ELAN and TLAN Ethernet ports on the back of a CS 1000M UEM” on [page 114](#)).
- 4** Insert the other end of the RJ-45 CAT5 Ethernet cable into an Ethernet port on the TLAN Ethernet switch.

End of Procedure

Verify or change the baud rate

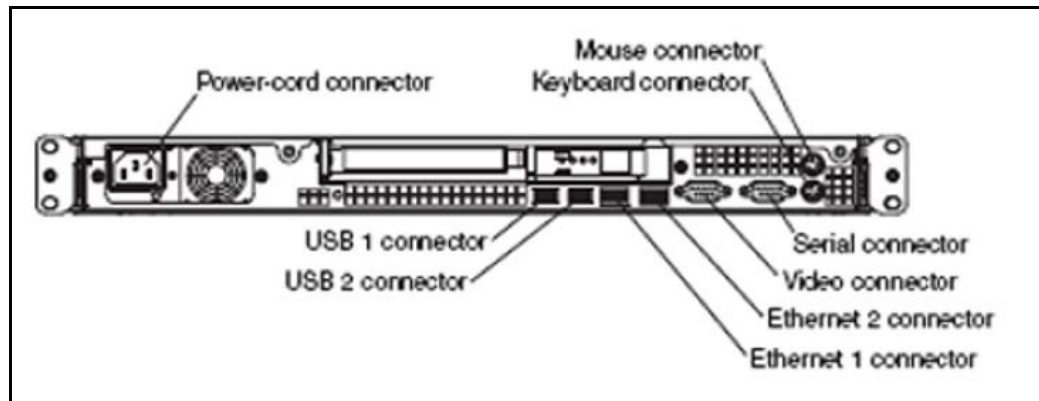
To verify or change the baud rate on a Nortel CP PM Signaling Server, see *Signaling Server: Installation and Commissioning* (NN43001-312).

Connecting an IBM X306m Signaling Server

In geographic regions that are susceptible to electrical storms, Nortel recommends that you plug the IBM X306m Signaling Server into an AC surge suppressor.

Figure 41 shows the rear view of the IBM X306m Signaling Server.

Figure 41
IBM X306m Signaling Server (rear view)



Note: Refer to Figure 41 when performing the following procedure.

Procedure 32
Connecting an IBM X306m Signaling Server

- 1 Connect the Signaling Server to the TLAN subnet. Insert the RJ-45 CAT5 (or better) cable into Port 1 (TLAN network interface) on the back of the Signaling Server. Port 1 is the right-most of the two network interfaces.
- 2 Connect the Signaling Server to the ELAN subnet. Insert the RJ-45 CAT5 (or better) cable into PEthernet 2 connector (ELAN network interface) on the back of the Signaling Server. Port 2 is the left-most of the two network interfaces.
- 3 Connect a DTE–DTE null modem serial cable from the serial port on the back of the Signaling Server to the serial port on a maintenance terminal.
- 4 Connect the Signaling Server power cord.
 - a. Check that the power cord is the type required in the region where the Signaling Server is used. Do not modify or use the supplied AC power cord if it is not the correct type.
 - b. Attach the female end of the power cord to the mating AC power receptacle on the left side of the Signaling Server's back panel. Plug the male end of the AC power cord into the AC power source (wall outlet).

- 5 Set the baud rate for the serial port on the Signaling Server to 9 600 b/ps. See *Signaling Server: Installation and Commissioning* (NN43001-312).

Note: The IBM X306m Signaling Server ships with the serial port set to 9600 b/ps.

- 6 Configure the connected maintenance terminal. See *Signaling Server: Installation and Commissioning* (NN43001-312).
- 7 Press the Power switch.

Note: Refer to the Signaling Server Product Guide on the CD-ROM shipped with the IBM X306m Signaling Server for additional operating information.

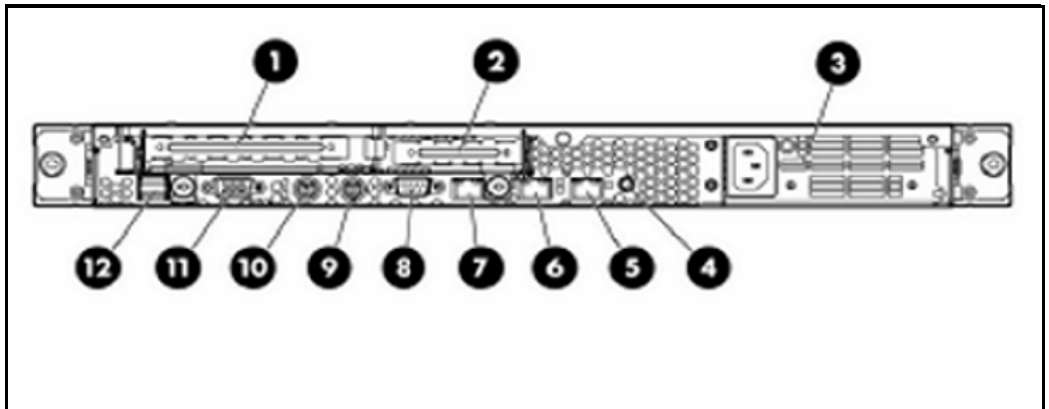
End of Procedure

Connecting an HP DL320-G4 Signaling Server

In geographic regions that are susceptible to electrical storms, Nortel recommends that you plug the HP DL320-G4 Signaling Server into an AC surge suppressor.

Figure 42 shows the rear view of the HP DL320-G4 Signaling Server.

Figure 42
HP DL320-G4 Signaling Server (rear view)



Procedure 33

Connecting an HP DL320-G4 Signaling Server

- 1** Connect the Signaling Server to the TLAN subnet. Insert the RJ-45 CAT5 (or better) cable labeled with the number 5 into the port (TLAN network interface) on the back of the Signaling Server.
- 2** Connect the Signaling Server to the ELAN subnet. Insert the RJ-45 CAT5 (or better) cable labeled with the number 6 into the port (ELAN network interface) on the back of the Signaling Server.
- 3** Connect a DTE–DTE null modem serial cable from the Serial Port on the back of the Signaling Server to a maintenance terminal.
- 4** Connect the Signaling Server power cord.
 - a.** Check that the power cord is the type required in the region where the Signaling Server is used. Do not modify or use the supplied AC power cord if it is not the correct type.
 - b.** Attach the female end of the power cord to the mating AC power receptacle on the right-hand side of the Signaling Server's back panel. Plug the male end of the AC power cord into the AC power source (wall outlet).
- 5** Configure the COM1 serial port as the communication port for the connected maintenance terminal. Set the COM 1 baud rate for the serial port on the Signaling Server to 9 600 b/ps. See *Signaling Server: Installation and Commissioning* (NN43001-312).
- 6** Configure the connected maintenance terminal. See *Signaling Server: Installation and Commissioning* (NN43001-312).
- 7** Press the Power switch.

End of Procedure

Maintenance terminal configuration parameters

To configure Signaling Server maintenance terminal configuration parameters, see the Maintenance chapter of *Signaling Server: Installation and Commissioning* (NN43001-312).

Installing the Signaling Server software

IMPORTANT!

The Signaling Server is out-of-service during software upgrade.

Introduction

This section provides installation procedures for CS 1000 Release 5.0 Signaling Server software on an IBM X306m or HP DL320-G4 Signaling Server.

IMPORTANT!

CP PM, IBM X306m and HP DL320-G4 Signaling Servers do not support any Signaling Server software prior to CS 1000 Release 5.0.

IMPORTANT!

CS 1000 Release 5.0 Signaling Server software does not need to be installed on the CP PM Signaling Server. It is delivered with the Signaling Server software, operating system, applications and web files pre-loaded onto the hard drive. Only basic system configuration parameters need to be entered on the first boot of the CP PM Signaling Server.

Before you begin

Before installing the software, you must do the following:

- Connect and power up the Signaling Server. See “Connections” on [page 135](#).
- For CP PM Signaling Servers, ensure that Switch S5 is set to position 2 (to support the internal hard disk drive)
- For IBM X306m and HP DL320-G4 Signaling Servers, you must obtain the CS 1000 Release 5.0 Signaling Server Software Install CD.

Installing the software

To install software and enter basic system configuration parameters on an IBM X306m or HP DL320-G4 Signaling Server, complete Procedure 34.

Procedure 34 **Installing Signaling Server software**

Upon completion of Step 1, this procedure takes approximately 45 minutes to complete.

