



# Upgrading the CS 2000 Core Manager

This document contains the procedures for performing CS 2000 Core Manager upgrades.

## What's new in Upgrading the CS 2000 Core Manager in SN09

### Features changes

The following feature-related changes have been made in the documentation:

- The Ability to apply patches during ESUP upgrade feature required changes in the procedure, Upgrading CS 2000 Core Manager software using ESUP.

### Other changes

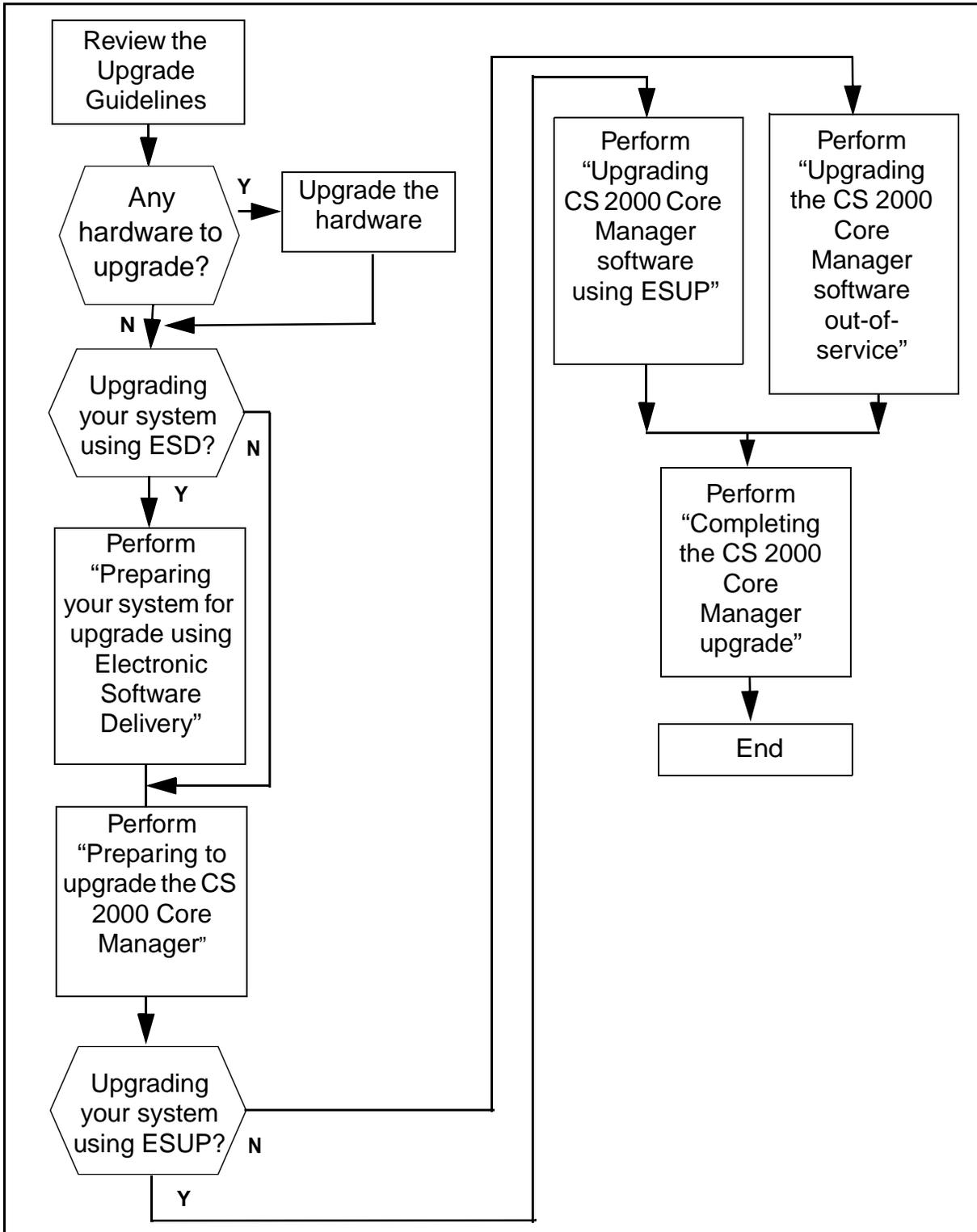
There are no other changes in this release.

## **Introduction to upgrading the CS 2000 Core Manager**

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The following flowchart provides a summary of the upgrade process. Use the instructions in the specific procedures to complete each task.

**Task flow for upgrading the CS 2000 Core Manager**



## Upgrade strategy

The Carrier Voice over IP Networks upgrade strategy is based on end-to-end upgrades that provides the following.

- an upgrade that provides a carrier grade solution and has no impact to stable calls
- a solution that does not isolate network components
- a solution that allows third party components
- a solution that introduces new functionality across many components without affecting network stability

The CS 2000 Core Manager component lies at the highest level of Carrier Voice over IP upgrades and must be upgraded before other components.

### **ATTENTION**

Once the CS 2000 Core Manager is upgraded, you cannot provision Gateway Controllers (GWCs) until the CS 2000 Management software package is installed and configured on the CS 2000 Management Tools server.

New software is available through the following sources:

- non-computing load (NCL), a major release of the software scheduled once or twice a year, delivered on tape or electronically
- maintenance non-computing load (MNCL), a maintenance release scheduled approximately every three months for the first year of a released NCL, delivered on tape or electronically
- CS 2000 Core Manager patching, fix filesets delivered electronically as soon as they are available

## Tools and utilities

Procedures are provided in this document for using common upgrade tools and utilities for:

- CS2000 Core Manager platform software upgrades available from tape or electronic software delivery (ESD): SDM Out of Service (OOS) Upgrade Procedure and enhanced SDM upgrade procedure (ESUP)
- Client application upgrades, including ASCII Terminal Access (ATA), Enhanced Terminal Access (ETA), Secure File Transfer (SFT) and others
- Hardware upgrades to the latest CPU modules

## Upgrade process overview

Task flow diagrams and detailed instructions for specific upgrade procedures are provided in this document.

**ATTENTION**

For an MNCL upgrade, check the release notes.

If you have an MNCL upgrade to install, refer to the MNCL release notes for instructions. This procedure only provides information on NCL upgrade installation.

## Upgrade guidelines

Nortel offers several Network Service Solution packages to assist you with the upgrade of CS 2000 Core Manager software. The level of design, planning, configuring, and installation that Nortel performs for you depends on the options that your company purchased.

### Upgrade methods

There are two methods of upgrading the CS 2000 Core Manager to a new software release:

- Out of Service (OOS) Upgrade procedure using Electronic software delivery (ESD) or tape: This procedure busies the CS 2000 Core Manager and upgrades both domains at the same time.
- Enhanced SDM upgrade procedure (ESUP), through electronic software delivery (ESD), or tape: This procedure breaks the root volume group (rootvg) mirror, applies new filesets to domain 1 rootvg, busies and reboots the system, then integrates rootvg disks.

ESUP upgrades can be performed in the following ways, using a:

- telnet connection (only for upgrades to SDM20/CS2E0070 or later)
- remote console connection (modem, terminal server, etc.) (all releases)
- local console connection (vt100 terminal/emulation) (all releases)

### When to use each method

The following table indicates when to use the OOS Upgrade Procedure or ESUP method to upgrade your CS 2000 Core Manager to the new software release:

If you are upgrading	OOS Upgrade Procedure	ESUP
a rootvg-only system	x	
a rootvg/datavg system	x	x
the software and CPU hardware		

## Hardware baseline

The following table indicates the supported hardware to upgrade to the new software release.

### Hardware baseline

PEC	Description
CPU	
NTRX50CG	604e - 200MHz/256MB Up to 3+1 XA-Core, SDM supports maximum billing capacity of 70KB/s with an NTRX50CG (or CH), and NTRX50GX. Higher capacity requires the NTRX50NB.
NTRX50CH	604e - 200MHz/512MB Up to 3+1 XA-Core, SDM supports maximum billing capacity of 70KB/s with an NTRX50CG (or CH), and NTRX50GX. Higher capacity requires the NTRX50NB.
NTRX50NB	Arthur 750 - 400MHz/512MB The NTRX50NB requires the NTRX50GX for total traffic in excess of 26KB/s (KB/s = billing records/hr * record size (bytes) / (3600 second * 1024)). The NTRX50NB is the minimum hardware for GEM applications.
Disk/DAT and LAN PM	
NTRX50GN	4G DAT/4G DD (rootvg) The NTRX50GN is a rootvg-only (single disk) system and does not support electronic software delivery (ESD) in SDM17 onward. Upgrade to the rootvg/datavg system with the NTRX50NM (36G rootvg) and NTRX50NL (36G+36G datavg).

**Hardware baseline**

PEC	Description
NTRX50ND	4G DAT/9G DD (rootvg) The NTRX50ND is the minimum hardware for GEM applications. Replacements for the NTRX50ND are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004 the NTRX50NM is the replacement for the NTRX50ND.
NTRX50NM	12G DAT/36G DD (rootvg)
NTRX50NK	LAN personality module The NTRX50NK is used with the NTRX50NM.
NTRX50FS	LAN personality module The NTRX50FS is used with the NTRX50GN and NTRX50ND.
Disk expansion	
NTRX50GP	4G DD/4G DD (datavg)
NTRX50NC	9G DD/9G DD (datavg) The NTRX50NC is the minimum hardware for GEM applications. Replacements for the NTRX50NC are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004 the NTRX50NL will replace the NTRX50NC.
NTRX50NL	36G DD/36G DD (datavg)
Core connectivity	
NTRX50GA	DS-512 controller module (BRISC)  <b>Note:</b> The NTRX50CG and CH support BRISC processor and XA 1+1 processor up to 26KB/s with the NTRX50GA and up to 37KB/s with the NTRX50GX. The NTRX50GX is the minimum hardware for GEM applications.

**Hardware baseline**

PEC	Description
NTRX50GX	DS-512 controller module (XA-Core) The NTRX50CG and CH support BRISC processor and XA 1+1 processor up to 26KB/s with the NTRX50GA and up to 37KB/s with the NTRX50GX. The NTRX50GX is the minimum hardware for GEM applications.
NTRX50GH	DS-512 personality module
X.25 connectivity (optional)	
NTRX50FY	X.25 controller module
NTRX50FZ	X.25 personality module
NTRX50NN	X.25 personality module for UMFIO

**Hardware baseline**

PEC	Description
CPU	
NTRX50NB	Arthur 750 - 400MHz/512MB
Disk/DAT and LAN PM	
NTRX50ND	9G + DAT (rootvg) Replacements for the NTRX50ND are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004 the NTRX50NM replaces the NTRX50ND.
NTRX50FS	LAN personality module
Disk expansion	

**Hardware baseline**

PEC	Description
NTRX50NC	9G + 9G (datavg) Replacements for the NTRX50NC are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004 the NTRX50NL replaces the NTRX50NC.
Core connectivity	
NTRX50GX	DS-512 controller module
NTRX50GH	DS-512 personality module
X.25 connectivity (optional)	
NTRX50FY	X.25 controller module Replacements for the NTRX50FY are no longer available after April 2004.
NTRX50FZ	X.25 personality module Replacements for the NTRX50FZ are no longer available after April 2004.
NTRX50NN	X.25 personality module for UMPIO

You can have different MFIO/UMPIO datavg and rootvg combinations configured on your system. The following table lists the combinations that are supported for the new software release.

**Supported MFIO and UMPIO, datavg and rootvg configurations**

Configuration	Domain 0		Domain 1		Total disk storage
	Rootvg	Datavg	Rootvg	Datavg	
Most basic (not recommended)	NTRX50G N 4-Gbyte	N/A	NTRX50GN 4-Gbyte	N/A	4-Gbyte (rootvg only)
Moderate	NTRX50G N 4-Gbyte	NTRX50G P 8-Gbyte	NTRX50GN 4-Gbyte	NTRX50GP 8-Gbyte	12-Gbyte

**Supported MFIO and UMPIO, datavg and rootvg configurations**

Configuration	Domain 0		Domain 1		Total disk storage
	Rootvg	Datavg	Rootvg	Datavg	
Largest with 4-Gbyte disk	NTRX50GN N 4-Gbyte	NTRX50GP (8-Gbyte) + (expansion chassis) NTRX50GP (8-Gbyte) 16-Gbyte	NTRX50GN 4-Gbyte	NTRX50GP (8-Gbyte) + (expansion chassis) NTRX50GP (8-Gbyte) 16-Gbyte	20-Gbyte
Basic with 9-Gbyte disk	NTRX50ND 9-Gbyte <sup>1</sup>	N/A	NTRX50ND 9-Gbyte <sup>1</sup>	N/A	9-Gbyte (rootvg only)
Moderate	NTRX50ND 9-Gbyte <sup>1</sup>	NTRX50NC 18-Gbyte <sup>2</sup>	NTRX50ND 9-Gbyte <sup>1</sup>	NTRX50NC 18-Gbyte <sup>2</sup>	27-Gbyte
Largest with 9-Gbyte disk	NTRX50ND 9-Gbyte <sup>1</sup>	NTRX50NC (18-Gbyte) <sup>2</sup> + (expansion chassis) NTRX50NC (18-Gbyte) 36-Gbyte	NTRX50ND 9-Gbyte <sup>1</sup>	NTRX50NC (18-Gbyte) <sup>2</sup> + (expansion chassis) NTRX50NC (18-Gbyte) 36-Gbyte	45-Gbyte
4-Gbyte/9-Gbyte mix	NTRX50GN N 4-Gbyte	NTRX50NC 18-Gbyte <sup>2</sup>	NTRX50GN 4-Gbyte	NTRX50NC 18-Gbyte <sup>2</sup>	22-Gbyte
Basic with 36-Gbyte disk	NTRX50NM 36-Gbyte	N/A	NTRX50NM 36-Gbyte	N/A	36-Gbyte
Largest with only 36-Gbyte disk	NTRX50NM 36-Gbyte	NTRX50NL 72-Gbyte	NTRX50NM 36-Gbyte	NTRX50NL 72-Gbyte	108-Gbyte

## Supported MFIO and UMFIO, datavg and rootvg configurations

Configuration	Domain 0		Domain 1		Total disk storage
	Rootvg	Datavg	Rootvg	Datavg	
4-Gbyte/ 36-Gbyte mix	NTRX50G N 4-Gbyte	NTRX50N L 72-Gbyte	NTRX50GN 4-Gbyte	NTRX50NL 72-Gbyte	76-Gbyte
9-Gbyte/ 36-Gbyte mix	NTRX50N D9-Gbyte <sup>1</sup>	NTRX50N L 72-Gbyte	NTRX50ND 9-Gbyte <sup>1</sup>	NTRX50NL 72-Gbyte	81-Gbyte

**Note 1:** The maximum number of NTRX50GP MFIOs allowed in a system is four. The expansion shelf is required for this configuration.

**Note 2:** NTRX50GN and NTRX50GP are supported after November 2004. These disks must be replaced by NTRX50ND and NTRX50NM.

**Note 3:** The maximum number of NTRX50NC MFIOs allowed in a system is four. The expansion shelf is required for this configuration.

**Note 4:** The maximum number of NTRX50NL UMFIOs allowed in a system is two. Disk expansion shelf is not required in this configuration.

**Note 5:** MFIOs and UMFIOs must be deployed in matched pairs. MFIO and UMFIO modules cannot be intermixed; a volume group must have all of one or the other. For example, a pair of 4-Gbyte MFIO modules can be mixed with a pair of 9-Gbyte MFIOs in datavg. A pair of 9-Gbyte MFIOs cannot be mixed with a pair of 36-Gbyte UMFIOs in datavg.

**Note 6:** A single 4-Gbyte MFIO module cannot be mixed with a single 9-Gbyte module or a 36-Gbyte module to form a pair.

1. Replacements for the NTRX50ND are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004 the NTRX50NM is the replacement for the NTRX50ND.

2. Replacements for the NTRX50NC are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004 the NTRX50NL is the replacement for the NTRX50NC.

## Software baseline

You must have the latest maintenance non-CM load (MNCL) release installed on the CS 2000 Core Manager before you upgrade to the new NCL release.

When a new MNCL is released for the CS 2000 Core Manager, a technical bulletin is issued with a Notification of Availability. Check whether any technical bulletins with a Notification of availability in the title have been issued to determine if a later MNCL exists for your release. If you need to upgrade to the latest MNCL, refer to the MNCL release notes for instructions.

## Filesets to solution mapping

This module provides information on the filesets included in the CS2E0090 load.