- 1 From your Planning and Engineering group, obtain the following network and IP Telephony data for this Signaling Server:
 - node ID for the IP Telephony node
 - node IP address for the IP Telephony node
 - hostname for the Signaling Server
 - ELAN network interface IP address, Subnet mask, and Gateway
 - TLAN network interface IP address, Subnet mask, and Gateway
 - ELAN network interface IP address of the Call Server
 - Primary and Alternate NRS IP addresses for this networked system. Refer to *IP Peer Networking: Installation and Commissioning* (NN43001-313)
 - NRS role, if applicable. Refer to *IP Peer Networking: Installation and Commissioning* (NN43001-313)
- 2 Boot the Signaling Server from the Removable Media Device (RMD):
 - For IBM X306m, HP DL320-G4, or Nortel ISP1100 Signaling Servers, insert the CS 1000 Release 5.0 Signaling Server Software CD into the CD drive and press the RST button on the front panel of the Signaling Server to trigger a cold boot. This forces the Signaling Server to boot from the CD.
 - For a Nortel CP PM Signaling Server, insert the CS 1000 Release 5.0 Signaling Server Software CF card into the faceplate CF drive and press the RST button on the faceplate of the Signaling Server to trigger a cold boot. The CP PM System BIOS Configuration screen appears (see Figure 43) with an instruction to press F to force the Signaling Server to boot from the CF card.

Figure 43
Nortel CP PM system BIOS configuration

+-----+ System BIOS Configuration, (C) 2005 General Software, Inc. +-----+			
System CPU	: Pentium M	Low Memory	: 632KB
Coprocessor	: Enabled	Extended Memory	: 1011MB
Ide 0 Type	: 3	Serial Ports 1-2	: 03F8 02F8
Ide 1 Type	: 3	ROM Shadowing	: Enabled
Ide 2 Type	: 3	BIOS Version	: NTDU74AA 15
+-----+			
Press F to force board to boot from faceplate drive.			

- The VxWorks™ banner screen appears (see Figure 44) followed by system messages indicating that the Signaling Server Software Installation Tool is being loaded from either the Signaling Server Software CD or CF Card.

The system verifies the file systems.

- If the hard drive of the Signaling Server is not partitioned, the file systems verification process fails. Upon failure, the menu in Figure 46 appears.

Figure 46
File systems verification failure

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

The filesystems verification failed! (This is normal for a new
system.)

The hard disk must be (re)partitioned and (re)initialized. This will
erase all data on the hard disk. The system will then reboot and
the Install Tool will restart.

Please enter:
<CR> -> <a> - Partition and initialize the hard disk, then reboot.

Enter Choice> a
```

- a. Enter a to partition and initialize the hard disk, and to reboot the Signaling Server.

The system displays the messages:

```
Partitioning hard disk ...
Hard disk partitioning succeeded.

Creating filesystems ...
Filesystems creation succeeded.

Rebooting system ...
```

- b. The Install Tool banner screen (Figure 45 on [page 149](#)) reappears. Go back to beginning of Step 2.. If the hard drive of the Signaling Server is partitioned, the following system messages appear.

```
Filesystems verification succeeded.
```

- c. Confirm or enter the date and time (Figure 47 on [page 151](#)).

Figure 47
Date and time

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

You should ensure the system date and time are correct prior to
installation, since all files copied or created during install will
be time-stamped.

You can press <CR> to accept the current values.

Current date is: FRIDAY 01-04-2006
Enter new date (dd mm yyyy): 04 04 2006
Date is set to: MONDAY 04-04-2006
Current time is: 09:47:18
Enter new time (hh mm ss): 08 38 30
Time is set to: 08:38:30
Current date and time is:
MONDAY 04-04-2005, 08:38:30

```

- When reinstalling the software on an existing system, the system verifies the file systems. The disk check reports:

Filesystems verification succeeded.

The system summary appears (Figure 48 on [page 152](#)). Enter **a** to continue the installation.

Note: For a new installation, the data fields in the system summary are blank.

Figure 48
System Summary

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

-----
                SYSTEM INFORMATION
-----

+=====+
| Hostname: SS_Node276_Ldr           S/W Ver: x.xx.xx          |
|                                     |                         |
|   Role: Leader                     Set TPS: Disabled          |
| Node ID:                           Vtrk TPS: Disabled         |
| Node IP:                           NRS Config: Alternate SIP   |
| H.323 ID: SS_Node276_Ldr           CS IP:                     |
|                                     |                         |
|   ELAN IP: 192.168.10.20           TLAN IP: 192.168.20.20     |
|   ELAN SM: 255.255.255.0           TLAN SM: 255.255.255.0     |
|   ELAN GW: 192.168.10.1           TLAN GW: 192.168.20.1      |
|   ELAN MAC: 00:02:b3:c5:51:c6      TLAN MAC: 00:02:b3:c5:51:c7 |
+=====+

Please enter:
<CR> -> <a> - Continue with Install Tool.
      <q> - Quit.

Enter Choice>
```


Figure 49
Install Tool Main Menu

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

                M A I N      M E N U

The Install Tool will install Signaling Server software and related
files. You will be prompted throughout the installation.

    Please enter:
<CR> -> <a> - To perform a complete installation/upgrade (Signaling
          Server s/w, IP Phone f/w, Voice Gateway Media
          Card l/w, basic Signaling Server configuration).
        <b> - To install/upgrade Signaling Server software only.
        <c> - To copy IP Phone firmware only.
        <d> - To copy Voice Gateway Media Card loadware only.
        <e> - To perform basic Signaling Server configuration only.
        <t> - To go to the Tools Menu.
        <q> - Quit.

Enter Choice>

```

- 4** At the Main Menu (Figure 49), enter **a** to install Signaling Server software. Option **a** performs options **b**, **c**, **d**, and **e**.

The following sample lines display on the screen:

```

Copying "/cd0/sse37012.p3/disk.sys" to "/u/disk.sys".
Processing the install control file ...
"/cd0/sse37012.p3/install.dat" parsed.

```

The Dependency Lists installation screen appears (Figure 50).

Figure 50
Dependency lists installation

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Do you want to install Dependency Lists?.

      Please enter:
<CR> -> <y> - Yes, Do the Dependency Lists installation
      <n> - No, Continue without Dependency Lists installation

      Enter Choice>
```

- 5 Press <CR> or enter y to install the dependency lists. The Installation Status Summary screen appears:

The Installation status screen appears (Figure 51 on [page 155](#)).

Figure 51
Installation Status

----- INSTALLATION STATUS SUMMARY -----			
Option	Choice	Status	Comment
Software	yes		new install x.xx.xx
Dependency Lists	yes		copy ALL
firmware	yes		copy ALL
loadware	yes		copy ALL
configuration	yes		
Please enter: <CR> -> <y> - Yes, start complete installation. <n> - No, cancel complete installation and return to the Main Menu. Enter Choice>			

- 6** Enter **y** to start the installation. The screens shown in Figures 52 to 58, which start on [page 156](#), appear.

Figure 52
Installation output

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

You have selected to install version x.xx.xx on the system. As
this is a new install, all necessary directories and files will
be created on the hard disk.

Starting new install of version x.xx.xx.

Initializing protected partition ...
"/p" initialized.

Creating directory ... (many directories are created here) ...
Copying ... (many files are copied here) ...

Boot ROM "/p/load/bootrom.bin" installed.
```

Figure 53
Software installation success

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Software version x.xx.xx was installed successfully.

All files were copied to the hard disk.
```

Figure 54
IP Phone firmware

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

The installation source contains multiple Internet Telephone firmware
files.

Copying "/cd0/0603Bxx.bin" to "/u/fw/0603Bxx.bin".
Copying "/cd0/0602Bxx.bin" to "/u/fw/0602Bxx.bin".
Copying "/cd0/0604Dxx.bin" to "/u/fw/0604Dxx.bin".
```

Figure 55
Voice Gateway Media Card loadware

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

The installation source contains multiple Voice Gateway Media Card
loadware files.

Copying "/cd0/IPL4xxxx.p2" to "/u/fw/IPL4xxxx.p2".
Copying "/cd0/IPL4xxxx.sa" to "/u/fw/IPL4xxxx.sa".
```

- 7 After the Signaling Server software and system components are installed, the Restore IP configuration screen appears (Figure 56 on [page 158](#)).

Figure 56
Restore IP configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please insert the database diskette in the removable drive
to restore the IP configuration to the hard disk

      Please enter:
<CR> -> <a> - Diskette is now in the removable drive.
          Continue.
      <b> - Continue without restoring the IP configuration
      <q> - Quit.

Enter Choice> b
```

8 Do one of the following:

- If you are migrating a Leader Signaling Server (see "Signaling Server migration" in *Signaling Server: Installation and Commissioning* (NN43001-312), insert the Removable Media Device (RMD) into the appropriate drive, and press <CR> or enter a to restore the IP configuration data. After the restore is complete, the following system message appears:

Done copying IP configuration to disk

The IP Telephony parameter confirmation screen appears (Figure 57 on [page 159](#)). Go to step 12 on [page 184](#).

Figure 57
IP telephony parameter confirmation

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
-----

You have entered the following parameters for this Leader SS :
(Press <a>-<l> to correct, <y> to proceed, <n> to reconfigure all.)

    Please enter:
<CR> -> <y> - Yes, these parameters are correct.
        <n> - Re-enter all of the parameters

        <a> - Node ID           I : 9
        <b> - Hostname           : CS1000E_PIV
        <c> - ELAN IP            : 192.167.102.4
        <d> - ELAN subnet mask   : 255.255.255.0
        <e> - ELAN gateway IP    : 192.167.102.1
        <f> - TLAN IP            : 192.167.103.2
        <g> - TLAN subnet mask   : 255.255.255.0
        <h> - TLAN gateway IP    : 192.167.103.1
        <i> - Node IP            : 192.167.103.3
        <j> - Call Server IP      : 192.167.102.3
              NRS configuration : Primary GK + SIP
        <k> - Primary NRS IP      : 192.167.103.2
        <l> - Alternate NRS IP   :

    Enter Choice>

```

- 9 If you are installing a new Signaling Server, or you are migrating a Follower or Standalone Signaling Server (see "Signaling Server migration" in *Signaling Server: Installation and Commissioning* (NN43001-312)), select b to bypass the restoration of IP configuration data. The Signaling Server role selection screen appears (Figure 58 on [page 160](#)).

Figure 58
Signaling Server role selection

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====
Note: This step will over-write all existing configuration parameters
      on this Signaling Server.
Please select the role of this Signaling Server.

If this Signaling Server will be a Leader then its data networking
and IP Telephony parameters must be entered now. (This will pre-
configure the IP Telephony node files.)

If this Signaling Server will be a Follower then its data networking
and IP Telephony parameters must be configured through Element
Manager later.

      Please enter:
<CR> -> <a> - Set this Signaling Server as a Leader.
      <b> - Set this Signaling Server as a Follower.
      <q> - Quit.

      Enter Choice>
```

10 Configure the Signaling Server as Leader or Follower. See Figure 58 on [page 160](#).

- If there is already a Leader Signaling Server in the IP Telephony node, enter **b** at the prompt to set this Signaling Server as Follower. The Follower Signaling Server configuration screen appears (Figure 59 on [page 161](#)). Go to step 10 on [page 180](#).

Figure 59
Follower Signaling Server configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

This Follower Signaling Server will obtain its data network and IP
telephony configuration from the Leader Signaling Server at boot.

To identify this Signaling Server, please enter a Hostname.

Hostname : SS_Node276_Ldr
```

- If there is not already a Leader Signaling Server in the IP Telephony node, or if the Signaling Server is to be a stand-alone Signaling Server, enter **a** at the prompt to configure this Signaling Server as Leader. The Application configuration screen appears (Figure 60 on [page 161](#)).

Figure 60
Application configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please select the application configuration for this Signaling Server.

      Please enter:
<CR> -> <a> - Co-resident (LTPS + VTRK + NRS).
        <b> - Stand-alone (NRS only - no Call Server).
        <q> - Quit.

      Enter Choice>
```

- 11 Configure the application configuration for this Signaling Server. See Figure 60 on [page 161](#).
- If the IP Phone TPS, Virtual Trunk TPS, and optional Network Routing Service (NRS) applications are to be enabled on this Signaling Server, enter **a** at the prompt to configure this Signaling Server as a co-resident Signaling Server.
 - If only the NRS is to be enabled on this Signaling Server:
 - If this Signaling Server is to be associated with a Call Server, enter **a** at the prompt to configure this Signaling Server as a co-resident Signaling Server. After you have finished installing the Signaling Server software, you can disable the Set TPS and Virtual Trunk TPS in Element Manager (refer to *Element Manager: System Administration* (NN43001-332)).
 - If this Signaling Server is not to be associated with a Call Server, enter **b** at the prompt to set this Signaling Server as a stand-alone Signaling Server.

Depending on the application configuration selected, either the NRS - Coresident Signaling Server screen or the NRS - Standalone Signaling Server screen appears.

Figure 61
Network Routing Service (NRS) — co-resident Signaling Server

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please select the Network Routing Service (NRS) configuration for this
Signaling Server.

Please enter:
<CR> -> <a> - H.323 Gatekeeper and SIP Redirect/Proxy Server.
        <b> - H.323 Gatekeeper only.
        <c> - SIP Redirect/Proxy Server only.
        <d> - None.

Enter Choice>
```

Figure 62
Network Routing Service (NRS) — stand-alone Signaling Server

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please select the Network Routing Service (NRS) configuration for this
Signaling Server.

Please enter:
<CR> -> <a> - H.323 Gatekeeper and SIP Redirect/Proxy Server.
        <b> - H.323 Gatekeeper only.
        <c> - SIP Redirect/Proxy Server only.

Enter Choice>
```

- 12** Select the Network Routing Service (NRS) to be provided by this Signaling Server. See Figure 61 on [page 162](#) for a co-resident Signaling Server or Figure 62 on [page 163](#) for a stand-alone Signaling Server.
- Enter **d** if this Signaling Server is configured as a Coresident Leader and is not providing an NRS. Go to step 13.
 - Press <CR> or enter **a** if this Signaling Server is to provide an H.323 Gatekeeper and a SIP Redirect/Proxy Server.
 - Enter **b** if this Signaling Server is to provide only an H.323 Gatekeeper.
 - Enter **c** if this Signaling Server is to provide only a SIP Redirect/Proxy Server. Refer to *Network Routing Service Installation and Commissioning* (NN43001-564) for more information on the NRS.

Depending on the application configuration selected, either the NRS type: Coresident Signaling Server screen or the NRS type: Standalone Signaling Server screen appears.

Figure 63
NRS type — co-resident Signaling Server

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please select the type of Network Routing Service (NRS) for this
Signaling Server.

      Please enter:
<CR> -> <a> - Primary.
      <b> - Alternate.
      <c> - Failsafe.

      Enter Choice>
```

Figure 64
NRS type — stand-alone Signaling Server

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please select the type of Network Routing Service (NRS) for this
Signaling Server.

      Please enter:
<CR> -> <a> - Primary.
      <b> - Alternate.

      Enter Choice>
```

- 13** Select the type of NRS to be provided by this Signaling Server. See Figure 63 for a co-resident Signaling Server.
- If this Signaling Server is to be the Primary NRS, enter **a**.
 - If this Signaling Server is to be the Alternate NRS, enter **b**.
 - If this Signaling Server is not a stand-alone Signaling Server and is to be the Fail-safe NRS, enter **c**.

Refer to *Network Routing Service Installation and Commissioning* (NN43001-564) for more information on the NRS.

Depending on whether the Signaling Server is configured as Leader or Standalone, either the Leader Signaling Server configuration screen (Figure 65) or the Standalone Signaling Server configuration screen (Figure 66) appears.

Figure 65
Leader Signaling Server configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please enter the data networking and IP Telephony parameters for
this Leader Signaling Server.

Node ID           : 276

Hostname          : SS_Node276_Ldr

ELAN IP           : 192.168.10.20
ELAN subnet mask: 255.255.255.0
ELAN gateway IP  : 192.168.10.1

TLAN IP           : 192.168.20.20
TLAN subnet mask: 255.255.255.0
TLAN gateway IP  : 192.168.20.1

Node IP           : 192.168.10.20

Call Server IP    : 192.168.10.10
```

Figure 66
Stand-alone Signaling Server configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please define the data networking parameters for this Standalone
Signaling Server. Note that the ELAN parameters are necessary for
management access (e.g. SNMP).

Hostname           : SS_SA
ELAN IP            : 192.168.10.20
ELAN subnet mask   : 255.255.255.0
ELAN gateway IP    : 192.168.10.1

TLAN IP            : 192.168.20.20
TLAN subnet mask   : 255.255.255.0
TLAN gateway IP    : 192.168.20.1
```

- 14** Enter the data networking and IP telephony parameters for the Signaling Server, as prompted. The IP information applies to a temporary IP Telephony node, to ensure that the existing node is not affected. The entry of data networking and IP telephony parameters also preconfigures the IP Telephony node files. After the Signaling Server software installation, the node files are imported into Element Manager for further configuration (see "Importing IP Telephony nodes" in *Signaling Server: Installation and Commissioning* (NN43001-312)).
- If this is a Leader Signaling Server, enter the parameters for the Node, ELAN network interface, TLAN network interface, and Call Server as required.
 - If installing the Signaling Server at an office that is not a branch office, enter the ELAN network interface IP address of the Call Server.
 - If installing the Signaling Server at a branch office, enter the ELAN network interface IP address of the MG 1000B Core.
 - If this is a Follower Signaling Server, enter the Hostname of the Leader Signaling Server. Then go to step 16 on [page 169](#).
 - If this is a stand-alone Signaling Server and not associated with a Call Server (that is, **b** was selected in step 11 on [page 162](#)), enter the

TLAN subnet parameters as required. The Call Server IP address is automatically set to 0.0.0.0.