The following table lists CS2E0090 filesets and provides the following information

- the solutions that use each fileset
- the DCE requirements for each fileset

### Fileset-to-solution mapping (Sheet 1 of 4)

Fileset	Description	Solutions					
		IAC	IAW	PT-AAL1	PT-IP	UA-AAL1	UA-IP
SDM_Version.info	CS2E0090	Y	Y	Y	Y	Y	Y
NT_SIM.tools	Patching tools	Y	Y	Y	Y	Y	Y
SDM_ACE.dist	SDM ACE distribution	Y	Y	Y	Y	Y	Y
SDM_AFT.DMS500	SBA Automatic File Transfertime	N	N	N	N	N	N
SDM_ATA.client	ASCII Terminal Access Client	Y	Y	Y	Y	Y	Y
SDM_BASE.base	Platform base	Y	Y	Y	Y	Y	Y
SDM_BASE.client	Client Common Resources	Y	Y	Y	Y	Y	Y
SDM_BASE.dfquery	Check disks and disk drives	Y	Y	Y	Y	Y	Y
SDM_BASE.fts	File Transfer Service	Y	Y	Y	Y	Y	Y
SDM_BASE.gdd	Generic Data Delivery	Y	Y	Y	Y	Y	Y
SDM_BASE.logs.client	Log Delivery Service Client	Y	Y	Y	Y	Y	Y
SDM_BASE.logs	Log Delivery Service	Y	Y	Y	Y	Y	Y
SDM_BASE.mtce	Platform Maintenance	Y	Y	Y	Y	Y	Y

**Note:** Y= required, N=not required, O=optional

## Fileset-to-solution mapping (Sheet 2 of 4)

Fileset	Description	Solutions					
		IAC	IAW	PT-AAL1	PT-IP	UA-AAL1	UA-IP
SDM_BASE.omsl	OM Access Service	Y	Y	Y	Y	Y	Y
SDM_BASE.tasl	Table Access Service	Y	Y	Y	Y	Y	Y
SDM_BASE.util	Platform utilities	Y	Y	Y	Y	Y	Y
SDM_BMI.bmi	Base Maintenance Interface	Y	Y	N	Y	Y	Y
SDM_DDMS.ossaps	OSS and Application Svcs	Y	Y	N	Y	Y	Y
SDM_DDMS.osscomms	OSS Comms Svcs	Y	Y	N	Y	Y	Y
SDM_DMA.dma	DMS Maintenance Application	Y	Y	N	Y	Y	Y
SDM_DNBD.dnbd	DNBD Call Data Delivery	Y	Y	Y	Y	Y	Y
SDM_DNBD.osidp	ONE FTAM Software	Y	Y	Y	Y	Y	Y
SDM_DTS_PROVIDERS.dts	DCE DTS Time providers for global servers	Y	Y	Y	Y	Y	Y
SDM_ECR.ecr	SDM Expansion Chassis Removal tool	Y	Y	Y	Y	Y	Y
SDM_ESUP.esup	ESUP Tools	Y	Y	Y	Y	Y	Y
SDM_ETA.eta	Enhanced Terminal Access	Y	Y	Y	Y	Y	Y
SDM_ETA.client	Enhanced Terminal Access Client	Y	Y	Y	Y	Y	Y
SDM_FTP.proxy	FTP proxy	Y	Y	Y	Y	Y	Y
SDM_GR740PT.gr740pt	GR740 Pass Through	Y	Y	Y	Y	Y	Y
SDM_IMAGEDUMP.rte	Image Dump Service	Y	Y	Y	Y	Y	Y
SDM_INSTALL_inst	SDM Tools	Y	Y	Y	Y	Y	Y

**Note:** Y= required, N=not required, O=optional

## Fileset-to-solution mapping (Sheet 3 of 4)

Fileset	Description	Solutions					
		IAC	IAW	PT-AAL1	PT-IP	UA-AAL1	UA-IP
SDM_LOGS.mdm	Passport Log Streamer	N	N	Y	Y	Y	N
SDM_OMDD.omdd	OM Delivery	Y	Y	Y	Y	Y	Y
SDM_OpenSSH.base	Open SSH ver. 3.4p1	Y	Y	Y	Y	Y	Y
SDM_OpenScreen.base	OpenScreen	Y	Y	Y	Y	Y	Y
SDM_PRECHECK.sysaudit	System pre-check tools	Y	Y	Y	Y	Y	Y
SDM_REACHTHRU.rttl1	Reach Through SPM	Y	Y	Y	Y	Y	Y
SDM_SBA.DMS500	SDM Billing Application	Y	Y	Y	Y	Y	Y
SDM_SCFT.scft	Secure Core File Transfer	Y	Y	Y	Y	Y	Y
SDM_SCM.scm	Succession SAM21 Manager This fileset is only required for SN05 to SN08 upgrades.	Y	Y	N	Y	Y	Y
SDM_SFT.client	Secure File Transfer Client	Y	Y	Y	Y	Y	Y
SDM_SFT.sft	Secure File Transfer	Y	Y	Y	Y	Y	Y
SDM_SWLD.swld	BOOTP Loading Service	Y	Y	N	Y	Y	Y
SDM_UPGRADE.tools	UPGRADE Tools	Y	Y	Y	Y	Y	Y
SDM_BKM-CSU-00.tape 21.3.0.0	Succession Provisioning Data Sync Manager	N	Y	N	Y	Y	Y
SDM_GEM.dmsDataSrv-<ve rsion>.tape	CEM DMS Data Server	Y	Y	Y	Y	Y	Y
<b>Note:</b> Y= required, N=not required, O=optional							

**Fileset-to-solution mapping (Sheet 4 of 4)**

Fileset	Description	Solutions					
		IAC	IAW	PT-AAL1	PT-IP	UA-AAL1	UA-IP
SDM_TntFTPHandl.TntFTPHandl-<version>.tape	CEM Telnet FTP Handler	Y	Y	Y	Y	Y	Y
SDM_CEM.SAF-<version>.tape	CEM Store and Forward	Y	Y	Y	Y	Y	Y
<b>Note:</b> Y= required, N=not required, O=optional							

## Preparing your system for upgrade using Electronic Software Delivery

### Purpose

Use this procedure to prepare the CS 2000 Core Manager for an electronic software delivery (ESD) upgrade, which includes the following tasks:

- [Preparing the repository server for the CS 2000 Core Manager load on page 18](#)
- [Preparing the CS 2000 Core Manager for file transfer from the repository server on page 23](#)

### Prerequisites

If the files already exist in a directory on the CS 2000 Core Manager, proceed to [Preparing to upgrade the CS 2000 Core Manager on page 27](#).

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

For the network path between the Nortel software vault and a customer's CS 2000 Core Manager, the repository server is the last file transfer point prior to the CS 2000 Core Manager. The server must have enough disk space to hold, uncompress and unarchive the CS 2000 Core Manager load. Once all of the CS 2000 Core Manager filesets are extracted, they are transferred to the CS 2000 Core Manager from the repository server by FTP.

Before you can begin preparing the repository server for the CS 2000 Core Manager load, you will need a decompression tool on the

repository server to extract the contents of the CS 2000 Core Manager load. The load transferred is a compressed tar file. If the tar file compression format used is .Z format (as seen by the filename), you will need the uncompress tool on the repository server. If the load transferred is in .gz format, you will need either a gzip or a gunzip tool. These tools and the tar command must be in your UNIX PATH environment variable.

#### **ATTENTION**

On the CS 2000 Core Manager, ensure that you have 3 Gbytes of free space available on datavg. To check the free space on datavg, enter the command `sdmmtc storage` at the # command prompt.

This procedure assumes that you are using the FTP tool on the CS 2000 Core Manager to transfer the load from the external repository server to the CS 2000 Core Manager. Alternate transfer methods using secure CS 2000 Core Manager applications such as Secure File Transfer (SFT) can be available, depending on your site configuration. SFT requires that

- both the CS 2000 Core Manager and repository server be configured as DCE clients within the same distributed computing environment (DCE) cell, and
- the required CS 2000 Core Manager software clients be installed on the repository server.

## **Application**

ESD uses standard network connectivity methods into the software distribution process for the core manager. ESD can be used for both NCL and MNCL upgrades. For more information about ESD, refer to the Electronic Software Delivery Customer Implementation Guide.

## **Procedures**

#### **ATTENTION**

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

## Preparing the repository server for the CS 2000 Core Manager load

### *On the client workstation*

- 1 Choose a directory location on the repository server to which the CS 2000 Core Manager load can be transferred by FTP. Ensure that this location has sufficient space for the load and its subsequent extraction. To determine space availability on the server, use the `df -k` command.

The uncompressed tar file for a major release of an CS 2000 Core Manager software load usually ranges from 1 to 1.5 gigabytes. You will need this amount of space for the uncompressed tar file, in addition to at least the same amount for the file's extracted content. It is recommended that you have a total of at least 5 gigabytes available.

- 2 Change to repository directory:

```
cd <directory_path_A>
```

*where*

**<directory\_path\_A>**

is the directory location on the repository server to which the CS 2000 Core Manager load is transferred, uncompressed and untarred before transfer to the CS 2000 Core Manager

- 3 Create a directory for the CS 2000 Core Manager product load:

```
mkdir <load>
```

*where*

**<load>**

is the software load you are updating to

- 4 Access this new directory:

```
cd <load>
```

- 5 Display your directory:

```
pwd
```

*Example response:*

```
/local/CS2E0080
```

- 6 Transfer the CS 2000 Core Manager product load by FTP to the repository server at your current location. After you have completed this step, the CS 2000 Core Manager load (a compressed tar file) appears in your current location

- 7 List the files in the directory:

```
ls -al
```

*Example response*

```
total 2333988
drwxr-xr-x  2 root      other      512 Nov  21  01:25  .
drwxr-xr-x 16 root      root        1024 Nov  18  14:48  ..
-rw-r--r--  1 root      other    1194397577 Nov  16  14:02
CS2E0080.8.V.NCL.NAP.VAULT.2.D.tar.gz
```

- 8 Check the disk space availability on the server:

```
df -k.
```

*The system displays the free unallocated disk space.*

- 9 Depending on the tool you have available, unzip the file using one of the following commands:

```
gunzip <order_name>.tar.gz
```

or

```
gzip -d <order_name>.tar.gz
```

*where*

**<order\_name>**

is the order name for the current load of this release

*Example command:*

```
gunzip CS2E0080.8.V.NCL.NAP.VAULT.2.D.tar.gz
```

or

```
gzip -d CS2E0080.8.V.NCL.NAP.VAULT.2.D.tar.gz
```

**Note:** Depending on the computing capabilities of the repository server and the size of the load file, the decompression process can take from 8 to 10 minutes.

- 10 List the files in the directory:

```
ls -al
```

*Example response*

```
total 2462180
drwxr-xr-x  2 root      other      512 Nov  21  01:39  .
drwxr-xr-x 16 root      root        1024 Nov  18  14:48  ..
-rw-r--r--  1 root      other    1260001280 Nov  16  14:02
CS2E0080.8.V.NCL.NAP.VAULT.2.D.tar
```

- 11 Unarchive (un tar) the filesets:

```
tar -xvf <order_name>.tar
```

where

**<order\_name>**

is the order name for the current load of this release

The system creates a subdirectory (for example, CS2E0080.8.V.NCL.NAP.VAULT.2.D) and displays a listing of each file as it is unarchived and placed in this subdirectory.

**Note:** If errors (such as insufficient disk space) occur during the untarring process, resolve the errors and repeat this step.

- 12 Note the path to the directory created during the un tar activity for later use (when using FTP to transfer files to the CS 2000 Core Manager).
- 13 Use the following table to determine your next step.

If you	Do
want to delete the tar file to conserve disk space	step <a href="#">14</a>
do not want to delete the tar file	step <a href="#">16</a>

- 14

	<p><b>CAUTION</b></p> <p>Be sure that untarring the load file was successful (that is, that the disk did not run out of space during the extraction) or that the load is still available on the server from which you obtained the load.</p>
---	--

To conserve disk space, remove the tar file:

```
rm <order_name>.tar
```

where

**<order\_name>**

is the order name for the current load of this release

*Example command:*

```
rm CS2E0080.8.V.NCL.NAP.VAULT.2.D.tar
```

15 Go to step [17](#).

16 Move the tar file to a different directory:

```
mv <file_name> <directory_path>
```

*where*

**<file name>**

is the name of the tar file

**<directory path>**

is the location of the directory to which you are moving the tar file

17 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Applying the SDM\_CERTS.Certs Package

### *On the CS2000 Core manager*

1 This procedure can only be followed if software authentication is required on the Supernode Data Manager (SDM). If software authentication is not required, go to step [11](#).

2 To enable the SDM software authentication feature for SDM software delivery (patch apply and ESD upgrades), complete the following steps.

3 Access the maintenance interface

```
# sdmmtc
```

4 Access the SWIM level

```
> swim
```

5 List the filesets

```
> apply <directory path>
```

where <directory path> is the directory where the filesets are located

**Note:** <directory path> can be the /swd/sdm/esd directory.

6 Verify that the SDM\_CERTS.Certs package is already installed and listed in the available filesets on the system.

- 7 Use the following table to determine your next step.

If	Do
the SDM_CERTS.Certs package is installed,	step <a href="#">8</a> in this procedure
the SDM_CERTS.Certs package is not installed,	skip the rest of this procedure and go to procedure <a href="#">Preparing the CS 2000 Core Manager for file transfer from the repository server on page 23</a>

- 8 Select the SDM\_CERTS.Certs package
- ```
> select <n>
```
- where
- ```
<n>
```
- is the number next to the SDM\_CERTS.Certs fileset
- 9 Apply the SDM\_CERTS.Certs fileset:
- ```
> apply
```
- 10 When prompted, confirm the apply command:
- ```
> y
```
- 11 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Preparing the CS 2000 Core Manager for file transfer from the repository server

#### *At the client workstation*

- 1 Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Use the following table to determine your next step:

If	Do
you want to convert an existing logical volume	<a href="#">step 3</a>
you do not want to convert an existing logical volume	<a href="#">step 6</a>

- 3 Access the logical volume directory that you want to convert:
- ```
cd <directory_path>
```

where

**<directory\_path>**

is the logical volume directory that you want to convert

4



#### CAUTION

The `rm` command will remove all files and subdirectories from the current directory. Make sure that you are in the correct directory by typing `pwd`. The system displays the name of the current working directory. If it is the directory that you want to convert, proceed with the `rm` command. Otherwise, repeat step [3](#) to access the directory that you want to convert.

Remove all files and subdirectories within this logical volume directory:

```
rm -r *
```

5 Perform a backup using the procedure “Creating system image backup tapes (S-tape) manually” in *CS 2000 Core Manager Security and Administration*, NN10170-611, so that you can restore your system at any time if necessary.

If the alarm is enabled, and you choose not to perform a backup, you can force-clear the alarm using the procedure “Clearing a system image backup Required or Failed alarm” in *CS 2000 Core Manager Fault Management*, NN10082-911.

6 Access the storage level:

```
sdmmtc storage
```

7 Add a logical volume to store the ESD loads:

```
esdadd
```

*The system prompts you to enter a logical volume to be converted to the /swd/sdm/esd standard.*

- 8 Use the following table to determine your next step.

**Note:** When converting a logical volume to the /swd/sdm/esd standard, no contents are changed in the old logical volume.

| If you                                            | Do                                                                                                                                                              |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| want to convert an existing logical volume        | enter the name of the logical volume to be converted (including the leading forward slash ( / ) symbol), press the Enter key, and go to step <a href="#">10</a> |
| do not want to convert an existing logical volume | press the Enter key and go to step <a href="#">9</a>                                                                                                            |

*The CS 2000 Core Manager goes to in-service trouble (ISTb) and the status of the Backup Status alarm is Required once a logical volume is converted to the /swd/sdm/esd standard. If the backup Required alarm is disabled, the alarm is not raised*

- 9 When prompted, enter the size (in MB) of the logical volume, or press the Enter key to accept the default value of 2000 MB.

Select the default size. If you do not enter a large enough size for the logical volume, you cannot put the entire load on the system. If necessary, you can increase the size of a logical volume using the procedure “Increasing the size of a logical volume” in the *CS 2000 Core Manager Security and Administration*, NN10170-611.

*The logical volume /swd/sdm/esd is created.*

- 10 Exit the maintenance interface:

```
quit all
```

- 11 Change to the /swd/sdm/esd upgrade directory:

```
cd /swd/sdm/esd
```

- 12 Use FTP to transfer the files from the repository server to the ESD directory.

*Example of file transfer commands and responses:*

```
# ftp 10.102.128.2 (example IP address)
Connected to 10.102.128.2
220 TimeServer FTP server (SunOS 5.7) ready.
Name (10.102.128.2:root): root
331 Password required for root.
Password:
230 User root logged in.
ftp> cd /local/CS2E0080/CS2E0080.8.V.NCL.NAP.VAULT.2.D
250 CWD command successful.
ftp> lcd /swd/sdm/esd
Local directory now /swd/sdm/esd
ftp> bin
200 Type set to I.
ftp> prompt off
Interactive mode off.
ftp> mget *
(files transfer)
ftp> quit
```

- 13 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure and proceed to upgrade your system from disk.

---

## Preparing to upgrade the CS 2000 Core Manager

---

### Purpose

Perform the procedures in this section prior to a CS 2000 Core Manager software upgrade. The purpose of these procedures is to ensure that the CS 2000 Core Manager is configured correctly, and that all hardware and software are in good operating condition.

### Prerequisites

This section also includes the procedure [Software upgrades from tape on page 55](#). The purpose of this procedure is to avoid any potential tape problems during the upgrade.

#### **ATTENTION**

Nortel strongly recommends that you perform this procedure seven days before the start of any software upgrade, to allow time for corrective action if required.

You must successfully complete each pre-check task. Call the Nortel support center for assistance if you cannot successfully complete a pre-check task.

By completing each of the pre-check tasks and submitting a list of any failed pre-check tasks to Nortel, you can minimize potential disruption to the software upgrade, minimize any risk to the call server, and assist Nortel with providing full support on the upgrade, if assistance is required. Nortel will assist in recovering a CS 2000 Core Manager if a problem arises during a software upgrade that was not preceded by this pre-check procedure, but will not provide a root cause analysis of the problem.

### Application

Perform this procedure using a printed copy. A check box is provided at the beginning of each task to help you track your progress through the entire procedure. Whenever you successfully complete a task, put a check mark in the box.

## Procedures

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

### Capturing the pre-check session file

It is recommended that you capture the execution of the pre-check session and store the file on the CS 2000 Core Manager for ten days. Nortel support engineers can use the file to investigate any pre-check step that failed.

To capture the upgrade pre-check session, complete the following steps before starting the pre-check procedure.

### Capturing the pre-check session file

#### *At the CS 2000 Core Manager VT100 console*

- 1 Start the capture of the pre-check session:

```
script -a sdmprcheck_YYMMDD
```

*where*

#### **YYMMDD**

is the current year, month, and day that the pre-check procedure is performed

*The system creates a file named sdmprcheck\_YYMMDD and places it in your current directory.*

- 2 When you complete all the pre-check tasks, press Ctrl + D to terminate the capture for the sdmprcheck\_YYMMDD session file.
- 3 You have completed this procedure.

### Pre-check list

Each required pre-check task is listed in the following table. Complete each of the pre-check tasks and indicate whether the task passed or failed for reference purposes.

| Pre-check tasks                                        | Time (min.) | Passed /Failed |
|--------------------------------------------------------|-------------|----------------|
| Basic pre-checks                                       | 20          |                |
| System audit pre-check                                 | 5           |                |
| Hardware baseline pre-check                            | 5           |                |
| CPU Stability pre-check                                | 5           |                |
| DS512 fiber link pre-check                             | 5           |                |
| Application/fileset status and configuration pre-check | 2           |                |
| User configuration pre-check                           | 2           |                |
| Ethernet configuration pre-check                       | 5           |                |
| System dump device pre-check                           | 1           |                |

### Basic pre-checks

Before beginning the software upgrade process, ensure that you have completed the following activities.

- Notify the Network Operation Center before you perform this procedure and before you perform the software upgrade procedure, as both procedures can temporarily raise alarms on the core and CS 2000 Core Manager.
- Obtain cell\_admin password.
- Obtain the IP address for the CS 2000 Core Manager, the core, and the operating company gateway and LAN (local area network).
- Ensure you have the latest Maintenance Non-Computing Load (MNCL) release installed on the CS 2000 Core Manager before you upgrade to the new NCL release. Refer to “Upgrade Guidelines” in *Upgrading the CS 2000 Core Manager*, NN10060-461 for the software baseline.

**Note:** If you need to upgrade to the latest MNCL, refer to the MNCL release notes for instructions.

- Ensure that all released DMS core-side SDM patches have been applied and that the SDM is at patch current status
- Ensure that all released DMS core-side CS 2000 Core Manager patches have been applied and that the CS 2000 Core Manager is at patch current status

- Ensure that the modem is configured and operational in the event that Nortel Field Support personnel require remote access to the CS 2000 Core Manager.
- Obtain a 3-gigabyte blank DAT tape to perform a full system backup following the upgrade.

Ensure that you have selected one of the brands and lengths approved by Nortel. The approved brands are: Hewlett Packard (HP), Maxell, Verbatim, Imation. The approved lengths (from any of the listed manufacturers) are: 90-meter (90M), 120-meter (120M), or 125-meter (125M). The 125M tape is approved for UMFIOs only, provided that your system is equipped with DDS3-capable devices to read the content of the tape.

- Test the SDM for CNR (call notification record) Delivery and CIPC Provisioning (applies to GEM-only applications).
- Check your VT100 terminals and cables.
- Clean tape drive 0 (slot 2) and tape drive 1 (slot 13) if you are upgrading using the procedure [Software upgrades from tape on page 55](#) or directly from tape. Refer to the procedure “Cleaning the DAT drive” in *CS 2000 Core Manager Fault Management*, NN10082-911.

**Note:** Nortel recommends that you upgrade your system directly from tape only if you are unable to complete the procedure [Software upgrades from tape on page 55](#).

- Execute a `querysdm config` command on the CS 2000 Core Manager and record the output for reference purposes.
- Execute a `sdmmtc hw` command on the CS 2000 Core Manager to check if you have an X.25 device installed. Record the output for reference purposes.
- Ensure that the following hardware spares are on site (check which versions of these cards you have on your system):
  - CPU controller card
  - DS512 controller card
  - spare hard drive module
  - spare DAT/hard drive module
- Ensure that adequate backup space is available on the core, because the upgrade procedure stops the Billing Application for
  - over 1 hour (OOS Upgrade Procedure)
  - approximately 20 minutes (ESUP)

To determine the amount of backup space required, refer to “Preparing for SBA installation and configuration” in *CS 2000 Core Manager Accounting, NN10126-811*. To reconfigure backup volumes, refer to “Configuring SBA backup volumes” in *CS 2000 Core Manager Accounting, NN10126-811*.

- Obtain the OAM and CALLP Gateway IP addresses for the Ethernet configuration pre-check from the system administrator.
- List the loads installed on the CS 2000 Core Manager, by entering the following command at the command line:

```
querysdm loads
```

In response to this command, the system will display the loads and software fixes currently installed on the CS 2000 Core Manager, and the status of these software loads and fixes.

- Display the latest configured SBA schedule by entering the following command at the command line:

```
/sdm/sba/DMS500/bin/schedulelist
```

### System audit pre-check

The purpose of the system audit pre-check is to execute a sanity check on various components of the CS 2000 Core Manager. For more information on the system audit functionality, refer to the “System audit overview” in *CS 2000 Core Manager Basics, NN10018-111*.

**Note:** Once the core manager is upgraded to the new software load, the system audit will run automatically on a daily basis.

### Installing the system audit script

#### At the VT100 console

- 1 Determine whether the system audit functionality exists on your CS 2000 Core Manager:

```
ls -l /sdm/mtce/precheck/sysaudit
```

| If sysaudit script            | Do                                                               |
|-------------------------------|------------------------------------------------------------------|
| does not exist on your system | step <a href="#">2</a>                                           |
| exists on your system         | <a href="#">Performing the system audit pre-check on page 35</a> |

## 2 Determine the fileset source.

| If the fileset is | Do                                                                                                                                                     |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| on tape           | insert the tape into slot 2, and continue with step <a href="#">3</a> and wait until the tape drive stabilizes (yellow LED is off) before you proceed. |
| in a directory    | obtain the directory path where the fileset is located, and continue with step <a href="#">4</a>                                                       |

## 3 Install the system audit precheck software from tape:

```
installp -ad /dev/rmt0 SDM_PRECHECK.sysaudit
```

*Example response:*

```
installp: Please mount volume 1 on /dev/rmt0.1.
```

```
Press the Enter to key to continue.
```

*Example response:*

```
+-----+
      Pre-installation Verification...
+-----+
Verifying selections...done
Verifying requisites...done
Results...

SUCSESSES
-----
Filesets listed in this section passed
pre-installation verification and will be
installed.

Selected Filesets
-----
SDM_PRECHECK.sysaudit 1.0.0.0      # System
pre-check                               tools

      << End of Success Section >>
FILESET STATISTICS
-----
      1 Selected to be installed, of which:
      1 Passed pre-installation verification
```

```

1 Total to be installed
+-----+
          Installing Software...
+-----+

installp:    APPLYING software for:
             SDM_PRECHECK.sysaudit 1.0.0.0

Finished processing all filesets.  (Total time:
                                   1 mins 44 secs).

+-----+
          Summaries:
+-----+

Installation Summary
-----
Name           Level      Part  Event    Result
-----
----SDM_PRECHECK.  1.0.0.0  USR   APPLY
SUCCESS sysaudit

```

Once you have completed this step, go to [Performing the system audit pre-check on page 35](#).

- 4 Install the system audit precheck software from a directory:

```
installp -ad <dir> SDM_PRECHECK.sysaudit
```

*where:*

**<dir>**

is the directory where the fileset is located

*Example response:*

```

+-----+
          Pre-installation Verification...
+-----+

Verifying selections...done
Verifying requisites...done
Results...

SUCSESSES
-----
Filesets listed in this section passed
pre-installation verification and will be
installed.

```

```

Selected Filesets
-----
SDM_PRECHECK.sysaudit 1.0.0.0      # System
pre-check                                     tools

<< End of Success Section >>
FILESET STATISTICS
-----
      1 Selected to be installed, of which:
        1 Passed pre-installation verification
        1 Total to be installed
+-----+
              Installing Software...
+-----+
installp:      APPLYING software for:
                SDM_PRECHECK.sysaudit 1.0.0.0

Finished processing all filesets. (Total time:
                                   1 mins 44 secs).

+-----+
              Summaries:
+-----+
Installation Summary
-----
Name           Level      Part      Event      Result
-----
----SDM_PRECHECK.  1.0.0.0   USR       APPLY
SUCCESS
sysaudit

```

- 5** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure or, if applicable, complete procedure [Performing the system audit pre-check](#).

## Performing the system audit pre-check

### *At the VT100 console*

- 1 Execute the system audit check:

```
sysaudit -all
```

*Example response:*

```
sysaudit command is in progress, please wait a few minutes for it to complete...
```

- 2 Display the system audit report:

```
sysaudit -report
```

Use the procedure “Viewing the system audit report and taking corrective action” in *CS 2000 Core Manager Fault Management*, NN10082-911 (start at step 2) to analyze the report and take corrective action, if necessary.

- 3 Return to the default directory:

```
cd
```

- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Hardware baseline pre-check

The purpose of the hardware baseline pre-check is to display the hardware PEC codes and ensure compatibility with the hardware baseline.

You must upgrade any hardware that does not meet the minimum hardware baseline before you proceed with the software upgrade.

## Performing the hardware baseline pre-check

### *At the VT100 console*

- 1 Display the information for the hardware that is installed on the CS 2000 Core Manager:

```
locate
```

- 2 Refer to “Upgrade Guidelines” in *Upgrading the CS 2000 Core Manager*, NN10060-461 and verify that the product engineering codes (PECs) on the output meet the minimum hardware baseline.

- 3 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### CPU stability pre-check

The purpose of the CPU stability pre-check is to ensure that the master and checker CPU is operating as expected. The master CPU is taken Offline and then returned to service.



**CAUTION**  
**Executing this procedure causes a temporary loss of fault-tolerance.**

Because the master CPU is Offlined, the system is in a NON-Fault tolerant mode for the duration of the pre-check.

### Performing the CPU stability pre-check

#### *At the VT100 console*

- 1 Determine which CPU is currently master:

```
ftctl -status
```

*Example response:*

```

CPUmodule CPU-0:
  Current istate      = present
                    powered on
                    significant
                    checker
                    using backplane signals
  Current condition  = online
  Online start date   = Sun Mar 17 12:52:53 CST 2002
  Online duration     = 23 days, 06:52:36
CPUmodule CPU-1:
  Current istate      = not present
  Current condition   = offline
CPUmodule CPU-2:
  Current istate      = present
                    powered on
                    significant
                    master
                    using backplane signals
  Current condition   = online
  Master start date   = Sun Mar 17 12:44:37 CST 2002
  Master duration     = 23 days, 07:00:52
  Online start date   = Sun Mar 17 12:44:37 CST 2002
  Online duration     = 23 days, 07:00:52
```

**Note:** CPU 0 is installed in Domain 0. CPU 2 is installed in Domain 1.

- 2 Access the hardware level to determine if the CPU modules are in service:

**sdmmtc hw**

*Example response:*

```

SDM   CON   512  NET   APPL  SYS   HW   CLLI: OTWAONXBEC3
      .     .   .    .    .    .    .   Host: pcary989
      .     .   .    .    .    .    .   Fault Tolerant
Hw
0 Quit
2      I F C D D D E E D 5
3      C A P S S S T T A 1
4 Logs M N U K K K H H T 2
5      1 2 3 1 2
6      Domain 0 . . . . .
7 Bsy  Domain 1 . . . . .
8 RTS
9
10
11      
12
13
14 QuerySDM
15 Locate
16
17 Help
18 Refresh
   root
Time 11:15 >

```

### 3 Busy the master CPU:

**bsy <domain> cpu**

*where*

**<domain>**

is the domain number of the master CPU identified in step 1.

*Example*

bsy 1 cpu

*Example response:*

```

SDM  CON  512  NET  APPL  SYS  HW  CLLI: OTWAONXBEC3
.      .      .      .      .      .      .      Host: pcary989
.      .      .      .      .      .      .      Fault Tolerant

Hw
0 Quit
2      I F C D D D E E D 5
3      C A P S S S T T A 1
4 Logs  M N U K K K H H T 2
5      1 2 3 1 2
6      Domain 0 . . . . .
7 Bsy   Domain 1 . . M . . . . .
8 RTS
9
10
11
12
13
14 QuerySDM
15 Locate
16
17 Help
18 Refresh
root
Time 11:17 >

```

- 4 Return the busy CPU to service:

```
rts <domain> cpu
```

where

**<domain>**

is the domain number of the master CPU you busied in the previous step [3](#)

**Example**

```
rts 1 cpu
```

*The CPU status changes from M (busy) to I (re-integration).  
Re-integration time will vary depending on system configuration.*

- 5 Use the following table to determine your next step.

| If the rts command | Do                     |
|--------------------|------------------------|
| succeeds           | step <a href="#">7</a> |
| fails              | step <a href="#">6</a> |

- 6 The CPU reintegration can fail because the system is too busy. To determine that, examine the eeprom on the failing CPU and look for the following message: PRI: System too busy, PRI could not complete.

*Example response:*

```
# eeprom -vL CPU-2
.
.
```

```
Event      Time - Date          Failure Category &
Reason
=====
=====
```

```
Power on 13:59 Mar 11 2002 EST
```

```
Failure 13:59 Mar 11 2002 EST Information
report
```

```
PRI: System too busy, PRI could not complete
```

This message does not indicate a faulty CPU (no matter how many times it fails). This message means that the system is presently too busy to reintegrate the CPUs, and the reintegration must be deferred until the system load is reduced. You can attempt the reintegration as many times as necessary, until it succeeds. To reduce the system load, you may have to busy SBA or the SDM from the core using a maintenance window.

Once you have successfully reintegrated the CPUs, go to step [7](#).

- 7 Exit the hardware level:

```
quit all
```

- 8 Monitor the integration status of the CPU:

```
ftctl -status
```

*Example response:*

```

CPUmodule CPU-0:
  Current istate      = present
                    powered on
                    significant
                    master
                    using backplane signals
  Current condition  = online
  Master start date   = Fri Apr 26 11:37:54 EDT 2002
  Master duration     = 00:07:50
  Online start date   = Tue Apr 23 17:11:30 EDT 2002
  Online duration     = 2 days, 18:34:14
CPUmodule CPU-1:
  Current istate      = not present
  Current condition   = offline
CPUmodule CPU-2:
  Current istate      = present
                    powered on
                    not significant
                    onboard
                    not using backplane signals
  Current condition   = integrating (12% complete)

```

- 9 Wait until the CPU has been fully integrated, then re-enter the hardware level to ensure that the CPU has returned to service:

```
sdmmtc hw
```

*Example response:*

```

SDM   CON   512  NET  APPL  SYS   HW   CLLI: OTWAONXBEC3
.     .     ..   .   .     .   .     Host: pccary989
.     .     ..   .   .     .   .     Fault Tolerant
Hw
0 Quit
2           I F C D D D E E D 5
3           C A P S S S T T A 1
4 Logs     M N U K K K H H T 2
5           1 2 3 1 2
6   Domain 0 . . . . .
7 Bsy  Domain 1 . . . . .
8 RTS
9
10
11
12
13
14 QuerySDM
15 Locate
16
17 Help
18 Refresh
root
Time 11:47 >

```

- 10 Repeat steps [3](#) to [9](#) for the second CPU. For example, if previously you have busied and returned to service CPU 1, repeat steps [3](#) to [9](#) for CPU 0.
- 11 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### DS512 fiber link pre-check

The purpose of the DS512 fiber link pre-check is to identify potential problems with the DS512 fiber links connected from the core to the

DS512 controller modules on the CS 2000 Core Manager. It can also identify problems with DS512 modules.

**CAUTION****Possible loss of communication to the core**

The DS512 fiber link pre-check results in a temporary simplex condition on CS 2000 Core Manager links to the core. Therefore, you must perform the DS512 fiber link pre-check during a maintenance shift to ensure that the traffic on the DS512 links does not lead to message overload conditions, which can result in a loss of communication with the call server.

***At the MAP terminal***

- 1 Access the SDM level of the MAPCI:

```
mapci;mtc;appl;sdm
```

- 2 Identify the message switch (MS) chain cards that are configured with the DS512 controller modules and the associated DS512 fiber links that communicate from the core to the CS 2000 Core Manager:

```
trns1
```

*Example response:*

```

XAC  MS  IOD  Net  PM  CCS  Lns  Trks  Ext  APPL
.
.
.
SDM  OAMAT ATMFTW  SDM  SPMCP  SWMTC  SDMBIL  TOPSIP
0 Quit
2
3  SDM 0 InSv  Links_OOS:.
4
5 Trns1
6      Trns1
7 Bsy  SDM 0 DOMAIN 0 PORT 0 (MS 0:05:0) OK  MsgCnd:Open
8 RTS  SDM 0 DOMAIN 0 PORT 1 (MS 1:05:0) OK  MsgCnd:Open
9 OffL SDM 0 DOMAIN 1 PORT 0 (MS 0:05:1) OK  MsgCnd:Open
10     SDM 0 DOMAIN 1 PORT 1 (MS 1:05:1) OK  MsgCnd:Open
11
12
13
14 QuerySDM
15 Locate
16
17
18 Platform
  ADMIN
Time 11:28 >

```

- 3 Post the chain card that corresponds to one of the four associated DS512 fiber links that communicate with the CS 2000 Core Manager.