Depending on whether the Signaling Server is configured as Primary, Alternate, or Standalone, either the Primary NRS IP address screen, the Alternate NRS IP address screen, or both (in succession) appear. Both screens appear in succession for a Standalone Signaling Server.

Figure 67
Primary NRS IP address

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====
```

```
Please enter the Primary NRS IP Address:
```

```
Primary NRS IP   :
```

Figure 68
Alternate NRS IP address

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====
```

```
Please enter the Alternate NRS IP Address:
```

```
Alternate NRS IP :
```

- 15 Enter the Primary NRS IP address or the Alternate NRS IP address, depending on the option entered in step 12 on [page 163](#) or step 13 on [page 164](#).
 - If **a** was entered in step 13, you can enter the address of the Alternate NRS if you know it, but it is not required. See.
 - If **b** was entered in step 13, enter the address of the Primary NRS..
 - If **c** was entered in step 13:
 - Enter the address of the Primary NRS..
 - Enter the address of the Alternate NRS.
 - If **d** was entered in step 12:

- Enter the address of the Primary NRS (optional).
- If you did enter the address of the Primary NRS, enter the address of the Alternate NRS (also optional).

The Gatekeeper configuration can be updated later using Element Manager.

The IP Telephony parameter confirmation screen appears (Figure 69).

Figure 69
IP Telephony parameter configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

You have entered the following parameters for this Leader
Signaling Server:

Node ID           : 276
Hostname          : SS_Node276_Ldr
ELAN IP           : 192.168.20.100
ELAN subnet mask : 255.255.255.0
ELAN gateway IP  : 192.168.10.1
TLAN IP           : 192.168.20.20
TLAN subnet mask : 255.255.255.0
TLAN gateway IP  : 192.168.20.1
Node IP           : 192.168.20.100
Call Server IP   : 192.168.10.10
NRS configuration: Alternate GK + SIP
Primary NRS IP    : 192.168.20.10
Alternate NRS IP  : 192.168.20.24

Please enter:
<CR> -> <y> - Yes, these parameters are correct.
      <n> - No, these parameters are not correct.

Enter Choice>
```


16 Enter <CR> or **y** to confirm the parameters.

The example in Figure 69 on [page 168](#) is for a Leader Signaling Server configured with an Alternate H.323 and SIP NRS. The confirmation screens for a Follower and stand-alone Signaling Server are similar, showing the same list of parameters, specifically:

- The configuration screen for the Follower Signaling Server displays only the value for the Hostname parameter; all other values are blank.
- The configuration screen for the stand-alone Signaling Server displays values for the Hostname, ELAN network interface, TLAN network interface, and NRS parameters. The Node ID field is set to 0. The Call Server IP field is set to 0.0.0.0.

After you confirm the IP configuration, the following system messages appear:

For future reference, the ELAN MAC address is:
"00:02:b3:c5:51:c6".

Wrote config file "/u/config/bootp.tab".

Wrote config file "/boot/nvram.sys".

Wrote config file "/u/config/config.ini".

Wrote config file "/u/config/nrsconf.xml".

Note: You must configure the ELAN network interface MAC address for the newly installed Signaling Server in the Element Manager node configuration web page.

17 To complete the installation, the Installation Status Summary screen appears as shown in Figure 70 on [page 170](#).

Figure 70
Installation Status Summary

----- INSTALLATION STATUS SUMMARY -----			
Option	Choice	Status	Comment
software	yes	ok	new install x.xx.xx
Dependency Lists	yes	ignore	copy NONE
firmware	yes	ok	copy Ixxxx version x.xx
firmware	yes	ok	copy Ixxxx version x.xx
firmware	yes	ok	copy PhaseX IP Firmware version x.xx
firmware	yes	ok	copy Ixxxx IP Firmware version x.xx
firmware	yes	ok	copy Ixxxx IP Firmware version x.xx
firmware	yes	ok	copy Ixxxx IP Firmware version x.xx
firmware	yes	ok	copy Ixxxx IP Firmware version x.xx
loadware	yes	ok	copy IP Line x.xx.xx for P2
loadware	yes	ok	copy IP Line x.xx.xx for SA
loadware	yes	ok	copy IP Line x.xx.xx for MC32S
configuration	yes	ok	set as Leader
Please press <CR> when ready ...			

- 18** Press <CR> to exit to the Main Menu (see Figure 71 on [page 171](#)). Enter q at the Main Menu to quit the installation process. Figure 72 on [page 171](#) appears. Enter q again.

Figure 71
Install Tool Main Menu

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

                M A I N      M E N U

The Install Tool will install Signaling Server software and related
files. You will be prompted throughout the installation.

        Please enter:
<CR> -> <a> - To perform a complete installation/upgrade (Signaling
          Server s/w, IP Phone f/w, Voice Gateway Media
          Card l/w, basic Signaling Server configuration).
        <b> - To install/upgrade Signaling Server software only.
        <c> - To copy IP Phone firmware only.
        <d> - To copy Voice Gateway Media Card loadware only.
        <e> - To perform basic Signaling Server configuration only.
        <t> - To go to the Tools Menu.
        <q> - Quit.

        Enter Choice>

```

Figure 72
Quit

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

You have selected to quit the Install Tool.

Before quitting and rebooting the system, remove all disks (floppy,
CDROM) from the drives.

        Please enter:
<CR> -> <m> - Return to previous menu.
        <q> - Quit and reboot the system.

        Enter Choice> q

```

- 19** Remove the Signaling Server Software CD or the Signaling Server Software CF Card (as appropriate) from the RMD drive of the Signaling Server and enter q to close/terminate the Installation Tool and reboot the system. The following system messages appear:

```
Removing temporary file "/u/disk.sys".
```

```
Rebooting system ....
```

End of Procedure

First boot of a new Nortel CP PM Signaling Server

Nortel CP PM Signaling Servers have CS 1000 Release 5.0 software, applications, operating system, and web files preloaded on the hard drive when they are shipped. On the first boot of a Nortel CP PM Signaling Server, the Signaling Server Software Installation Tool prompts you to enter basic system configuration parameters.

Before you begin

Before booting the new Nortel CP PM Signaling Server for the first time and entering basic system configuration parameters, you must perform the following tasks:

- Install and connect the Signaling Server (refer to “Installing the CP PM Signaling Server hardware” on [page 111](#)).
- Obtain the network and IP Telephony data for the Signaling Server from your Planning and Engineering group:
 - node ID for the IP Telephony node
 - node IP address for the IP Telephony node
 - hostname for the Signaling Server
 - ELAN network interface IP address, Subnet mask, and Gateway
 - TLAN network interface IP address, Subnet mask, and Gateway
 - ELAN network interface IP address of the Call Server

- 2 Press <CR> to continue with the configuration. The Restore IP configuration screen appears (Figure 74).

Figure 74
Restore IP configuration

```
CS 1000 signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please insert the database diskette in the removable drive
to restore the IP configuration to the hard disk

Please enter:
<CR> -> <a> - Diskette is now in the removable drive.
        Continue.
        <b> - Continue without restoring the IP configuration
        <q> - Quit.
Enter Choice> b
```

- 3 Enter b at the prompt to bypass the restore of IP configuration data. The CP PM board location screen appears (Figure 75).

Figure 75
CP PM board location

```
CS 1000 signaling Server Software Install Tool (sse-x.xx.xx)
=====

This CS 1000 signaling server is currently located in the IPMG
configured as (Loop-Shelf-Card) :

Please enter new IPMG location for this CPPM SS, or press <CR> to skip.
Note: If the IPMG has not been configured yet, the IPMG loop and
      shelf information can be left as the current value. To update
      the loop and the shelf information later, use OAM shell)