**mapci;mtc; ms;shelf;chain <chain\_number>**

*where:*

**<chain\_number>**

is the number of the MS chain card

**Example**

mapci;mtc;ms;shelf;chain 5

*Example response:*

```

XAC  MS  IOD  Net  PM  CCS  Lns  Trks  Ext  APPL
.    .    .    .    .    .    .    .    .    .

CHAIN  |  Message Switch  Clock Shelf 0  Inter-MS Link 0 1
0 Quit  MS 0      .      Master      .      ..
2      MS 1      .      Slave        .      ..
3
4      Shelf0      .      .      .      .
5      Card 1 2 3 4 5 6 7 8 9 0 1 2 3
6 Tst_  Chain      < >  |
7 Bsy_  MS 0      .      .      .      .
8 RTS_  MS 1      .      .      .      .
9 Offl_
10      Chain 05  Range  Link 0 1
11      MS 0      .      05-06  DS512 . .
12 Chain_ MS 1      .      05-06  DS512 . .
13 Card_
14 QueryMS 6
15 Tmsl_
16
17
18
OPERATOR
Time 11:53 >

```

- 4 Busy the DS512 fiber links that correspond to the DS512 card to be busied:

**bsy 0 link <link\_number>**

**bsy 1 link <link\_number>**

where:

**<link\_number>**

is the number of the DS512 link (0 or 1)

*Example*

*bsy 0 link 0*

and

*Example*

*bsy 1 link 0*

*The previous examples will busy MS 0 link 0 and MS 1 link 0 for the DS512 card on domain 0.*

**At the VT100 console**

- 5 Access the hardware level:

```
sdmmtc hw
```

- 6 Busy the DS512 controller module:

```
bsy <domain_number> 512
```

*where:*

**<domain\_number>**

is the domain number of the DS512 link

- 7 Return the DS512 controller module to service:

```
rts <domain_number> 512
```

*where:*

**<domain\_number>**

is the domain number of the DS512 link

- 8 Use the following table to determine your next step.

| <b>If the DS512 controller module</b> | <b>Do</b>                          |
|---------------------------------------|------------------------------------|
| returns to service                    | step <a href="#">11</a>            |
| does not return to service            | contact your next level of support |

**At the MAP terminal**

- 9 Return the DS512 fiber links that correspond to the DS512 card to service:

```
rts 0 link <link_number>
```

```
rts 1 link <link_number>
```

*where*

**<link\_number>**

is the number of the DS512 link (0 or 1)

*Example*

```
rts 0 link 0
```

*and*

*Example*

```
rts 1 link 0
```

*The previous examples will return MS 0 link 0 and MS 1 link 0 for the DS512 card on domain 0 to service.*

- 10 Use the following table to determine your next step.

| If the links             | Do                                 |
|--------------------------|------------------------------------|
| return to service        | step <a href="#">11</a>            |
| do not return to service | contact your next level of support |

- 11 Repeat the previous steps until each of the DS512 Controller Modules has been busied and returned-to-service successfully.
- 12 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Application/fileset status and configuration pre-check

The purpose of the application/fileset status and configuration pre-check is to verify that the applications on the CS 2000 Core Manager are in-service and configured.

#### *At the VT100 console*

- 1 Access the application level:

```
sdmmtc appl
```

*Example response:*

```

SDM  CON  512  NET  APPL  SYS  HW  CLLI: OTWAONXBEC3
      .      .      .      .      .      .      Host: pcary989
      .      .      .      .      .      .      Fault Tolerant

Appl
0 Quit
2          # Application                      State
3          1 SDM Billing Application          .
4 Logs    2 Generic Data Delivery           .
5          3 Log Delivery Service           .
6          4 Image Dump Service             .
7 Bsy     5 Secure File Transfer            .
8 RTS     6 Enhanced Terminal Access       .
9 OffL    7 Table Access Service            .
10        8 OM Access Service               .
11                Applications showing: 1 to 8 of 8
12 Up
13 Down
14 QuerySDM
15 Locate
16
17 Help
18 Refresh
root
Time 06:30 >

```

- 2 Verify that all applications used are in service as represented by the in-service dot [.] under the State header, as shown in the previous example. Use the up/down commands to scroll through the list of applications if necessary.
- 3 Use the following table to determine your next step.

| If                                          | Do                                                               |
|---------------------------------------------|------------------------------------------------------------------|
| all applications are in service             | step <a href="#">4</a>                                           |
| one or more applications are not in service | investigate and return to service if required before you proceed |

- 4 Access the configuration level:

**config**

*Example response:*

```

SDM  CON  512  NET  APPL  SYS  HW  CLLI: OTWAONXBEC3
.      .      .      .      .      .      .      Host: pcary989
.      .      .      .      .      .      .      Fault Tolerant
.      .      .      .      .      .      .
Config
0 Quit      Filter: OFF
2          # Fileset Description          Status
3          1 Enhanced Terminal Access    Configured
4          2 OM Delivery                  Configured
5          3 Remote Registration System    Configured
6          4 SDM Billing Application        Configured
7 Select    5 Secure File Transfer          Secure and Normal FTP Access
8 Config    Configuration programs: 1 to 5 of 5
9
10
11
12 Up
13 Down
14 Search
15 Filter
16 View
17 Help
18 Refresh
root
Time 18:55 >

```

- 5 Verify that all required in-service applications are configured as shown in the previous example graphic. Use the up/down commands to scroll through the list of applications if necessary.
- 6 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### User configuration pre-check

The purpose of the user configuration pre-check is to ensure that the CS 2000 Core Manager user attributes are configured correctly.

#### Performing the user configuration pre-check

##### *At the VT100 console*

- 1 Display the user attributes for the root user:  

```
lsuser root
```

- 2 Display the user attributes for the maint user:

```
lsuser maint
```

*Example response:*

```
3004687 User "root" does not exist.
```

- 3 Use the following table to determine your next step.

| If the user    | Do                                                                           |
|----------------|------------------------------------------------------------------------------|
| does not exist | contact your next level of support                                           |
| exists         | proceed to the next task<br><a href="#">Ethernet configuration pre-check</a> |

- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Ethernet configuration pre-check

The purpose of the Ethernet configuration pre-check is to display the status and configuration of the Ethernet interfaces.

### Performing the Ethernet configuration pre-check

#### At the VT100 console

- 1 Obtain and record the IP gateway addresses for Ethernet interface ent0 and ent1.
- 2 Display the Ethernet configuration and status:

```
lsstate -s | grep ent
```

The system will display the Ethernet configuration. The following is an example of this kind of display:

*Example response:*

```
pent0 c1-f2 Available online Physical Ethernet Device
pent1 c1-f4 Available online Physical Ethernet Device
pent2 c1-f13 Available online Physical Ethernet Device
pent3 c1-f15 Available online Physical Ethernet Device
ent0 Available online_both FT Logical Ethernet
```

```
ent1 Available online_both FT Logical Ethernet
```

**dbgent**

The system will display the Ethernet status. The following is an example of this kind of display:

Example response:

```
ent1:
```

```
member0 pent1 active (08:00:3e:26:25:21) PM: online
member1 pent3 backup (08:00:3e:26:25:25) PM: online
```

```
ent0:
```

```
member0 pent0 backup (08:00:3e:26:25:24) PM: online
member1 pent2 active (08:00:3e:26:25:20) PM: online
```

- 3 Using the information obtained in step 1, verify that the selected external network element can be reached.

```
ping -c 3 <ip_address>
```

Example

```
# ping -c 3 47.101.50.112
```

The following example shows a sample ping command used to ping the Gateway router for ent0 and the format of the results that the system displays in response:

Example response:

```
ent1:
```

```
member0 pent1 active (08:00:3e:26:25:21) PM: online
member1 pent3 backup (08:00:3e:26:25:25) PM: online
```

```
ent0:
```

```
member0 pent0 backup (08:00:3e:26:25:24) PM: online
member1 pent2 active (08:00:3e:26:25:20) PM: online
```

```
# ping -c 3 47.101.50.112
PING 47.101.50.112:(47.101.50.112): 56 data bytes
```

```
64 bytes from 47.101.50.112: icmp_seq=0 ttl=61 time=1 ms
64 bytes from 47.101.50.112: icmp_seq=1 ttl=61 time=1 ms
64 bytes from 47.101.50.112: icmp_seq=2 ttl=61 time=1 ms
```

----47.101.50.112 PING Statistics----

3 packets transmitted, 3 packets received, 0% packet loss  
round-trip min/avg/max=1/1/1 ms

- 4 Switch the active and backup Ethernet interface members:

```
dbgent -s1 entn
```

where

**n**  
is either 0 or 1

Example  
dbgent -s1 ent0

- 5 Verify that the switch occurred.

```
dbgent
```

The following examples show that the active and backup Ethernet interface members for ent0 have switched. Compare the display for ent0 with that for ent0 in step 2 in the example response to the dbgent command.

*Example response:*

ent1:

```
member0 pent1 active (08:00:3e:26:25:21) PM: online
member1 pent3 backup (08:00:3e:26:25:25) PM: online
```

ent0:

```
member0 pent0 active (08:00:3e:26:25:20) PM: online
member1 pent2 backup (08:00:3e:26:25:24) PM: online
```

- 6 Using the information obtained in step 1, verify that the selected external network element can still be reached.

```
ping -c 3 <ip_address>
```

*The following example response shows a sample ping command used to ping the Gateway router for ent0 and the format of the results that the system displays in response:*

```
# ping -c 3 47.101.50.112
PING 47.101.50.112:(47.101.50.112): 56 data bytes
64 bytes from 47.101.50.112: icmp_seq=0 ttl=61 time=1 ms
64 bytes from 47.101.50.112: icmp_seq=1 ttl=61 time=1 ms
64 bytes from 47.101.50.112: icmp_seq=2 ttl=61 time=1ms

----47.101.50.112 PING Statistics----
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max=1/1/1 ms
```

- 7 Switch the active and backup Ethernet interfaces.

```
dbgent -s1 entn
```

where

**n**  
is either 0 or 1

Example  
`dbgent -s1 ent0`

- 8 Verify that the switch occurred.

```
dbgent
```

The following examples show that the active and backup Ethernet interface members for ent0 have switched. Compare the display for ent0 with that for ent0 in step [5](#) in the example response to the dbgent command.

Example response:

ent1:

```
member0 pent1 active (08:00:3e:26:25:21) PM: online
member1 pent3 backup (08:00:3e:26:25:25) PM: online
```

ent0:

```
member0 pent0 backup (08:00:3e:26:25:24) PM: online
member1 pent2 active (08:00:3e:26:25:20) PM: online
```

- 9 Repeat steps [3](#) through [8](#) for the second Ethernet (ent0 or ent1).
- 10 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## System dump device pre-check

The purpose of the System dump device pre-check is to verify that the system dump devices are not in the null state. If either device is in the null state, your upgrade will fail.

### Performing the system dump device pre-check

#### At the VT100 console

- 1 Verify the system dump (sysdump) devices by completing the following steps.

Start the verification:

```
sysdumpdev -l
```

**Note:** In the previous command, the “l” is a lower-case letter L.

- 2 Use the following table to determine your next step.

| If the following message is displayed                                                                                                                 | Do                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <pre>primary/dev/sysdump0 secondary/dev/sysdumpnull copy directory/var/adm/ras forced copy flagFALSE always allow dumpFALSE dump compressionOFF</pre> | step <a href="#">3</a> |
| <pre>primary/dev/sysdump0 secondary/dev/sysdump1 copy directory/var/adm/ras forced copy flagFALSE always allow dumpFALSE dump compressionOFF</pre>    | step <a href="#">4</a> |

- 3 Change the sysdump devices to sysdump1:

```
sysdumpdev -P -s /dev/sysdump1
```

*The following message is displayed.*

```
primary/dev/sysdump0
secondary/dev/sysdump1
copy directory/var/adm/ras
forced copy flagFALSE
always allow dumpFALSE
dump compressionOFF
```

- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Software upgrades from tape

### ATTENTION

If you are planning to upgrade your system from tape, upload the software from tape to a disk, and then upgrade your system from the directory created during this procedure, in order to avoid any potential tape problems during the upgrade.

The purpose of transferring the upgrade software from tape to a disk is to help ensure a trouble-free upgrade by avoiding tape problems that can occur during the upgrade.

### Installing the UPGRADE Tools fileset

#### *At the VT100 console*

- 1 Log on to the CS 2000 Core Manager using the root user ID and password.
- 2 Verify that tape drive 0 (slot 2) and tape drive 1 (slot 13) have been cleaned during the [Basic pre-checks](#) procedure. If not, clean both tape drives now. Refer to the procedure "Cleaning the DAT drive" in *CS 2000 Core Manager Fault Management*, NN10082-911.
- 3 Insert the tape into the tape drive in slot 2 (DAT0) or slot 13 (DAT1).
- 4 Install the software that will be used later to copy the content of the tape to a disk, using one of the following commands.

- If the tape is inserted in slot 2:

```
bffcreate -d /dev/rmt0.1 -t /home/swd -q  
SDM_UPGRADE
```

- If the tape is inserted in slot 13:

```
bffcreate -d /dev/rmt1.1 -t /home/swd -q  
SDM_UPGRADE
```

Ignore the warning messages that the system displays. Wait until the command is complete and continue with the procedure.

- 5 Access the maintenance interface:

```
sdmmtc
```

- 6 List the filesets in directory /home/swd:

```
apply /home/swd
```

- 7 Select the UPGRADE Tools fileset:

```
select <x>
```

*where*

```
<x>
```

is the number next to the UPGRADE Tools fileset

- 8 Install the UPGRADE Tools fileset:

```
apply
```

- 9 Use the following table to determine your next step.

If	Do
the command fails, and the following message is displayed: Create the FIXES filesystem from sdmmtc; fixes and retry this, then the FIXES directory does not exist on the core manager.	create the FIXES directory using step <a href="#">10</a>
the command succeeds,	step <a href="#">14</a>

- 10 The FIXES directory does not exist on the core manager. Create the FIXES directory:

```
sdmmtc fixes
```

- 11 Exit from the maintenance interface:

```
quit all
```

- 12 Enter the maintenance interface:

```
sdmmtc
```

- 13 Return to step [6](#) and continue.

- 14 If prompted, confirm the apply command:

```
y
```

- 15 Exit the sdmmtc interface:

```
quit all
```

- 16 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Uploading the software from tape to a disk

### At the VT100 console

- 1 Start the process of transferring the software load from tape to a disk:

#### **unpacktape**

- 2 When prompted, select automatic or interactive method for creating the logical volume where the tape content is transferred. Enter one of the following values:

where

- 1 creates the logical volume
- 2 creates the logical volume or allows you to select an existing logical volume

If there is not enough disk space on your system, the procedure will automatically abort. Contact your next level of support for further instructions.

- 3 When prompted, enter the location of the tape:

where

- 1 is used if the tape is inserted in slot 2
- 2 is used if the tape is inserted in slot 13

- 4 Use the following table to determine your next step.

If in step 2 you have selected option	Do
automatic	the system provides the location of the directory where the tape load is being transferred. <i>Record the directory path for reference</i> , then go to step <a href="#">9</a> .
interactive	continue with step <a href="#">5</a>

- 5 When prompted, specify whether you want to transfer the tape load to an existing logical volume. Enter one of the following values:

**Note:** If using an existing logical volume, make sure that you have at least 1400 Mbytes of free space in the volume.

where

**yes**

is used if you want to transfer the load to an existing logical volume

**no**

is used if you want to create a new logical volume

- 6 Use the following table to determine your next step.

If you entered	Do
yes	enter the directory path where you want to transfer the load, and press the Enter key. Go to step <a href="#">9</a> .
no	go to step <a href="#">7</a>

- 7 To continue the procedure, enter:

**yes**

- 8 When prompted, enter the full path to the new directory where the new logical volume is mounted.

*If the system reports that there is insufficient free space on datavg and rootvg, the system aborts the procedure. Contact your next level of support for further instructions.*

- 9 Use the following table to determine your next step.

If the system	Do
completes the transfer and displays the following message: Successfully deposited all filesets to <directory name> Record the directory path for reference.	go to step <a href="#">12</a>
displays a failure message <b>Note:</b> If this is your second attempt to complete the procedure, contact your next level of support.	go to step <a href="#">10</a>

- 10 Clean the DAT drive where the tape is inserted. Refer to the procedure “Cleaning the DAT drive” in *CS 2000 Core Manager Fault Management*, NN10082-911.
- 11 Once the DAT drive is clean, repeat steps [1](#) through [9](#).

- 12** You have completed this procedure. You are now ready to upgrade the CS 2000 Core Manager software. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Upgrading CS 2000 Core Manager software using ESUP

This procedure provides information about upgrading the CS 2000 Core Manager to the new software release using an enhanced SDM upgrade procedure (ESUP).

**Note:** This procedure does not apply to rootvg-only systems.

This procedure references other procedures in the following NTPs:

- *CS 2000 Core Manager Upgrades*, NN10060-461
- *CS 2000 Core Manager Fault Management*, NN10082-911
- *CS 2000 Core Manager Configuration Management*, NN10104-511
- *CS 2000 Core Manager Accounting*, NN10126-811
- *CS 2000 Core Manager Security and Administration*, NN10170-611

Ensure that you have access to those documents while performing this procedure.

You can perform this procedure from a VT100 console. You can also use this procedure if you are able to telnet to the CS 2000 Core Manager through the LAN (local area network).

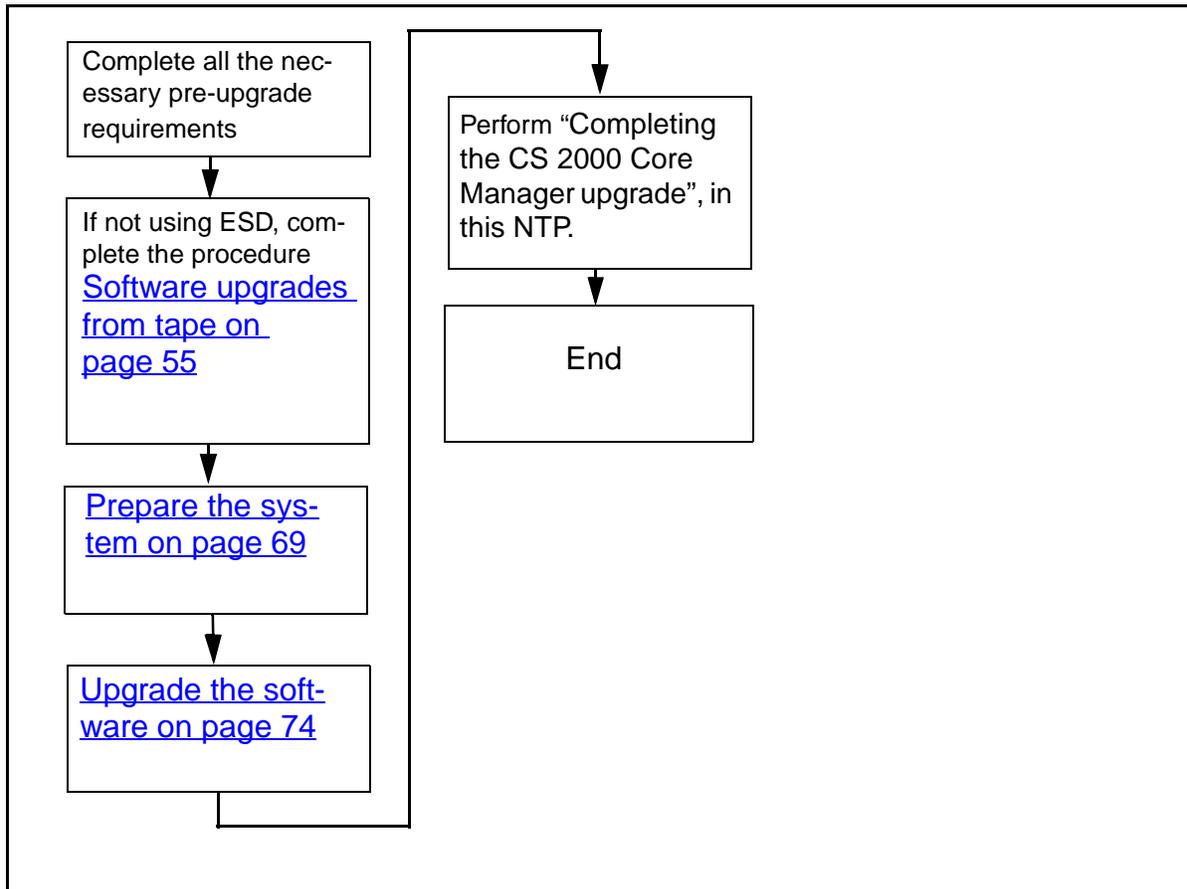
During the ESUP upgrade, the rootvg mirror is broken, the system is busied for a short time, then rootvg disks are re-integrated. The procedure takes approximately 2.5 hours. Datavg mirroring is not broken during this procedure; therefore, it does not undergo re-integration.

### ATTENTION

This procedure provides on-screen information and instructions. Please read all displayed messages carefully and use them together with this high-level procedure to successfully complete the upgrade.

### Task flow diagram

Use the following task flow to upgrade the CS 2000 Core Manager using the enhanced software upgrade procedure (ESUP).

**Task flow for upgrading CS 2000 Core Manager software using ESUP****ATTENTION**

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

## Pre-upgrade requirements

### ATTENTION

Nortel recommends the usage of the system console (SP0) for the upgrade. When upgrading the software using ESUP using TELNET, ensure that the device used to connect to the console port (modem, VDU - Visual Display Unit or VT-100 terminal, terminal server, dual input VDU, etc.) is configured with flow control off. Failure to turn off flow control can cause the SDM to hang during the reboot conducted at the end of each upgrade.

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

### Prerequisites

Before starting this procedure, complete the following activities:

- Ensure the latest MNCL release is installed on your system.

Refer to “Upgrade guidelines” in *Upgrading the CS 2000 Core Manager*, NN10060-461, for the software baseline.

**Note:** If you need to upgrade to the latest MNCL, refer to the MNCL release notes for instructions.

- Verify that the pre-check tasks described in the procedure “Preparing to upgrade the CS 2000 Core Manager” in *Upgrading the CS 2000 Core Manager*, NN10060-461 were successfully completed seven days before starting this upgrade.

- Perform a system image backup.

**ATTENTION**

Nortel recommends that you perform a system image backup before you upgrade the base software. Use the procedure “Creating system image backup tapes (S-tapes) manually” in *CS 2000 Core Manager Administration and Security*, NN10170-611.

Performing a system image backup does not back up billing data. Ensure that billing is operating properly before starting.

If you need to revert to a prior release during an out-of-service upgrade, refer to “Performing a full restore of the software from S-tape” in *CS 2000 Core Manager Fault Management*, NN10082-911.

- Ensure that no other users are logged on during the upgrade. Only the user at the VT100 console or the upgrade telnet session can be logged on during the upgrade.
- Obtain the IP address for the CS 2000 Core Manager.
- Execute a `querysdm config` command and record the output.
- Obtain and record the following information from your network administrator:
  - if your system has a CS 2000 SAM21 Manager installed, verify whether DNS is supported on CS 2000 SAM21 Manager client workstations
  - the host name of the CS 2000 Management Tools server that is configured to run the Login Application
  - the CommonName from the certificate on the CS 2000 Management Tools server that is configured to run the Login Application
  - the IP address of the CS 2000 Management Tools server
- If upgrading from tape, ensure that you have the tape labeled for the new software release.

**Note:** Nortel recommends that you upgrade your system directly from tape only if you are unable to complete the procedure [Uploading the software from tape to a disk on page 57](#).

- If upgrading using Electronic Software Delivery (ESD), ensure that the required files are in the directory you are upgrading from, which is likely to be the `/swd/sdm/esd` directory.

If necessary, contact your next level of support, or refer to the procedures “Preparing your system for upgrade using Electronic Software Delivery” in *Upgrading the CS 2000 Core Manager*, NN10060-461 and “Transferring and retrieving files using SFT” in *CS 2000 Core Manager Administration and Security*, NN10170-611.

**Note:** If you need to determine the list of required filesets for your solution, refer to section “Filesets to solution mapping” in this NTP.

- Install and configure the pserver application on the Preside MDM. This applies to Carrier Voice over IP offices where the CS 2000 Core Manager needs to communicate with the Preside MDM for fault data using the Passport log streamer application. Refer to the Passport 15000 and Preside MDM sections in Solution-level Fault Management Troubleshooting, NN10198-912, for instructions on how to configure the pserver application.
- Ensure that the system is equipped with a datavg. The CS 2000 Core Manager must be equipped with a data volume group (datavg). You can check the presence of a datavg through the maintenance interface under the storage level (sdmmtc storage).
- Check the root logical volume file system - potential disk space error. Make sure the root logical volume or file system does not exceed 70% of its total size. If the root file system exceeds the 70% mark, you must make more room on it for the upgrade to be successful. The /usr logical volume must have a minimum size of 1050Mb. Before starting the upgrade, ensure that /usr is less than 50% full. For more details, contact your next level of support.
- Ensure the CS 2000 Core Manager is alarm free. If any alarms are present, refer to the CS 2000 Core Manager Fault Management, NN10082-911, for alarm-clearing procedures.
- Ensure that you either
  - Have VT100 terminal emulation.  
Before you perform this procedure, it is recommended that you ensure that your terminal is capable of VT100 terminal emulation and that you can establish a VT100 connection to SP0.
  - or
  - Have a PC or UNIX workstation connected to the LAN.  
Ensure that you have access to a PC or UNIX workstation from which you are able to telnet and access the CS 2000 Core Manager through the LAN. Also, verify that telnet is enabled on the CS 2000 Core Manager.

- If you have SBA on your system, query the status of RTB for each billing stream for which RTB is configured. Record all RTB streams that are InSv for reference purposes.

**Note:** If required, refer to the procedure “Querying the status of RTB for a billing stream” in *CS 2000 Core Manager Accounting*, NN10126-811.

- Nortel recommends that you deliver unprocessed billing files to a downstream destination. Ensure that no more than one unprocessed billing file remains on the system. The following table lists each task and the procedure in *CS 2000 Core Manager Accounting*, NN10126-811, to complete the task.

#### Accounting procedure for each task and file transfer mode

Task	File transfer mode	Accounting procedure
Close billing files	All	“Closing billing files”
Send billing files downstream	Outbound file transfer (OFT)	“Sending billing files from disk”
	Inbound file transfer (IFT)	“Retrieving billing files for a stream set to inbound file transfer”
	Real time billing (RTB)	“Sending billing files from disk”

### Accounting procedure for each task and file transfer mode

Task	File transfer mode	Accounting procedure
	Automatic file transfer (AFT)	<p>No manual action is required. Wait for SBA to deliver pending billing files to the downstream destination. There should be no pending files (at least, not more than one) for each AFT session.</p> <p>Use the following commands to query AFT sessions: billmtc, appl, aft, aftcfg, list.</p> <p>To verify which billing files for each session are still pending, enter the following commands: billmtc, appl, aft, query &lt;session_name&gt;.</p> <p><b>Note:</b> Press the Enter key after each command.</p>

To display the details about a stream, refer to the procedure “Listing billing streams” in *CS 2000 Core Manager Accounting*. To list all files currently stored in a stream, refer to the procedure “Listing billing files” in *CS 2000 Core Manager Accounting*, NN10126-811.

If you are unable to send billing files to a downstream destination and you want to proceed with the upgrade, Nortel recommends that you backup the billing files to a DAT tape. If required, refer to the procedure “Copying billing files to tape (backup)” in *CS 2000 Core Manager Accounting*, NN10126-811.

If you need to restore the billing files from tape and you have AFT or IFT configuration, contact your next level of support for instructions. For any other configuration, you can send the billing files from tape following the procedure “Sending billing files from tape” in *CS 2000 Core Manager Accounting*, NN10126-811.

- If you are upgrading to SN07 or a higher release, remove and offline the Ineo SSH Secure File Transfer application using the procedure [Removing the Ineo SSH Secure File Transfer application on page 67](#)

## Removing the Ineo SSH Secure File Transfer application

### *At the VT100 console or telnet session*

- 1 Log on to the CS 2000 Core Manager using the root user ID and password.
- 2 Access the application level of the SDMMTC interface:  

```
# sdmmtc appl
```
- 3 In the display, locate the Ineo SSH Secure File Transfer application.

If	Do
Ineo SSH Secure File Transfer is installed on your system	step <a href="#">4</a>
Ineo SSH Secure File Transfer is not installed on your system	step <a href="#">11</a>

- 4 If the Ineo SSH Secure File Transfer application is in service, busy it and take it offline:  

```
> bsy <number>
```

 where  
     **<number>**  
     is the number displayed on the screen that is associated with the Ineo SSH Secure File Transfer application
- 5 Take the Ineo SSH Secure File Transfer application offline:  

```
> offl <number>
```

 where  
     **<number>**  
     is the number displayed on the screen that is associated with the Ineo SSH Secure File Transfer application
- 6 Access the details level:  

```
> details
```
- 7 Select the Ineo SSH Secure File Transfer application for removal from the system:  

```
> select <number>
```

 where  
     **<number>**  
     is the number displayed on the screen that is associated with the Ineo SSH Secure File Transfer application

- 8 Remove the Ineo SSH Secure File Transfer application from the system:  

```
> remove
```

*The system will provide output similar to that in the following example:*

```
WARNING: If you proceed with this action, all
versions of the following fileset will be
removed from the system.

Ineo SSH Secure File Transfer

Do you wish to proceed?
Please confirm ("YES", "Y", "NO", or "N")
```
- 9 Confirm the removal of this application:  

```
> Yes
```
- 10 Exit from the maintenance interface:  

```
> quit all
```
- 11 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Post-upgrade notes

You must be aware of the following information.

If, after an ESUP upgrade, the source command (at the sdmmtc/apply level) fails, the following message is displayed: Create the FIXES filesystem from sdmmtc;fixes and retry this. This message displays when the FIXES directory does not exist on the core manager. You should, then, create the FIXES directory as requested in this message.

## Upgrade notices

**CAUTION****Possible upgrade failure**

Do not login into any of the /alt\_inst file systems at any stage of the upgrade. This can cause the upgrade to fail and start an automatic recovery.

**ATTENTION**

Some applications that are obsolete in the new release are automatically removed.

If the Exception Reporting, Alarm Conduit, SDM Corba Framework, and Remote Registration System filesets are present, they are automatically removed when upgrading to the new software load.

**ATTENTION**

In cases of fallback, You can abort this procedure at every prompt. If you choose to abort before the system reboots, follow the on-screen instructions to recover the system. If you choose to abort after the system reboots, complete the procedure “Recovering the system from an ESUP failure” in *Upgrading the CS 2000 Core Manager*, NN10060-461.

If the CS 2000 Core Manager system initiates an automatic fallback during this procedure, contact your next level of support before attempting the recovery procedure.

## Prepare the system

Use the following procedure to prepare the system for an upgrade.

**Prerequisites**

The following prerequisites apply to this procedure:

**ATTENTION**

Read the [Pre-upgrade requirements on page 62](#) and [Upgrade notices on page 69](#) sections, and complete any necessary activities before you proceed with the upgrade.

**At the PC or UNIX workstation**

- 1 Determine how you will connect to the CS 2000 Core Manager.

If you choose	Do
telnet session	step <a href="#">2</a>
VT100 console	step <a href="#">5</a>

- 2 Establish a telnet connection to the CS 2000 Core Manager by opening a terminal window that is VT100 compatible.
- 3 Log onto the CS 2000 Core Manager from the terminal window prompt:
 

```
telnet <ip_address>
```

 where
 

```
<ip_address>
```

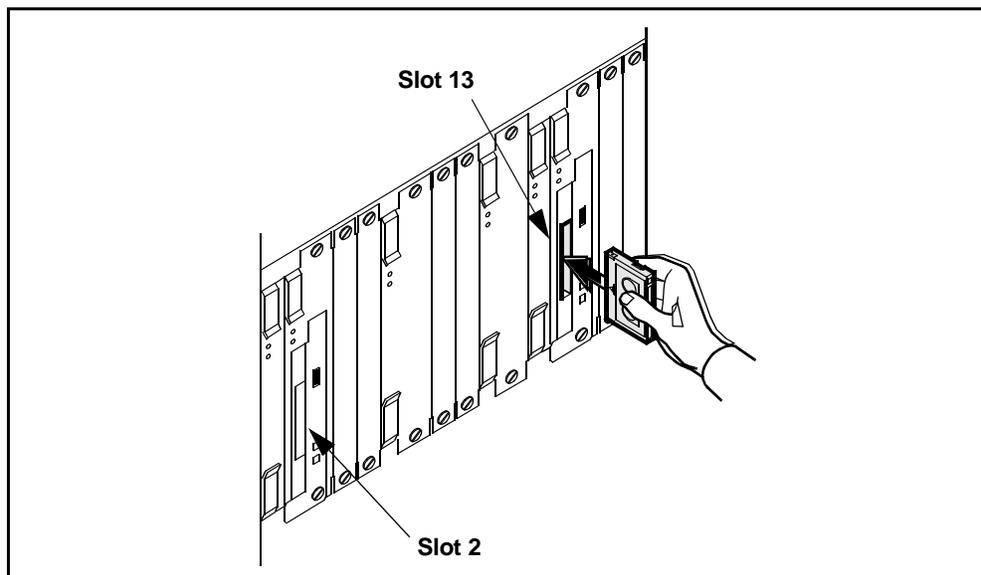
 is the IP address of the CS2000 Core Manager
- 4 Keep window size at 80x24.

**At the VT100 console or telnet session**

- 5 Log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 6 If you are upgrading from tape (not from ESD), verify that the procedure [Uploading the software from tape to a disk on page 57](#) has been completed. If not, perform the procedure now.
- 7 Use the following table to determine your next step.