New IPMG location (Loop and Shelf only) [LL SS] :
```

- 4 Enter the location (loop and shelf) of the IPMG board.

Note: If the IPMG has not been configured yet, the loop and shelf information can be left at the current value. The IPMG board location can be updated using OAM shell commands after the Signaling Server is configured.

- 5 The Leader/Follower configuration screen appears (Figure 76).

Figure 76
Leader/Follower Signaling Server configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====
Note: This step will over-write all existing configuration parameters
      on this Signaling Server.
Please select the role of this Signaling Server.

If this Signaling Server will be a Leader then its data networking
and IP Telephony parameters must be entered now. (This will pre-
configure the IP Telephony node files.)

If this Signaling Server will be a Follower then its data networking
and IP Telephony parameters must be configured through Element
Manager later.

      Please enter:
<CR> -> <a> - Set this Signaling Server as a Leader.
      <b> - Set this Signaling Server as a Follower.
      <q> - Quit.

      Enter Choice>
```

- 6 Configure the Signaling Server as a Leader or Follower. If there is already a Leader Signaling Server in the IP Telephony node, enter b at the prompt to configure this Signaling Server as Follower. The Follower Signaling Server configuration screen appears (Figure 77). Go to step 15 on [page 167](#).

Figure 77
Follower Signaling Server configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

This Follower Signaling Server will obtain its data network and IP
telephony configuration from the Leader Signaling Server at boot.

To identify this Signaling Server, please enter a Hostname.

Hostname : SS_Node276_Ldr
```

- 7 If there is not a Leader Signaling Server in the IP Telephony node already, or if the Signaling Server is to be a stand-alone Signaling Server, press <CR> or enter a at the prompt to configure this Signaling Server as Leader.

- 8** Configure the application configuration for this Signaling Server. See Figure 78.
- If you are planning on enabling the IP Phone TPS, Virtual Trunk TPS, and optional Network Routing Service (NRS) applications on this Signaling Server, enter **a** at the prompt to configure this Signaling Server as a co-resident Signaling Server.
 - If you are planning on enabling only the NRS on this Signaling Server:
 - If this Signaling Server is to be associated with a Call Server, enter **a** at the prompt to configure this Signaling Server as a co-resident Signaling Server. After you finished installing the Signaling Server software, you can disable the IP Phone TPS and Virtual Trunk TPS in Element Manager (refer to *Element Manager: System Administration* (NN43001-332)).
 - If this Signaling Server is not to be associated with a Call Server, enter **b** at the prompt to set this Signaling Server as a Standalone Signaling Server - NRS.

Figure 78
Application configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please select the application configuration for this Signaling Server.

Please enter:
<CR> -> <a> - Co-resident (LTPS + VTRK + NRS).
        <b> - Stand-alone (NRS only - no Call Server).
        <q> - Quit.

Enter Choice>
```

Depending on the application configuration selected, either the NRS type: co-resident Signaling Server screen (Figure 79 on [page 178](#)) or the NRS type: standalone Signaling Server screen (Figure 80 on [page 178](#)) appears.

Figure 79
Standalone Signaling Server - NRS

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please select the Network Routing Service (NRS) configuration for this
Signaling Server.

      Please enter:
<CR> -> <a> - H.323 Gatekeeper and SIP Redirect/Proxy Server.
        <b> - H.323 Gatekeeper only.
        <c> - SIP Redirect/Proxy Server only.

      Enter Choice>
```

Figure 80
NRS type — co-resident Signaling Server

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please select the type of Network Routing Service (NRS) for this
Signaling Server.

      Please enter:
<CR> -> <a> - Primary.
        <b> - Alternate.
        <c> - Failsafe.

      Enter Choice>
```

- 9** Select the type of NRS to be provided by this Signaling Server. See Figure 80 for a co-resident Signaling Server. See Figure 79 for a stand-alone Signaling Server.
- If this Signaling Server is to be the Primary NRS, enter **a**.
 - If this Signaling Server is to be the Alternate NRS, enter **b**.
 - If this Signaling Server is not a stand-alone Signaling Server and is to be the Fail-safe NRS, enter **c**.

Refer to *IP Peer Networking: Installation and Commissioning* (NN43001-313) for more information on the NRS.

Depending on whether the Signaling Server is configured as Leader, Follower or Stand-alone, the Leader Signaling Server configuration screen (Figure 81), the Follower Signaling Server configuration screen (Figure 82) or the Stand-alone Signaling Server configuration screen (Figure 83) appears.

Figure 81
Leader Signaling Server configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please enter the data networking and IP Telephony parameters for
this Leader Signaling Server.

Node ID           : 276

Hostname          : SS_Node276_Ldr

ELAN IP           : 192.168.10.20
ELAN subnet mask: 255.255.255.0
ELAN gateway IP  : 192.168.10.1

TLAN IP           : 192.168.20.20
TLAN subnet mask: 255.255.255.0
TLAN gateway IP  : 192.168.20.1

Node IP           : 192.168.10.20

Call Server IP    : 192.168.10.10
```

Figure 82
Follower Signaling Server configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

This Follower Signaling Server will obtain its data network and IP
telephony configuration from the Leader Signaling Server at boot.

To identify this Signaling Server, please enter a Hostname.

Hostname : SS_Node276_Ldr
```

Figure 83
Stand-alone Signaling Server configuration

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

Please define the data networking parameters for this Standalone
Signaling Server. Note that the ELAN parameters are necessary for
management access (e.g. SNMP).

Hostname           : SS_SA
ELAN IP            : 192.168.10.20
ELAN subnet mask: 255.255.255.0
ELAN gateway IP   : 192.168.10.1

TLAN IP           : 192.168.20.20
TLAN subnet mask: 255.255.255.0
TLAN gateway IP   : 192.168.20.1

```

- 10** Enter the data networking and IP telephony parameters for the Signaling Server, as prompted.
- If this is a Leader Signaling Server, enter the parameters for the Node, ELAN network interface, TLAN network interface, and Call Server as required. See Figure 65 on [page 165](#). For the Call Server:
 - If installing the Signaling Server at an office that is not a branch office, enter the ELAN network interface IP address of the Call Server.
 - If installing the Signaling Server at a branch office, enter the ELAN network interface IP address of the MG 1000B Core.
 - If this is a Follower Signaling Server, enter the Hostname of the Leader Signaling Server. The IP telephony parameter configuration screen appears (Figure 84 on [page 181](#)).

Figure 84
IP Telephony parameter configuration

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
-----

You have entered the following parameters for this Leader SS :
(Press <a>-<l> to correct, <y> to proceed, <n> to reconfigure all.)

Please enter:
<CR> -> <y> - Yes, these parameters are correct.
        <n> - Re-enter all of the parameters

        <a> - Node ID           I : 9
        <b> - Hostname          : CS1000E_PIV
        <c> - ELAN IP           : 192.167.102.4
        <d> - ELAN subnet mask  : 255.255.255.0
        <e> - ELAN gateway IP   : 192.167.102.1
        <f> - TLAN IP           : 192.167.103.2
        <g> - TLAN subnet mask  : 255.255.255.0
        <h> - TLAN gateway IP    : 192.167.103.1
        <i> - Node IP           : 192.167.103.3
        <j> - Call Server IP     : 192.167.102.3
              NRS configuration : Primary GK + SIP
        <k> - Primary NRS IP    : 192.167.103.2
        <l> - Alternate NRS IP  :

Enter Choice>

```

- Proceed to step 16 on [page 169](#).
- If this is a stand-alone Signaling Server and not associated with a Call Server (that is, **b** was selected in step 11 on [page 162](#)), enter the TLAN subnet parameters as required. The Call Server IP address is automatically set to 0.0.0.0.

The IP information applies to a temporary IP Telephony node. This ensures that the existing node is not impacted. This also preconfigures the IP Telephony node files. In *Signaling Server: Installation and Commissioning* (NN43001-312), the node files are imported to Element Manager for further configuration.

Depending on whether the Signaling Server is configured as Primary, Alternate or Stand-alone, the Primary NRS IP address screen (Figure 85), the Alternate NRS IP address screen (Figure 86), or both in succession (for a Stand-alone Signaling Server) appear.