If you are upgrading from	Do
a directory, such as one directory created during ESD or during procedure <a href="#">Uploading the software from tape to a disk on page 57</a>	step <a href="#">8</a>
directly from tape (not recommended; use this option only if you are unable to upload the software from tape to a disk)	insert the tape labeled for the new software load into the tape drive in slot 13 (DAT1) as shown in the following figure, and continue with step <a href="#">8</a> .  <b>Note:</b> Wait until the tape drive stabilizes (yellow LED is off) before you proceed.

## Main chassis tape drive



- 8 Remove all archived filesets from the system, which will free up disk space:

Access the Details level:

```
sdmmtc details
```

- 9 Show all software:

```
filter off
```

- 10 Select all archived filesets:

```
select all
```

**Note:** If there are no archived filesets to remove, go to step [14](#).

- 11 Remove all archived filesets:

```
remove all
```

System will automatically select appropriate files to remove.

- 12 Confirm the command:

```
y
```

Once you remove the archived filesets, the state of the CS 2000 Core Manager changes to in-service trouble (ISTb), and the status of the Backup Status alarm indicates: Required. If the backup Required alarm is disabled, the alarm will not be raised. If the alarm is enabled, perform a backup of your new system image using procedure "Creating system image backup tapes (S-tape) manually" in *CS 2000 Core Manager Security and*

*Administration*, NN10170-611. If you choose not to perform a backup, you can force-clear the alarm using procedure “Clearing a system image backup Required or Failed alarm” in *CS 2000 Core Manager Fault Management*, NN10082-911.

- 13** After removing the archived filesets, ensure that /usr logical volume is less than 50% full. To check the % full value of /usr, enter the following command:

```
sdmmtc storage
```

If /usr is more than 50% full, refer to procedure “Increasing the size of a logical volume” in *CS 2000 Core Manager Security and Administration*, NN10170-611, to increase the /usr logical volume size as required. The /usr logical volume must have minimum size of 1050Mb.

- 14** Exit the maintenance interface:

```
quit all
```

- 15** Use the following table to determine your next step.

If you	Do
have pre-loaded the software from tape, as described in procedure <a href="#">Uploading the software from tape to a disk on page 57</a>	go to step <a href="#">18</a>
are upgrading your system from an ESD directory (not after tape pre-loading)	go to step <a href="#">17</a>
are upgrading your system directly from tape inserted in slot 13	go to step <a href="#">16</a>

- 16** Install the Upgrade Tools filesset:

```
installp -ad /dev/rmt1 SDM_UPGRADE.tools
```

When prompted, press the Enter key again.

Go to step [18](#).

- 17** Install the Upgrade Tools filesset:

```
installp -ad <directory> SDM_UPGRADE.tools
```

where

**<directory>**

is the directory where the software is located

When prompted, press the Enter key again.

- 18** Install the ESUP software:

```
esupinstall
```

- 19** When prompted, select the location of the software load: one of the following values:

**0**

if you are upgrading directly from the tape in slot 2

**Note:** Nortel recommends that you do not use slot 2. Use slot 13 instead.

**1**

if you are upgrading directly from the tape in slot 13

**D**

if you are upgrading from a directory (ESD or pre-loaded from tape)

**ABORT**

if you wish to abort the procedure

If you entered	Do
D	step <a href="#">20</a>
0, 1, or ABORT	step <a href="#">21</a>

- 20** When prompted, enter the directory path where the software load is located.
- 21** Wait until the system completes the installation (up to 10 min).  
*When completed, the following message is displayed:*  
SUCCESSFULLY INSTALLED SOFTWARE FOR ESUP
- 22** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Upgrade the software

### ATTENTION

All application filesets are upgraded during this procedure, except the SDM Billing Application (SBA), the SBA Automatic File Transfer (AFT) application, upgrade these application filesets after the ESUP portion of this procedure.

### *At the PC or UNIX workstation*

- 1 Determine how you will connect to the CS 2000 Core Manager.

If you choose	Do
telnet session	step <a href="#">2</a>
VT100 console	step <a href="#">5</a>

- 2 Establish a telnet connection to the CS 2000 Core Manager by opening a terminal window that is VT100 compatible.
- 3 Log onto the CS 2000 Core Manager from the terminal window prompt:
 

```
telnet <ip_address>
```

 where
 

```
<ip_address>
```

 is the IP address of the CS2000 Core Manager
- 4 Keep window size at 80x24.

### *At the VT100 console or telnet session*

- 5 When prompted, log in as a user authorized to perform config-admin actions.
- 6 Begin the upgrade:
 

```
esup
```

 The system lists all stages of the upgrade and gives you the choice to continue the upgrade or to abort (go/abort).
- 7 To continue, type
 

```
go
```

- 8 When prompted to select the upgrade type, use the following table to determine your next step.

If	Do
you choose to upgrade to a higher release	type 1 and press the Enter key, then go to step <a href="#">11</a>
you choose to perform a patch-only upgrade (only patches are applied, and no other files are applied)	type 2 and press the Enter key, then go to step <a href="#">9</a>

**Note:** If you wish to abort, enter abort.

- 9 When prompted to enter the directory location for the patches, use the following table to determine your next step.

If the patch files	Do
are located in the default ESD directory /swd/sdm/esd	Enter go and press the Enter key.
are not located in the default directory	Enter the directory path where the patch files are located and then press the Enter key.

- 10 The system verifies the content of the directory and informs you if you entered the wrong path.

If the directory is	Do
correct, the system continues the upgrade procedure until it prompts you to busy the SDM.	step <a href="#">21</a>
not correct	<p>1. Re-type the directory path, press the Enter key.</p> <p>The system continues the upgrade procedure until it prompts you to busy the SDM.</p> <p>Go to step <a href="#">21</a></p>

- 11 When prompted to select the media type, use the following table to determine your next step.

If you are upgrading from	Do
a directory (ESD or pre-loaded from tape)	type 2 and press the Enter key, then go to step <a href="#">15</a>
directly from tape	type 1 and press the Enter key, then go to step <a href="#">12</a>

**Note:** If you wish to abort, enter 0.

- 12 The system displays the following response:

The following device has been selected to perform the upgrade:

```
Media Type: TAPE /dev/rmt1
```

```
Continue (yes or no)>
```

**Note:** /dev/rmt1 is the device name for the tape drive in slot 13 (DAT1).

Verify that the displayed media type is correct and continue the upgrade:

**yes**

The system reports all automatic sub-processes that are taking place during this stage, as well as the start time for each process. Also displayed is an estimated duration for each process.

**Note:** The estimated time may not be exact. Allow some additional time. However, if the process continues much longer than the estimate, contact your next level of support.

- 13 When prompted to insert the tape, use the following table to determine your next step.

If at this point the tape	Do
is not inserted	insert the tape labeled for the new software load into the tape drive in slot 13, enter go and press the Enter key
is inserted	make sure that the tape is in the correct drive, enter go and press the Enter key

- 14 The system verifies the content of the tape and informs you if the wrong tape is inserted.

If the inserted tape is	Do
correct, the system continues the upgrade procedure until it prompts you to busy the SDM.	step <a href="#">18</a>
not correct	1. Replace it with the tape labeled for the new software load, enter go and press the Enter key.  2. Go to step <a href="#">18</a>

- 15 The system confirms that you have selected Media Type: DISK. Continue the upgrade:

**yes**

**Note:** If you wish to abort the procedure, enter no.

The system reports all automatic sub-processes that are taking place during this stage, as well as the start time for each process. Also displayed is an estimated duration for each process.

**Note:** The estimated time may not be exact. Allow some additional time. However, if the process continues much longer than the estimate, contact your next level of support.

- 16 When prompted to enter the directory location for the new NCL load, use the following table to determine your next step.

If the new software load files	Do
are located in the default ESD directory /swd/sdm/esd	enter go and press the Enter key
are not located in the default directory, or are located in the directory created during the procedure <a href="#">Uploading the software from tape to a disk on page 57</a> .	enter the directory path where the files are located, then press the Enter key

- 17 The system verifies the content of the directory and informs you if you entered the wrong path.

If the directory is	Do
correct	step <a href="#">18</a>
not correct	re-type the directory path, press the Enter key, then go to step <a href="#">18</a>

- 18 When you are prompted as to whether you want to install patches, use the following table to determine your next step.

If	Do
you want to install patches	step <a href="#">19</a>
you do not want to install patches, the system continues the upgrade procedure until it prompts you to busy the SDM.	step <a href="#">21</a>

**Note:** If you wish to abort, enter abort.

- 19 When prompted to enter directory location for patches, use the following table to determine your next step.

If the patch files	Do
are located in the default ESD directory /swd/sdm/esd	enter go and press the Enter key
are not located in the default ESD directory	enter the directory path where the patch files are located, then press the Enter key.

- 20** The system verifies the content of the directory and informs you if you entered the wrong path.

If the directory is	Do
correct, the system continues the upgrade procedure until it prompts you to busy the SDM.	step <a href="#">21</a>
not correct	1. Re-type the directory path, press the Enter key.  The system continues the upgrade procedure until it prompts you to busy the SDM.  Go to step <a href="#">21</a>

- 21**

**ATTENTION**

Before the system prompts you to busy the SDM it automatically sets AFT and SBA applications into offline state. ESUP will automatically brings them back in service after the SDM reboots and is returned into service.

- 22** Use the following table to determine your next step.

If	
your office is equipped with a third-party Call Agent	<a href="#">step 26</a>
your office not equipped with a third-party Call Agent	<a href="#">step 30</a>

**At the PC or UNIX workstation**

- 23** Establish a telnet connection to the CS 2000 Core Manager. Open a terminal window that is VT100 compatible.
- Log onto the CS 2000 Core Manager from the terminal window prompt:
- ```
telnet <ip_address>
```
- where

**<ip\_address>**

is the IP address of the CS 2000 Core Manager

- 24 Keep window size at 80x24.
- 25 When prompted, log in as a user authorized to perform config-admin actions.
- 26 Busy the CS 2000 Core Manager. Access the SDM maintenance level by typing  
**sdmmtc;mtc**
- 27 Busy the CS 2000 Core Manager by typing  
**bsy**
- 28 Confirm the busy request by typing  
**y**
- 29 Continue with step [33](#).

**At the MAP display**

- 30 Busy the CS 2000 Core Manager level at the MAP display accessing the SDM level of the MAP display:  
**mapci;mtc;appl;sdm**
- 31 Busy the CS 2000 Core Manager:  
**bsy**
- 32 Confirm the busy request:  
**y**

**At the MAP display**

- 33 Verify that each billing stream has entered the active backup mode by posting and querying each of your billing streams.  
**sdbil;post<stream>;query**

**At the VT100 console or telnet session**

- 34 Continue the procedure, by typing  
**go**

**Note:** Until the CS 2000 Core Manager is fully busy, the system displays the following message: Waiting for SDM BSY.

The system automatically reboots. This process can take up to ten minutes.

**Note:** If the upgrade is being done using telnet, the system reboot will close the telnet session.

- 35 Wait until the system has finished rebooting. Use the following table to determine your next step:

| If you are using | Do                            |
|------------------|-------------------------------|
| VT100 console    | go to step <a href="#">37</a> |
| Telnet session   | go to step <a href="#">36</a> |

The upgrade automatically continues.

***At the PC or UNIX workstation***

- 36 The reboot process closed the previous telnet session. Re-establish a new telnet session:

```
telnet <ip_address>
```

where

**<ip\_address>**

is the IP address of the SDM

**Note:** Keep window size at 80x24

***At the VT100 console or telnet session***

- 37 When prompted, log in as a user authorized to perform config-admin actions.
- 38 Continue the upgrade:
- ```
esup
```
- 39 Use the following table to determine your next step.

If you are	Do
prompted to configure DDMS clients	step <a href="#">40</a>
not prompted to configure DDMS clients	step <a href="#">46</a>

- 40 Configure the DDMS clients which are the CS 2000 Management tools servers with the SESM load.
- 41 To display a list of existing client IP addresses, from the DDMS Clients Configuration menu select option 3: List existing clients. Use the IP addresses listed to add clients as required.
- 42 Add a new client:
- ```
1
```
- 43 When prompted, enter the IP address for each of the CS 2000 Management tools servers. Press the Enter key after each entry.

**44** Type **done** once you have entered all the IP addresses.

**45** Exit the DDMS clients configuration screen:

**0**

**Note:** You can reconfigure the OSS Comms Svcs at any time through the `sdmmtc` config level.

**46** If you have the DNBD Call Monitoring Application on your system, upgrade it by following the appropriate procedure in the International Lawful Interception NTP, and then return to step [47](#)

**47** Use the following table to determine your next step.

| If your office                                | Do                      |
|---|-------------------------|
| is equipped with a third-party Call Agent     | step <a href="#">48</a> |
| is not equipped with a third-party Call Agent | step <a href="#">56</a> |

#### ***At the PC or UNIX workstation***

**48** Access the Application level of the CS 2000 Core Manager maintenance interface:

```
sdmmtc appl
```

**49** Locate and busy the OSS Comms Svcs application:

```
bsy <x>
```

where

```
<x>
```

is the number next to the OSS Comms Svcs fileset

**50** Return the OSS Comms Svcs application to service:

```
rts <x>
```

where

```
<x>
```

is the number next to the OSS Comms Svcs fileset

**51** Continue with step [52](#) (the system automatically returns to service).

**At the VT100 console or telnet session**

- 52 Use the following table to determine your next step.

If your office	Do
is equipped with a third-party Call Agent	continue with step <a href="#">53</a> (the system automatically returns to service)
is not equipped with a third-party Call Agent	when prompted to return the SDM to service, go to step <a href="#">56</a>

**At the PC or UNIX workstation**

- 53 The reboot process closed the previous telnet session. Re-establish a new telnet session:

```
telnet <ip_address>
```

where

**<ip\_address>**

is the IP address of the SDM

**Note:** Keep window size at 80x24

**At the VT100 console or telnet session**

- 54 When prompted, log in as a user authorized to perform config-admin actions.

- 55 Continue the procedure:

```
esup
```

*The upgrade continues until you are prompted to return the SDM to service.*

**At the MAP display**

- 56 When prompted, return the CS 2000 Core Manager to service by accessing the SDM level of the MAP display:

```
mapci;mtc;appl;sdm
```

- 57 Return the CS 2000 Core Manager to service:

```
rts
```

**Note:** Ensure that the CS 2000 Core Manager has returned to service completely before performing step [58](#).

**At the VT100 console or telnet session**

- 58 Continue by typing

**go**

*The following response: Waiting for SDM RTS, will appear until the system is fully in service. It will take 2 to 10 minutes for the CS 2000 Core Manager to return to service.*

**At the MAP display**

- 59 Verify that all billing streams are either in-service or in recovery on the CS 2000 Core Manager side:

**sdbmil;post<stream>;query**

- 60 Use the following table to determine your next step.

If your system	Do
has CS 2000 SAM21 Manager application, and you are upgrading from CS2E0070 or CS2E0080	step <a href="#">61</a>
does not have CS 2000 SAM21 Manager application	step <a href="#">68</a>

**At the PC or UNIX workstation**

- 61 Configure CS 2000 SAM21 Manager application. Locate and have available your records from the [Pre-upgrade requirements](#) section.

- 62 Access the Config level:

**sdmmtc config**

- 63 Start the configuration process:

**config <x>**

where

**<x>**

is the number next to the SAM21 Manager application

- 64 When prompted whether DNS is supported on CS 2000 SAM21 Manager workstations, enter Y (yes) or N (no), and press the Enter key.

If you enter	Do
Y (yes)	step <a href="#">65</a>
N (no)	step <a href="#">66</a>

- 65 When prompted, enter the CommonName from the certificate on the CS 2000 Management Tools server that is configured to run the Login Application, and press the Enter key.
- 66 When prompted, enter the host name of the CS 2000 Management Tools server that is configured to run the Login Application, and press the Enter key.
- 67 Exit the maintenance interface:  
**quit all**

**At the VT100 console or telnet session**

- 68 The system displays a message confirming that the CS 2000 Core Manager has been upgraded successfully. Read the message and follow the on-screen instructions. Use the following table to determine your next step.

If you wish to	Do
continue the upgrade	step <a href="#">69</a>
abort the upgrade	type abort and press the Enter key, then complete the procedure "Recovering the system from an ESUP failure" in <i>Upgrading the CS 2000 Core Manager</i> , NN10060-461.

- 69 Use the following table to determine your next step.

If you	Do
have SBA on your system	step <a href="#">70</a>
do not have SBA on your system	step <a href="#">75</a>

**At the PC or UNIX workstation**

- 70 Establish a telnet connection to the SDM. Open a terminal window that is VT100 compatible.
- 71 Log onto the SDM from the terminal window prompt:  
**telnet <ip\_address>**  
where  
**<ip\_address>**  
is the IP address of the SDM  
**Note:** Keep window size at 80x24.
- 72 When prompted, log in as a user authorized to perform config-admin actions.

- 73** Query the status of each RTB stream that was InSv before the upgrade (refer to your records from the [Pre-upgrade requirements](#) section). If none were recorded, continue with step [75](#).

**Note:** If required, refer to the procedure “Querying the status of RTB for a billing stream” in *CS 2000 Core Manager Accounting*, NN10126-811.

- 74** If the status of RTB for any stream changed from InSv to ManB, manually return each of these RTB stream instances to service. Refer to the procedure “Returning RTB stream instance to service” in *CS 2000 Core Manager Accounting*, NN10126-811.