Figure 85
Primary NRS IP address

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====
Please enter the Primary NRS IP Address:
Primary NRS IP   :
```

Figure 86
Alternate NRS IP address

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====
Please enter the Alternate NRS IP Address:
Alternate NRS IP :
```

- 11 Enter the Primary NRS IP address or the Alternate NRS IP address, depending on the option entered in step 12 on [page 163](#) or step 13 on [page 164](#).
 - If **a** was entered in step 13, you can enter the address of the Alternate NRS if you know it, but it is not required. See Figure 68 on [page 167](#).
 - If **b** was entered in step 13, enter the address of the Primary NRS. See Figure 67 on [page 167](#).
 - If **c** was entered in step 13:
 - Enter the address of the Primary NRS. See Figure 67.
 - Enter the address of the Alternate NRS. See Figure 68.
 - If **d** was entered in step 12:
 - Enter the address of the Primary NRS (optional).

- If you did enter the address of the Primary NRS, enter the address of the Alternate NRS (also optional).

The Gatekeeper configuration can be updated later using Element Manager. The IP telephony parameter configuration screen appears (Figure 87).

Figure 87
IP Telephony parameter configuration

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
-----

You have entered the following parameters for this Leader SS :
(Press <a>-<l> to correct, <y> to proceed, <n> to reconfigure all.)

Please enter:
<CR> -> <y> - Yes, these parameters are correct.
      <n> - Re-enter all of the parameters

      <a> - Node ID           I : 9
      <b> - Hostname          : CS1000E_PIV
      <c> - ELAN IP           : 192.167.102.4
      <d> - ELAN subnet mask  : 255.255.255.0
      <e> - ELAN gateway IP   : 192.167.102.1
      <f> - TLAN IP           : 192.167.103.2
      <g> - TLAN subnet mask  : 255.255.255.0
      <h> - TLAN gateway IP   : 192.167.103.1
      <i> - Node IP           : 192.167.103.3
      <j> - Call Server IP    : 192.167.102.3
            NRS configuration : Primary GK + SIP
      <k> - Primary NRS IP    : 192.167.103.2
      <l> - Alternate NRS IP  :

Enter Choice>
```

12 Press <CR> or enter y to confirm all parameters entered, n to re-enter all parameters, or a letter a through l to change the value of the corresponding system parameter. The configuration screens for a Follower and Standalone Signaling Server - NRS are similar, showing the same list of parameters, specifically:

- The screen for the Follower Signaling Server displays only the value for the Hostname parameter; all other values are blank.
- The screen for the stand-alone Signaling Server displays values for the Hostname, ELAN network interface, TLAN network interface, and NRS parameters. The Node ID field is set to 0. The Call Server IP field is set to 0.0.0.0.

The following message is displayed:

**For future reference, the ELAN MAC address is:
"00:02:b3:c5:51:c6".**

Note: The ELAN network interface MAC address must be configured in the Element Manager node configuration web page.

The Install Tool Main Menu screen appears (Figure 88):

Figure 88
Install tool

```

CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====

                M A I N      M E N U

The Install Tool will install Signaling Server software and related
files. You will be prompted throughout the installation.

Please enter:
<CR> -> <a> - To perform a complete installation/upgrade (Signaling
          Server s/w, Internet Telephone f/w, Voice Gateway Media
          Card l/w, basic Signaling Server configuration).
        <b> - To install/upgrade Signaling Server software only.
        <c> - To copy Internet Telephone firmware only.
        <d> - To copy Voice Gateway Media Card loadware only.
        <e> - To perform basic Signaling Server configuration only.
        <f> - To selectively change initial system parameters.
        <g> - To change board location information (CPPM only).
        <t> - To go to the Tools Menu.
        <q> - Quit.

Enter Choice> q

```

- 13** Enter **q** to quit the Install Tool. Confirm to reboot the system. The Installation Tool quit confirmation screen appears (Figure 89).

Figure 89
Installation Tool quit confirmation

```
CS 1000 Signaling Server Software Install Tool (sse-x.xx.xx)
=====
You have selected to quit the Install Tool.

Before quitting and rebooting the system, remove all disks (floppy,
CDROM) from the drives.

Please enter:
<CR> -> <m> - Return to previous menu.
        <q> - Quit and reboot the system.

Enter Choice> q
```

- 14** Enter **q** to close/terminate the Installation Tool and reboot the Signaling Server.

End of Procedure

Adding a follower Signaling Server

After configuration and reboot, a Follower Signaling Server sends out BOOTP requests and waits for a response. Since the Follower Signaling Server is not yet configured in an IP Telephony node, there is no BOOTP response. Do not wait for this response. Complete Procedure 36, “Adding a Follower Signaling Server to an IP Telephony node,” on [page 187](#) .

Procedure 36**Adding a Follower Signaling Server to an IP Telephony node**

Note: The first time the Follower Signaling Server is installed, it cannot obtain the system login and password, and does not have the current CONFIG.INI file with the Call Server IP address, therefore the FTP fails. In subsequent Follower installations, FTP succeeds.

- 1 Open the Web browser.
- 2 Enter the **Signaling Server Node IP address** in the Address Bar of the browser window and press Enter on the keyboard.

Note: The ELAN network interface IP address can be required, instead of the Node IP address, to access the Element Manager login Web page in secure environments.

- 3 The Element Manager **Login** Web page opens.

- a. Enter a valid **User ID** and **Password** combination.

— A valid User Id and Password combination is one that is defined on the Call Server.

The IP Address of the Call Server appears in the Call Server IP Address field.

- b. Click **Login**.

The System Overview Web page appears.

- 4 Select **IP Network > Nodes: Servers, Media Cards** from the navigator. The Node Configuration web page opens, as shown in Figure 90.

Figure 90
Node Configuration web page

Managing: **207.179.153.99**
IP Telephony » Nodes: Servers, Media Cards » Node Configuration

Node Configuration

New Node

+ Node: 8 Node IP: 192.168.253.7

- 5 Click Edit next to the node to which the Follower Signaling Server is to be added. The Edit web page opens, as shown in Figure 91.

Figure 91
Edit web page

Managing: **Navigation Sytem Name (192.167.102.3)**
 System » IP Network » Node Configuration » IP Telephony: Node ID 9 » Edit

Edit

- IP Telephony Node

Node ID 9

Telephony LAN (TLAN) Node IP address

Embedded LAN (ELAN) gateway IP address

Embedded LAN (ELAN) subnet mask

Voice LAN (TLAN) subnet mask

- + VGW and IP phone codec profile
- + QoS
- + LAN configuration
- + SNTP
- + Virtual Trunk Network Health Monitor configuration
- + H323 GW Settings
- + Firmware
- + SIP GW Settings
- + SIP URI Map
- + SIP CD Services
- + SIP CTI Services
- + Cards
- + Signaling Servers

**Mandatory fields of current configuration*

- 6 Click Add next to Signaling Servers. The section expands to show a list of Signaling Servers and a blank template for entering Signaling Server xxx.xxx.xxx.xxx properties, as shown in Figure 92.

Figure 92
Signaling Server properties template

- Signaling Servers	Add
+ Signaling Server 192.167.102.4 Properties	Remove
- Signaling Server 0.0.0.0 Properties	Remove

Role **Unknown**
 Type **UnknownSS**

Embedded LAN (ELAN) IP address *
 Embedded LAN (ELAN) MAC address *
 Telephony LAN (TLAN) IP address *
 Telephony LAN (TLAN) gateway IP address
 Hostname *
 H323 ID

Enable Line TPS ☒
 Enable IP Peer Gateway (Virtual Trunk TPS)

If Telephony LAN(TLAN) IP address and Telephony LAN(TLAN) gateway IP
 Telephony LAN(TLAN) Node IP address when Line TPS or IP Peer Gateway
 applications will not run.

Enable SIP Proxy / Redirect Server ☐
 Local SIP TCP/UDP Port to Listen to
 SIP Domain name
 SIP Gateway Endpoint Name
 SIP Gateway Authentication Password
 Enable Gatekeeper ☐
 Network Routing Service Role

** Mandatory fields of current configuration*

- 7 Enter the information corresponding to the Follower Signaling Server. The Role field will automatically revert to Follower once the Follower Signaling Server has been added.

- 8 Click Save and Transfer to transfer the updated IP Telephony node information to the other elements of the node. Refer to Transferring IP Telephony files, and *IP Line: Description, Installation, and Operation* (NN43001-500) for detailed instructions on transferring IP Telephony node information.

End of Procedure

Unpacking Help files for Virtual Terminal Emulator

Help files for the Virtual Terminal Emulator (VTE) component of Element Manager are copied to the Signaling Server as compressed files during installation of the Signaling Server software.

Unpacking the Help files is optional. However, they can be unpacked at any time after the Signaling Server software is installed. To unpack the files, refer to *Signaling Server: Installation and Commissioning* (NN43001-312).

IMPORTANT!

Unpacking the Help files takes approximately 20 to 30 minutes. Nortel recommends that you unpack the files during a service outage.

Refer to *Element Manager: System Administration* (NN43001-632) for more information on Element Manager and the Virtual Terminal Emulator.

Logging in to the Signaling Server

Use Procedure 37 on [page 192](#) to log in to the vxWorks™ shell to access the Signaling Server from a maintenance terminal.

Procedure 37

Logging in to the Signaling Server

Before you begin, make sure the DTE–DTE null modem cable (supplied with the Signaling Server) runs between the serial port on the back of the Signaling Server and the maintenance terminal.

- 1 Make sure the Signaling Server is powered up and connected to the maintenance terminal. Refer to *Signaling Server: Installation and Commissioning* (NN43001-312).

The Signaling Server must boot successfully before the user can log in.

- 2 Press <CR> to invoke the login prompt.
- 3 Enter the login credentials by doing one of the following:
 - If the Signaling Server has connected to the Call Server (the startup messages indicate if the PBX link is up), use the PWD1 login to access the Signaling Server.
 - If the Signaling Server is not connected to the Call Server:
 - a. Enter the default Signaling Server Command Line Interface (CLI) login **admin**.
 - b. Enter the Signaling Server Command Line Interface (CLI) password.
 - If this Signaling Server has just been installed and you are logging in for the first time, enter the default password **cseadmin**.

The system immediately prompts you to change the default password.
 - If this is not the first login to the Signaling Server, enter the appropriate password.

If you have forgotten the password, reset it from the Tools Menu (see *Signaling Server: Installation and Commissioning* (NN43001-312)).

End of Procedure

To log out of the Signaling Server, enter **exit** at the command line.

Verifying a successful configuration

To ensure that the Signaling Server Ethernet connections (for the ELAN and TLAN subnets) are configured correctly, perform a ping test to one or more of the other devices connected to the network, particularly the Call Server.

Procedure 38

Verifying the Signaling Server Ethernet connection

- 1 Log in to the Signaling Server, using Procedure 37 on [page 192](#).
- 2 Ping the IP address of the Signaling Server. Enter the command:

```
ping x.x.x.x
```

Where **x.x.x.x** is the Signaling Server ELAN network interface IP address.

- 3 Ping the IP address of the Call Server. Enter the command:

```
ping x.x.x.x,3
```

Where **x.x.x.x** is the Call Server ELAN network interface IP address.

- 4 If desired, repeat step 3 for other devices connected to the network.

End of Procedure

Testing the Leader Signaling Server

Configure two IP Phones to register to the Signaling Server on its temporary node. These IP Phones must be provisioned on the Call Server. Refer to *Communication Server 1000E: Installation and Commissioning* (NN43041-310), *Communication Server 1000M and Meridian 1: Large System Installation and Commissioning* (NN43021-310), or *Communication Server 1000M and Meridian 1: Small System Installation and Configuration* (NN43011-310) for the procedure appropriate to the system. After provisioning, the telephones can call each other.

Appendix A: Upgrade checklists

Contents

This section contains information on the following topics:

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Upgrade details	196
Pre-upgrade checklists.	197
Pre-conversion steps	200
Post-conversion checks	202
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Introduction

The following section provides Large System upgrade checklists.

Technical Support

Nortel can provide an Installation and Upgrade Support team to assist with PBX upgrades on a scheduled bases. This service is billable and a purchase order is required. Please refer to current price book for rates.

Note: This service requires that a service request be opened in advance of the upgrade.

Site details

Table 7
Site Details

Customer Name	
Tape ID (LD 22)	
Modem Number (Core)	
Switch Room Telephone	
Baud Rate	
Modem Password	
PBX Password	
System Type	
Software Generic	

Upgrade details

Table 8
Upgrade details

Current Software - Generic	
Target Software - Generic	
Hardware being added	
Feature Upgrade	
License Upgrade	

Pre-upgrade checklists

Software Upgrade

Software audit

Table 9
Software audit

Software Audit		
Perform the software audit prior to the scheduled upgrade.		
Take corrective action if answer is no		
	Yes	No
Software CD Ready		
Keycode Disk Ready		
Install Disk Ready		
DEP Patch Disk Ready		
Review Keycode Data Sheet - (SDID,PKGS,License,TID)		
Review Site Specific Patches - (Non MDCS)		
Read GRB for target Release – (Verify Memory Requirements)		

License Upgrade

Table 10
Keycode audit

Keycode Audit		
Perform the keycode Audit prior to the scheduled upgrade.		
Take corrective action if answer is no		
	Yes	No
Keycode Disk Ready		
Keycode Data Sheet Ready		
SDID Matches System		
TID Matches System		
Perform a KDIFF in LD 143 to compare keycodes		

Conversion Required

Table 11
Conversion Procedures

Conversion Procedures	
Upgrades between different machine types require some type of conversion.	
If the disk media is changing the database must be physically transferred	
between storage devices. Please select source and target media.	

Table 12
Typical Storage Media Changes Between machine Types (Part 1 of 2)

Typical Storage Media Changes Between machine Types		
Source	Target	Procedure Required
Omega	IODUC	Direct cable transfer

Table 12
Typical Storage Media Changes Between machine Types (Part 2 of 2)

Omega	MMDU	Nortel Internal
CMDU	IODUC	4M - 2M media transfer
IODUC	MMDU	Disk to new Drive both use 2M Floppy Drives
MMDU	MMDU	Disk to new Drive

Hardware Upgrade

Hardware audit

Table 13
Hardware audit

Hardware Audit		
Perform the Hardware Audit prior to the scheduled upgrade.		
	Yes	No
Verify Shipping List - Complete and Accurate		
Audit Site for new hardware locations		
Pre Run Cables if possible		
Review All switch settings for new cards		
Read all applicable NTP Procedures completely		

Pre-conversion steps

Table 14
Pre-conversion steps (Part 1 of 2)

Pre Conversion Steps
A capture file should be made of the following information using a PC or Printer.
Perform an overall system check:
LD 135 SCPU (ensure that the system is redundant)
LD 137 STAT/TEST CMDU
LD 96 STAT DCH
LD 48 STAT AML
LD 32 STAT
LD 60 STAT

Table 14
Pre-conversion steps (Part 2 of 2)

LD 30 LDIS (Verify what is disabled if any)
Get Software Information from LD 22
ISSP - Patches in service - Future Reference if required LD 143 - MDP ISSP -Prints all inservice patches and patch handle numbers (includes all DepList patches)
TID/SLT - License Parameters - To compare with converted database
LD 21 - PRT CFN
LD 97 - PRT SUPL/XPEC
Run a Template Audit
LD 1 - Auto Run
Perform a Datadump
Backup at least two copies of the current database, retain the copies.
Print History File or System Event Log
LD 22 - Print AHST - Capture Systems Events to compare with new software if required
LD 117 - PRT SEL 500 - Same as above

Post-conversion checks

Table 15
Post-conversion checks

Post Conversion Checks
Perform these checks after a successful INI.
Test for dial tone
Stat D Channels for proper operation
Ensure that all XPEC's are in service via visual inspection
Ensure that all AUX applications are working
LD 30 LDIS (Verify that output is the same prior to upgrade)

Quick reference

IGS Cabling Chart - MultiGroup PBX - Opt 81/81C/CP (5 Groups Maximum)

Table 16
IGS cabling chart (Part 1 of 2)

Net Group	Net Shelf	IGS Connector	IGS Net	Slot	Net	DIGS	Slot Connector	Intergroup connector	I G S	Clock
0	0	0	3	8	2	9	BOTTOM	J1	0	
0	0	1	2	9	2	9	TOP	J6	2	0
0	1	1	2	9	2	9	TOP	J17	3	1
0	1	0	3	8	2	9	BOTTOM	J22	1	
1	0	0	3	8	2	9	BOTTOM	J2	4	

Table 16
IGS cabling chart (Part 2 of 2)

1	0	1	2	9	2	9	TOP	J7	6	0
1	1	1	2	9	2	9	TOP	J16	7	1
1	1	0	3	8	2	9	BOTTOM	J21	5	
2	0	0	3	8	2	9	BOTTOM	J3	8	
2	0	1	2	9	2	9	TOP	J8	1 0	0
2	1	1	2	9	2	9	TOP	J15	1 1	1
2	1	0	3	8	2	9	BOTTOM	J20	9	
3	0	0	3	8	2	9	BOTTOM	J4	1 2	
3	0	1	2	9	2	9	TOP	J9	1 4	0
3	1	1	2	9	2	9	TOP	J14	1 5	1
3	1	0	3	8	2	9	BOTTOM	J19	1 3	
4	0	0	3	8	2	9	BOTTOM	J5	1 6	
4	0	1	2	9	2	9	TOP	J10	1 8	0
4	1	1	2	9	2	9	TOP	J14	1 9	1
4	1	0	3	8	2	9	BOTTOM	J18	1 7	

Note: A DIGS Card is located in the card slot position for IGS 1 in all network shelves. The IGS 1 slot detects the clock signals from the active clock controller and distributes the clock to the entire group. Three out of four IGS cards can be disabled at any given time via LD 39, the IGS 1 that is associated with the active clock cannot be disabled via software, e.g. if clock 1 is active then IGS's 3,7,11,15 and 19 can never be disabled as they are providing clock for their respective network groups.

Group/Loop/PS/FIJI/3PE Switch Settings

Table 17
Switch settings (Part 1 of 2)

Group	Shelf	P S	Loops	FIJI*	3PE NT8D35 Net**	3PE NT5D21 Core Net**
0	0	0	0-16	0 0	off on on on on on on on	off on on off on on on on
0	1	1	16-31	0 1	off on on on on on on off	off on on off on on on off
1	0	2	32-47	1 0	off on on on on on off on	off on on off on on off on
1	1	3	48-63	1 1	off on on on on on off off	off on on off on on off off
2	0	4	64-79	2 0	off on on on on off on on	off on on off on off on on
2	1	5	80-95	2 1	off on on on on off on off	off on on off on off on off