**At the VT100 console or telnet session**

**75**



**CAUTION**

**Possible loss of service**

Once you begin the re-integration process, you cannot use the abort command to return to the previous version of the CS 2000 Core Manager software. If you decide to return to the previous version of the CS 2000 Core Manager software after the reintegration process, you must take the CS 2000 Core Manager off-line and restore the previous version of the CS 2000 Core Manager software from an S-tape. There is a loss of service for several hours when you restore the previous software.

Begin the integration process:

**go**

When the system confirms that the upgrade is complete, go to step [76](#).

- 76** Complete any post-upgrade commissioning:

**sdmconfig auto**

- 77** If you have the SDM Billing Application (with or without the SBA Automatic File Transfer application), proceed to the section [Upgrade the SBA and AFT applications on page 89](#), and then return to step [78](#).

- 78 Use the following table to determine your next step.

If you	Do
need to install new applications and services	step <a href="#">79</a>
do not need to install new applications and services	step <a href="#">80</a>

- 79 Install new applications and services using the procedures in the CS 2000 Core Manager suite of information modules that correspond to the applications or services you want to install. Only install the required applications. For a list of applications required for each Succession solution, refer to [Filesets to solution mapping on page 13](#). When complete, return to this procedure and proceed to step [80](#).

**Note:** Install new applications and services from the VT100 console.

- 80 You have completed this procedure. If applicable, go to [Apply the SDM\\_Base.dfquery fileset on page 87](#) or return to the higher level task flow or procedure that directed you to this procedure.

## Apply the SDM\_Base.dfquery fileset

The SDM\_BASE.dfquery fileset, also called Revised MFIO Software, must be manually applied after an upgrade if it has not already been installed.

### *At the VT100 console or telnet session*

- 1 Access the maintenance interface:

```
sdmmtc
```

- 2 Use the following table to determine your next step.

If upgrading from	Do
a directory (ESD or pre-loaded from tape)	step <a href="#">3</a>
directly from tape	step <a href="#">5</a>

- 3 List the filesets:

```
apply <directory_path>
```

where

```
<directory_path>
```

is the directory where the filesets are located

**Note:** <directory\_path> can be the /swd/sdm/esd directory.

- 4 Go to [6](#).
- 5 List the filesets:  
**apply <domain\_number>**  
where  
    **<domain\_number>**  
        indicates the domain where you inserted the tape. Type 1.
- 6 Select the SDM\_BASE.dfquery (Revised MFIO Software) fileset;  
**select <x>**  
where  
    **<x>**  
        is the number next to the SDM\_BASE.dfquery (Revised MFIO Software) fileset
- 7 Apply the SDM\_BASE.dfquery fileset:  
**apply**  
*Example response*  

```
You have selected to install the following new
filesets or fileset updates.
SDM_BASE.dfquery xx.xx.xx.x
Do you wish to proceed?
Please confirm ("YES", "Y", "NO", or "N")
```
- 8 When prompted, confirm the apply command:  
**Y**
- 9 You have completed this procedure. If applicable, go to procedure "Completing the CS 2000 Core Manager upgrade", located in this document, or return to the higher level task flow or procedure that directed you to this procedure.

## Upgrade the SBA and AFT applications

### ATTENTION

During the time period between the end of the ESUP and prior to the completion of the upgrade of the SBA application package, SBA maintenance commands related to stream configuration are not available. Therefore, do not attempt to enter SBA maintenance commands for adding, changing, deleting, or listing a billing stream during that time period.

Complete this procedure only if you have the SDM Billing Application (with or without the SBA Automatic File Transfer application) on your system.

**Note:** If you do not have the SBA Automatic File Transfer (AFT) application, disregard any references to AFT.

### ATTENTION

The following steps stop the SBA for approximately 20 minutes. Ensure that adequate backup space is available on the core before continuing with these steps. To determine the amount of backup space required, refer to the “Disk space requirements” section in “Preparing for SBA installation and configuration” in *CS 2000 Core Manager Accounting*, NN10126-811. To set up the backup space, refer to procedure “Configuring the SBA on the Communication Server 2000 core” in *CS 2000 Core Manager Accounting*, NN10126-811.

### At the VT100 console or telnet session

- 1 Access the maintenance interface:  
`sdmmtc`
- 2 Use the following table to determine your next step.

If upgrading from	Do
a directory (ESD or pre-loaded from tape)	step <a href="#">3</a>
directly from tape	step <a href="#">9</a>

- 3 List the filesets:

```
apply <directory path>
```

where

**<directory\_path>**

is the directory where the filesets are located

**Note:** <directory path> can be the /swd/sdm/esd directory.

- 4 If, after an ESUP upgrade, the apply command fails and the following message is displayed: Create the FIXES filesystem from sdmmtc;fixes and retry this, then the FIXES directory does not exist on the CS 2000 Core Manager. Use the following table to determine your next step.

If upgrading from	Do
If the apply command failed and you received the error message requesting you to create the FIXES filesystem	You must create the FIXES directory. Go to step <a href="#">5</a>
If the apply command was successful	step <a href="#">10</a>

- 5 Create the fixes directory:

```
sdmmtc fixes
```

- 6 Exit from the maintenance interface:

```
quit all
```

- 7 Restart the maintenance interface:

```
sdmmtc
```

- 8 Return to step [3](#).

- 9 List the filesets:

```
apply <domain_number>
```

where

**<domain\_number>**

indicates the domain where you inserted the tape. Type 0 or 1.

- 10 Select all versions of the SDM Billing Application filesets and, if required, the SBA Automatic File Transfer filesets:

```
select <x> <y>
```

where

**<x> <y>**

are the numbers next to the SDM Billing Application filesets and the SBA Automatic File Transfer filesets. Specify as many numbers after the command as necessary.

**Note:** If you do not have the SBA Automatic File Transfer application on your system, do not select the AFT filesets.

- 11** Apply the SDM Billing Application fileset and, if required, the SBA Automatic File Transfer fileset:

**apply**

*The system automatically selects the SDM\_ACE fileset, which is required by the SBA and AFT applications. When you confirm the apply command, the system will, if necessary, automatically install the ACE fileset first.*

*Example response*

You have selected to install the following new filesets or fileset updates.

```
SBA Automatic File Transfer xx.xx.xx.x
SDM Billing Application xx.xx.xx.x
```

You did not select the following filesets that are required by some of the selected filesets. If you proceed, they will be applied automatically before the selected filesets.

```
SDM ACE distribution x.x.x.x
```

```
Do you wish to proceed?
Please confirm ("YES", "Y", "NO", or "N")
```

- 12** When prompted, confirm the apply command:

**y**

- 13** Exit the maintenance interface:

**quit all**

- 14** If applicable, access the billing maintenance interface to restart the AFT application:

**billmtc**

- 15** Access the APPL (application) level:

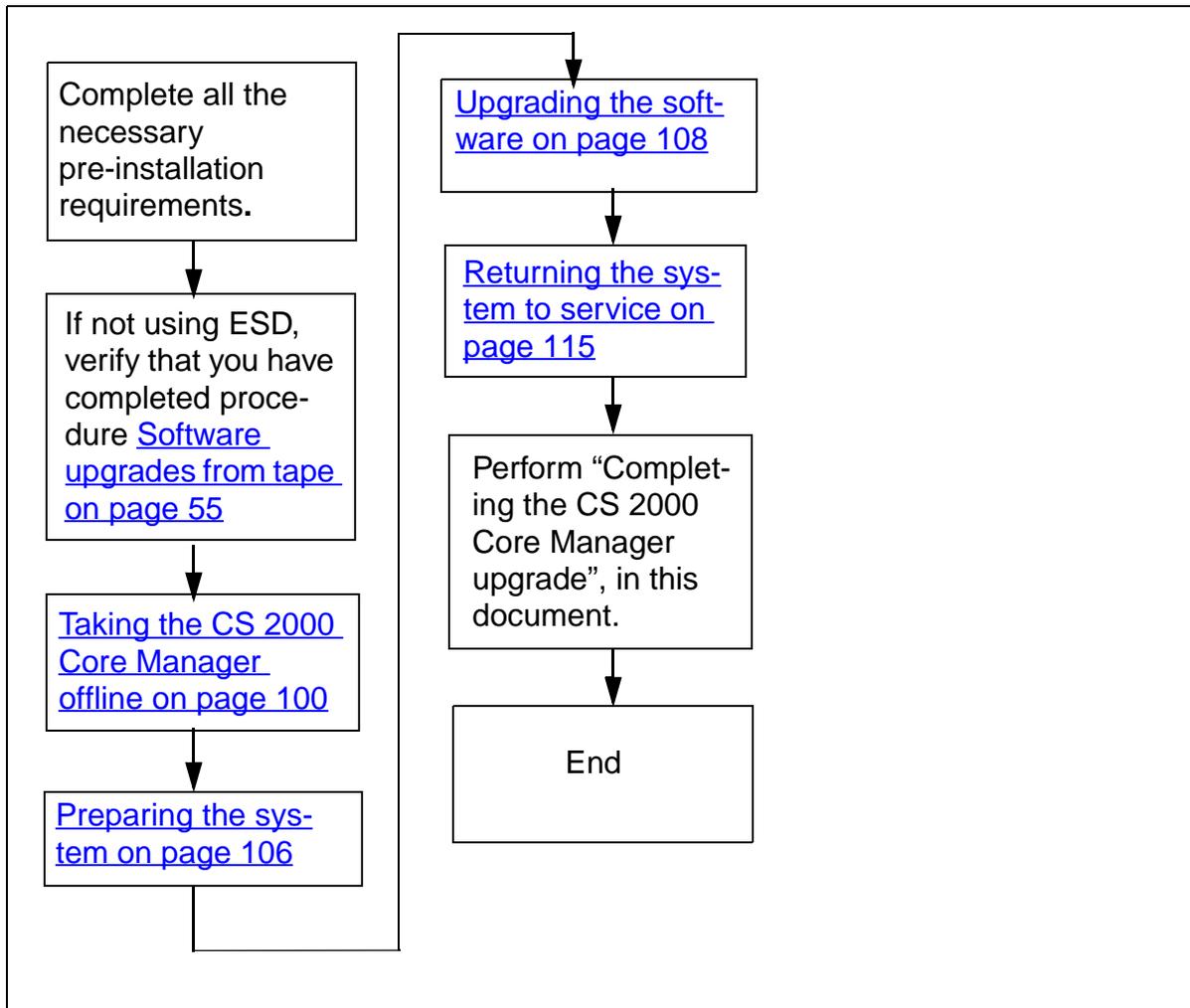
**appl**

- 16 Access the AFT level:  
**aft**
- 17 Restart the AFT application:  
**start <session\_name>**  
*where*  
**<session\_name>**  
is the name of the AFT session
- 18 Exit the billing maintenance interface:  
**quit all**
- 19 You have completed this procedure. Return to step [77](#) in the procedure, [Upgrade the software](#).

## Upgrading CS 2000 Core Manager software out of service

Use the following task flow to upgrade CS 2000 Core Manager software while the Core Manager is out of service.

### Task flow for upgrading CS 2000 Core Manager software out of service



## Purpose

This procedure describes the process to upgrade the CS 2000 Core Manager to the new software release using the out-of-service (OOS) Upgrade Procedure. During the OOS upgrade, the system is busied and both domains are upgraded at the same time.

This procedure references other procedures in the following NTPs:

- *CS 2000 Core Manager Basics*, NN10018-111
- *CS 2000 Core Manager Upgrades*, NN10060-461
- *CS 2000 Core Manager Fault Management*, NN10082-911
- *CS 2000 Core Manager Configuration Management*, NN10104-511
- *CS 2000 Core Manager Accounting*, NN10126-811
- *CS 2000 Core Manager Security and Administration*, NN10170-611

Ensure that you have access to those documents while performing this procedure.

## Pre-upgrade requirements

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

Before starting this procedure, complete the following activities:

- Ensure that the latest MNCL release is installed on your system.

Refer to “Upgrade guidelines” in *Upgrading the CS 2000 Core Manager*, NN10060-461 for the software baseline.

**Note:** If you need to upgrade to the latest MNCL, refer to the MNCL release notes for instructions.

- Verify that the pre-check tasks described in the [Preparing to upgrade the CS 2000 Core Manager on page 27](#) procedure were successfully completed seven days before starting this upgrade.
- Perform a system image backup.

#### ATTENTION

Nortel recommends that you perform a system image backup before you upgrade the base software. Use the procedure “Creating system image backup tapes (S-tapes) manually” in *CS 2000 Core Manager Administration and Security*, NN10170-611.

Performing a system image backup does not back up billing data. Ensure that billing is operating properly before starting.

If you need to revert to a prior release during an out-of-service upgrade, refer to “Performing a full restore of the software from S-tape” in *CS 2000 Core Manager Fault Management*, NN10082-911.

- Obtain the password for the user authorized to perform config-admin actions.

You must log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions, to perform the upgrade. Failure to log on as the user authorized to perform config-admin actions can cause your upgrade to fail. Furthermore, ensure that no other users are logged on during the upgrade. Only the user at the VT100 console can be logged on. For a procedure used to determine who is logged on, refer to the section, “Accessing the CS 2000 Core Manager” in *CS 2000 Core Manager Basics*, NN10018-111.

- Obtain and record the following information from your network administrator:
  - if your system has a CS 2000 SAM21 Manager installed, verify whether DNS is configured on the CS 2000 SAM21 Manager client workstations
  - the host name of the CS 2000 Management Tools server that is configured to run the Login Application

- the CommonName from the certificate on the CS 2000 Management Tools server that is configured to run the Login Application
- the IP address of the CS 2000 Management Tools server
- Obtain the right tape if upgrading from tape. Ensure that you have the tape labeled for the new software load.
- If upgrading using Electronic Software Delivery (ESD), ensure the required files are in the directories you are upgrading from, which can be the /swd/sdm/esd directory.  

If necessary, contact your next level of support, or refer to the procedures “Preparing your system for upgrade using Electronic Software Delivery” in *Upgrading the CS 2000 Core Manager*, NN10060-461 and “Transferring and retrieving files using SFT” in *CS 2000 Core Manager Administration and Security*, NN10170-611.
- Ensure the pserver application is installed and configured on the Preside MDM server prior to upgrading the CS 2000 Core Manager. This applies to Succession offices where the CS 2000 Core Manager needs to communicate with the Preside MDM for fault data, using the Passport log streamer application. Refer to the Passport 15000 and Preside MDM in *Succession Networks Fault Management Troubleshooting*, NN10198-912, for instructions on how to configure the pserver application.
- Check the root logical volume file - potential disk space error. Make sure the root logical volume (/) file system does not exceed 70% of its total size. If the root file system exceeds the 70% mark, you must make more room on the root file system for the upgrade to be successful. The /usr logical volume must have a minimum size of 1050Mb. Before starting the upgrade, ensure that /usr is less than 50% full. For more details, contact your next level of support.
- Check for the presence of a datavg if required.  
If upgrading a rootvg-datavg, ensure datavg is present. You can check the presence of a datavg through the maintenance interface under the storage level (sdmmtc storage).
- Make sure the CS 2000 Core Manager is alarm free. If any alarms are present, refer to *CS 2000 Core Manager Fault Management*, NN10082-911 for alarm-clearing procedures.
- Have VT100 terminal emulation. Before you perform this procedure, make sure that your terminal is configured for VT100 terminal

emulation and that you can establish a connection to SP0 either locally or remotely through modem or terminal server.

- If you are upgrading to SN07 or a higher release, offline and remove the Ineo SSH Secure File Transfer application using the procedure [Removing the Ineo SSH Secure File Transfer application on page 97](#)

## Removing the Ineo SSH Secure File Transfer application

### *At the VT100 console or telnet session*

- 1 Log on to the CS 2000 Core Manager using the root user ID and password.
- 2 Access the application level of the SDMMTC interface:  
**# sdmmtc appl**
- 3 In the display, locate the Ineo SSH Secure File Transfer application.

If	Do
Ineo SSH Secure File Transfer is installed on your system	step <a href="#">4</a>
Ineo SSH Secure File Transfer is not installed on your system	step <a href="#">9</a>

- 4 If the Ineo SSH Secure File Transfer application is in service, busy it and take it offline:  
**> bsy <number>**  
 where  
**<number>**  
 is the number displayed on the screen that is associated with the Ineo SSH Secure File Transfer application
- 5 Take the Ineo SSH Secure File Transfer application offline:  
**> offl <number>**  
 where  
**<number>**  
 is the number displayed on the screen that is associated with the Ineo SSH Secure File Transfer application
- 6 Access the details level:  
**> details**

- 7 Select the Ineo SSH Secure File Transfer application for removal from the system:  

```
> select <number>
```

where  

```
<number>
```

is the number displayed on the screen that is associated with the Ineo SSH Secure File Transfer application
- 8 Remove the Ineo SSH Secure File Transfer application from the system:  

```
> remove
```

*The system will provide output similar to that in the following example:*

```
WARNING: If you proceed with this action, all
versions of the following fileset will be
removed from the system.

Ineo SSH Secure File Transfer

Do you wish to proceed?
Please confirm ("YES", "Y", "NO", or "N")
```
- 9 Confirm the removal of this application:  

```
> Yes
```
- 10 Exit from the maintenance interface:  

```
> quit all
```
- 11 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Post-upgrade notes

You must be aware of the following information.