3	0	6	96-111	3 0	off on on on on off off on	off on on off on off off on
3	1	7	112-127	3 1	off on on on on off off off	off on on off on off off off
4	0	8	128-143	4 0	off on on on off on on on	off on on off off on on on
4	1	9	144-159	4 1	off on on on off on on off	off on on off off on on off
5	0	10	160-175	5 0	off on on on off on off on	off on on off off on off on
5	1	11	176-191	5 1	off on on on off on off off	off on on off off on off off
6	0	12	192-207	6 0	off on on on off off on on	off on on off off off on on
6	1	13	208-233	6 1	off on on on off off on off	off on on off off off on off

Table 17
Switch settings (Part 2 of 2)

7	0	1 4	224-23 9	7 0	off on on on off off off on	off on on off off off off on
7	1	1 5	240-25 5	7 1	off on on on off off off off	off on on off off off off off

Software generic by machine type

Table 18
Software generic by machine type

System Type	Generic	System Type	Generic	Processors
ST	1011	Option 61	1111	CP1 - NT6D66 - 68030
STE	1511	Option 61 CP1	1811	CP2 - NT9D19 - 68040
NT	1111	Option 61 CP2	2311	CP3 - NT5D10 - 68060
XT	1211	Option 61 CP3	2511	CP4 - NT5D03 - 68060E
RT	1311	Option 61 CP4	2911	CPP - INTEL PII
Option 11	1411	Option 71	1211	CNI'S
Option 11	1411	Option 81 CP1	1611	Opt 81 - 8,9,10
Option 11C	2111	Option 81 CP2	1911	Opt 81C - 12,13,14
Compact	X27	Option 81 CP3	2611	CPP - c9,c10,c11,c12
Option 21	1011	Option 81 CP4	3011	Key Packages
Option21E	1511	Option 81C CP1	1611	Opt 81 - PKG 298
Option 51	1111	Option 81C CP2	1911	Opt 81C - PKG 299
Option 51 CP1	1711	Option 81C CP3	2611	CPP - PKG 299,368
Option 51 CP2	2211	Option 81C CP4	3011	FIJI - PKG 365
Option 51 CP3	2411	Option CP PII	3311	
Option 51 CP4	2811			

Appendix B: Technical Assistance service

Contents

This section contains information on the following topics:

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Nortel Technical Assistance Centers

To help customers obtain maximum benefit, reliability, and satisfaction from their CS 1000E systems, Nortel provides technical assistance in resolving system problems. Table 19 on [page 208](#) lists the centers that provide this service.

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

If you purchased a Nortel service program, contact one of the following Nortel Technical Solutions Centers.

Table 19
Customer Technical Services (Part 1 of 2)

Location	Contact
Nortel Global Enterprise Technical Support (GETS) PO Box 833858 2370 Performance Drive Richardson, TX 75083 USA	North America Telephone: 1 800 4NORTEL
Nortel Corp. P.O. Box 4000 250 Sydney Street Belleville, Ontario K8N 5B7 Canada	North America Telephone: 1 800 4NORTEL
Nortel Service Center - EMEA	EMEA Telephone: 00 800 8008 9009 or +44 (0)870 907 9009 E-mail: emeahelp@nortel.com
Nortel 1500 Concord Terrace Sunrise, Florida 33323 USA	Brazil Telephone: 5519 3705 7600 E-mail: entcts@nortel.com English Caribbean Telephone: 1 800 4NORTEL Spanish Caribbean Telephone: 1 954 858 7777 Latin America Telephone: 5255 5480 2170

Table 19
Customer Technical Services (Part 2 of 2)

Location	Contact
Network Technical Support (NTS)	Asia Pacific Telephone: +61 28 870 8800 Australia Telephone: 1800NORTEL (1800 667835) or +61 2 8870 8800 E-mail: asia_support@nortel.com People's Republic of China Telephone: 800 810 5000 E-mail: chinatsc@nortel.com Japan Telephone: 010 6510 7770 E-mail: supportj@nortel.com Hong Kong Telephone: 800 96 4199 E-mail: chinatsc@nortel.com Taiwan Telephone: 0800 810 500 E-mail: chinatsc@nortel.com Indonesia Telephone: 0018 036 1004 Malaysia Telephone: 1 800 805 380 New Zealand Telephone: 0 800 449 716 Philippines Telephone: 1 800 1611 0063 or 632 917 4420 Singapore Telephone: 800 616 2004 South Korea Telephone: 0079 8611 2001 Thailand: Telephone: 001 800 611 3007

Services available

Services available through the Technical Assistance Centers include:

- diagnosing and resolving software problems not covered by support documentation
- diagnosing and resolving hardware problems not covered by support documentation
- assisting in diagnosing and resolving problems caused by local conditions

There are several classes of service available. Emergency requests (Class E1 and E2) receive an immediate response. Service for emergency requests is continuous until normal system operation is restored. Non-emergency

requests (Class S1, S2, and NS) are serviced during normal working hours.
Tables 20 and 21 describe the service classifications.

Table 20
Technical service emergency classifications

Class	Degree of failure	Symptoms
E1	Major failure causing system degradation or outage	System out-of-service with complete loss of call-processing capability. Loss of total attendant console capability. Loss of incoming or outgoing call capability. Loss of auxiliary Call Detail Reporting (CDR) in resale application. Call processing degraded for reasons such as trunk group out-of-service: • 10% or more lines out-of-service • frequent initializations (seven per day or more) • inability to recover from initialization or SYSLOAD • consistently slow dial tone (eight seconds or more delay)
E2	Major failure causing potential system degradation or outage	Standby CPU out-of-service. Frequent initializations (one per day or more). Disk drive failure. Two sets of disks inoperative.

Table 21
Technical services non-emergency classifications

Class	Degree of failure	Symptoms
S1	Failure that affects service	Software or hardware trouble directly and continuously affecting user's service or customer's ability to collect revenue. Problem that will seriously affect service at in-service or cut-over date.
S2	Intermittent failure that affects service	Software or hardware faults that only intermittently affect service. System-related documentation errors that directly result in or lead to impaired service.
NS	Failure that does not affect service	Documentation errors. Software inconsistencies that do not affect service. Hardware diagnostic failures (not defined above) that cannot be corrected by resident skills. Test equipment failures for which a backup or manual alternative can be used. Any questions concerning products.

Except as excluded by the provisions of warranty or other agreements with Nortel, a fee for technical assistance may be charged, at rates established by Nortel. Information on rates and conditions for services are available through Nortel sales representatives.

Requesting assistance

Collect the information listed in Table 22 before you call for service.

Table 22
Checklist for service requests

Name of person requesting service	_____
Company represented	_____
Telephone number	_____
System number/identification	_____
Installed software generic and issue (located on data disk)	_____
Modem telephone number and password (if applicable)	_____
Seriousness of request (see Tables 20 and 21)	_____
Description of assistance required	_____

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Nortel Communication Server 1000

Communication Server 1000M and Meridian 1

61C CP PII to CS1000M SG CP PIV Upgrade

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