If, after this upgrade, the source command (at the sdmmtc/apply level) fails, the following message is displayed: Create the FIXES filesystem from sdmmtc;fixes and retry this. This message displays when the FIXES directory does not exist on the core manager. You should, then, create the FIXES directory as requested in this message.

## Upgrade notices

### ATTENTION

Some applications are automatically removed.

If the Exception Reporting, Alarm Conduit, SDM Corba Framework, and Remote Registration System filesets are present, they are automatically removed when upgrading to the new software load.

## Procedures

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

### ATTENTION

Read the instructions in [Pre-upgrade requirements on page 94](#) and [Upgrade notices on page 99](#), and complete any necessary activities before you proceed with the upgrade.

### ATTENTION

Nortel recommends that you deliver unprocessed billing files downstream. Ensure that no unprocessed billing file remains on the system.

### ATTENTION

Nortel recommends that you complete the entire upgrade procedure in one session, without interruption, to avoid any unnecessary disruption in billing file processing.

## Preparing for a software upgrade from tape

### *At the VT100 console*

- 1 If you are upgrading from tape, verify that the procedure [Software upgrades from tape on page 55](#) has been completed.

- 2 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Taking the CS 2000 Core Manager offline

#### *At the console connected to SP0 (local VT100 terminal or remote access)*

- 1 Log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 If the SuperNode Billing Application (SBA) is installed on your system, determine the operational status of the SBA application and record this status for future reference. You will be asked to return the SBA application to this operational state later on in this procedure. Use the following table to determine your first step.

If the SBA application	Do
is installed on your system and is not busy or offline	step <a href="#">3</a>
is installed on your system, but is busy or offline	step <a href="#">27</a>
is not installed on your system	step <a href="#">28</a>

#### *At the MAP display*

- 3 Busy all billing streams on the core. Post the required billing stream:

```
mapci;mtc;appl;sdmbil;post<stream>
```

where

**<stream>**

is the name of the billing stream

- 4 If necessary, to display the details about a stream, refer to the procedure "Listing billing streams" in *CS 2000 Core Manager Accounting*, NN10126-811. To list all files currently stored in a stream, refer to the procedure "Listing billing files" in *CS 2000 Core Manager Accounting*, NN10126-811.
- 5 Busy the posted stream:
 

```
bsy
```
- 6 Confirm the request to **bsy**:
 

```
y
```

- 7 Verify that the status of the posted stream changed to ManB (manual busy):

**status**

- 8 Repeat steps [3](#) through [7](#) for each billing stream.
- 9 Examine the SDMB 621 logs to determine the volume names and backup file names for each billing stream:

**logutil;open sdmb 621;back 10**

*In response to the command, the system displays the sdmb 621 log.*

```
BRW_CENTREX   SDMB621   AUG03   14:19:05   4500   INFO   SDM
BILLING BACKUP
```

```
                                STREAM=   AMA:   Backup started to
record to file.
```

```
                                VOLUME=   S00DAMA   FILE=   BACK01AMA_01
```

- 10 For each configured billing stream, verify that at least one backup file exists on at least one of the configured backup volumes.

Display the names of the backup volumes configured for the specified billing stream:

**mapci;mtc;appl;sdmbil;conf view <stream>**

where

**<stream>**

is the name of the billing stream

- 11 Verify that SBA backup file exists on at least one of the displayed backup volumes:

If the backup disk type is	Enter command
DDU	<b>dskut;liv &lt;volume name&gt; all</b>
IOP	<b>diskut;lf &lt;volume name&gt;</b>
SLM	<b>diskut;lf &lt;volume name&gt;</b>

**Note:** The name of each backup file begins with BK.

- 12 Repeat steps [10](#) and [11](#) for each billing stream, then go to step [13](#).

**At the console connected to SP0 (local VT100 terminal or remote access)**

- 13** Close all unprocessed billing files by performing the procedure “Closing billing files”, located in *CS 2000 Core Manager Accounting*, NN10126-811.
- 14** Send all unprocessed billing files downstream using the following table to determine which procedure to perform.

File transfer mode	Procedure to use in Accounting, NN10126-811
Outbound file transfer (OFT)	“Sending billing files from disk”
Inbound file transfer (IFT)	“Retrieving billing files for a stream set to inbound file transfer”
Real-time billing (RTB)	“Sending billing files from disk”
Automatic file transfer (AFT)	<p>No manual action is required. Wait for SBA to deliver pending billing files to the downstream destination. There should be no pending files for each AFT session.</p> <p>Use the following commands to query AFT sessions: billmtc, appl, aft, aftcfg, list.</p> <p>To verify which billing files for each session are still pending, enter the following commands: billmtc, appl, aft, query &lt;session_name&gt;.</p>
For any other configuration	<p>Send the billing files from tape using the procedure “Sending billing files from tape”</p> <p><b>Note:</b> If you need to restore the billing files from tape and you have AFT or IFT configuration, contact your next level of support for instructions.</p>

- 15** If you are unable to send billing files to a downstream destination and you want to proceed with the upgrade, Nortel recommends that you backup the billing files to a DAT tape. If required, refer to the procedure “Copying billing files to tape (backup)” in *CS 2000 Core Manager Accounting*, NN10126-811. Otherwise, continue with the next step.

- 16** If applicable, you can display the details about a stream, refer to the procedure “Listing billing streams” in *CS 2000 Core Manager Accounting*, NN10126-811. To list all files currently stored in a stream, refer to the procedure “Listing billing files” in *CS 2000 Core Manager Accounting*, NN10126-811.

**17**

	<p><b>CAUTION</b></p> <p>Before continuing with the upgrade, verify that there are no files in the /sba/ama/closedNotSent directory. Otherwise, the billing center may receive duplicate billing records.</p>
---	---

Determine whether files exist in the /sba/ama/closedNotSent directory. If they do, perform a manual backup. If files still exist in the /sba/ama/closedNotSent directory after manual backup, contact your next level of support.

- 18** Access the APPL level of the maintenance interface:

```
sdmmtc appl
```

If the AFT application	Do
is installed on your system	step <a href="#">19</a>
is not installed on your system	step <a href="#">23</a>

- 19** Determine the current operational status of the AFT application and record this status for future reference. You will be asked to return the AFT application to this operational state later on in this procedure. Use the following table to determine your next step.

If the AFT application	Do
is in service	step <a href="#">20</a>
is busy	step <a href="#">22</a>
is offline	step <a href="#">23</a>

- 20** Busy the AFT application:

```
bsy <application_number>
```

where

- <application\_number>**  
is the number next to the Automatic File Transfer application
- 21** Confirm the command:  
**y**
- 22** Offline the AFT application:  
**offl <application\_number>**  
where  
**<application\_number>**  
is the number next to the Automatic File Transfer application
- 23** Busy the SuperNode Billing Application (SBA):  
**bsy <application\_number>**  
where  
**<application\_number>**  
is the number next to the SuperNode Billing Application
- 24** Confirm the command:  
**y**
- 25** Take the SBA offline:  
**offl <application\_number>**  
where  
**<application\_number>**  
is the number next to the SuperNode Billing Application
- 26** Exit from the maintenance interface:  
**quit all**  
Go to step [28](#)

***At the console connected to SP0 (local VT100 terminal or remote access)***

- 27** Use the following table to determine your next step.

<b>If the SBA application</b>	<b>Do</b>
is busy	step <a href="#">25</a>
is offline	step <a href="#">28</a>

**At the console connected to SP0 (local VT100 terminal or remote access)**

**28** Use the following table to determine your next step.

If your core manager	Do
is connected to a CS 2000 - Compact	step <a href="#">29</a>
is not connected to a CS 2000 - Compact	step <a href="#">36</a>

**29** Busy the CS 2000 Core Manager. Access the MTC level of the maintenance interface:

```
sdmmtc mtc
```

**30** Check that the CS 2000 Core Manager is in a fault-free state. If the CS 2000 Core Manager is not in a fault-free state, correct all faults and alarms before continuing this procedure. Refer to the *CS 2000 Core Manager Fault Management*, NN10082-911, for alarm-clearing procedures. If you have alarms or faults that you cannot clear, stop and contact your next level of support.

**31** Busy the CS 2000 Core Manager:

```
bsy
```

**32** Offline the CS 2000 Core Manager:

```
offl
```

**33** Confirm the busy request:

```
y
```

**34** Exit from maintenance interface:

```
quit all
```

**35** Go to step [41](#).

**At the MAP display**

**36** Access the SDM level of the MAP display:

```
mapci ; mtc ; appl ; sdm
```

**37** Check that the CS 2000 Core Manager is in a fault-free state. If the CS 2000 Core Manager is not in a fault-free state, correct all faults and alarms before continuing this procedure. Refer to the *CS 2000 Core Manager Fault Management*, NN10082-911, for alarm-clearing procedures. If you have alarms or faults that you cannot clear, stop and contact your next level of support.

- 38 Busy the CS 2000 Core Manager:  
**bsy**
- 39 Confirm the busy request:  
**y**
- 40 Take the CS 2000 Core Manager offline:  
**off1**
- 41 You have completed this procedure.

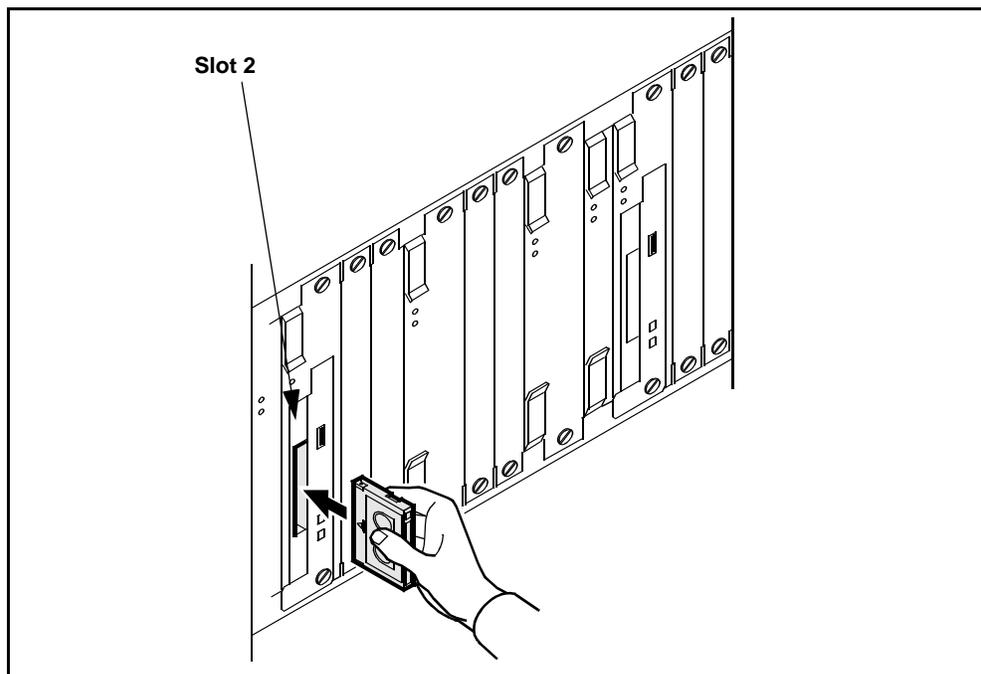
### Preparing the system

#### *At the local VT100 console*

- 1 Use the following table to determine your next step.

If you are upgrading	Do
from a directory created during ESD or during the procedure <a href="#">Software upgrades from tape on page 55</a>	step <a href="#">3</a>
directly from tape <b>Caution:</b> This method is not recommended. Use this method only if you are unable to upload the software from tape to a disk.	insert the tape labeled for the new software load into the tape drive in slot 2, as shown in the following figure. Wait until the tape drive stabilizes (yellow LED is off) before you proceed with step <a href="#">2</a> .

## Inserting a tape into the tape drive slot 2



- 2 If you are upgrading from the CS2E0006, or later, release, verify the version of the tape. Otherwise, continue with step [3](#).

Verify the version of the tape:

```
querytape dat0
```

*Example response*

```
SDM_VERSION.info: CS2E0080.0 : 21.60.8.0
```

The displayed product name (in this example, CS2E0080.0) must match the label on the tape that you inserted in step [1](#).

- 3 Remove all archived filesets from the system, to free up disk space. Access the Details level:

```
sdmmtc details
```

- 4 Show all software:

```
filter off
```

- 5 Select all archived filesets:

```
select all
```

- 6 Remove all archived filesets:

```
remove all
```

**Note:** The system will automatically select appropriate files to remove.

- 7 Confirm the removal:  
**y**
- 8 After removing the archived filesets, ensure that /usr logical volume is less than 50% full. To check the percent full value for /usr, enter the following command:  
**sdmmtc storage**  
If /usr is more than 50% full, refer to procedure “Increasing the size of a logical volume” in *CS 2000 Core Manager Security and Administration*, NN10170-611, to increase the /usr logical volume size as required. The /usr logical volume must have minimum size of 1050Mb. Otherwise continue to the next step.
- 9 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Upgrading the software

#### **At the console connected to SP0 (local VT100 terminal or remote access)**

- 1 From the “sdmmtc details” level, use the following table to determine your next step.

If you are upgrading	Do
from a directory created during ESD or during the procedure <a href="#">Software upgrades from tape on page 55</a>	list the filesets: apply <directory path>  <b>Note:</b> <directory path> is the directory where your filesets are located. The directory depends on whether you are upgrading after ESD or after tape pre-loading.
directly from tape <b>Caution:</b> This method is not recommended. Use this method only if you are unable to upload the software from tape to a disk.	list the filesets: apply 0 and go to step <a href="#">2</a>

- 2 Select all the new application filesets:  
**select new**
- 3 Apply all the new software:  
**apply**

- 4 Confirm the apply command:

**y**

Wait until the upgrade is complete before you proceed. The upgrade can take up to 2.5 hours, depending on which release you are upgrading from, and how many filesets require upgrading.

If the command response	Do
indicates any errors	contact your next level of support before you proceed with this procedure
does not indicate any errors	step <a href="#">5</a>

- 5 Use the following table to determine your next step.

If you are	Do
prompted to configure OSS Comms Svcs	step <a href="#">6</a>
In the sdmmtc maintenance interface window: OSS Comms Svcs MORE... (100%)	
not prompted to configure OSS Comms Svcs	step <a href="#">10</a>

- 6 Press the space bar to display the DDMS Clients Configuration menu.

*The system responds:*

```
#####
# Configuring 'SDM_DDMS.osscomms'.
#####

#####

#          Configuring DDMS clients          #
#####

          DDMS Clients Configuration

0. Quit
1. Add new clients
2. Remove existing client
3. List existing clients

Enter choice:
```

- 7 Configure the DDMS clients which are typically the CS 2000 Management tools servers with the SESM load. Add a new DDMS client:
- 1
- 8 When prompted, enter the IP address for each of the CS 2000 Management tools servers. Press the Enter key after each entry and type **done** once you have entered all the IP addresses.
- 9 Exit the DDMS clients configuration screen:
- 0

**Note:** You can reconfigure the OSS Comms Svcs at any time through the sdmmtc config level.

- 10 Use the following table to determine your next step.

If you are	Do
prompted to configure the SAM21 Manager	step <a href="#">11</a>
not prompted to configure the SAM21 Manager	step <a href="#">15</a>

- 11 Ensure that you records obtained from the [Pre-upgrade requirements on page 94](#) section ready for reference.
- 12 To configure SAM21 Manager application, when prompted whether DNS is supported on SAM21 EM workstations, enter Y (yes) or N (no), and press the Enter key.

If you enter	Do
Y (yes)	step <a href="#">13</a>
N (no)	step <a href="#">14</a>

- 13 When prompted, enter the CommonName from the certificate on the CS 2000 Management Tools server that is configured to run the Login Application, and press the Enter key.
- 14 When prompted, enter the host name of the CS 2000 Management Tools server that is configured to run the Login Application, and press the Enter key.

- 15 Use the following table to determine your next step.

If the system	Do
prompts you to reboot	step <a href="#">16</a>
does not prompt you to reboot	press Enter, and continue with step <a href="#">21</a>

- 16 When prompted, confirm the system reboot:

**y**

- 17 Once the system has finished rebooting, log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 18 Wait until all cards at the hardware level are in service before you proceed. Monitor the status of the cards as described in steps [19](#) and [20](#).
- 19 Access the hardware level of the maintenance interface:
- ```
sdmmtc hw
```
- 20 Check that no faults exist on the CS 2000 Core Manager:
- ```
querysdm flt
```

If	Do
faults are present	correct the faults using the procedures in <i>CS 2000 Core Manager Fault Management</i> , NN10082-911, and return to this step in the procedure
no faults are present	step <a href="#">21</a>

- 21 Use the following table to determine your next step for installing the sdm bundle.

If you are upgrading	Do
from a directory created during ESD or during the procedure <a href="#">Software upgrades from tape on page 55</a>	list the filesets: apply <directory path> <b>Note:</b> <directory path> can be the /swd/sdm/esd directory.
directly from tape	list the filesets: apply 0
<b>Caution:</b> This method is not recommended. Use this method only if you are unable to upload the software from tape to a disk.	

- 22 Install the sdm software:

**apply bundle sdm**

If you are upgrading directly from tape, the system prompts you to confirm the apply command.

If you are	Do
prompted to confirm the apply command	step <a href="#">23</a>
not prompted to confirm the apply command	step <a href="#">29</a>

- 23 Confirm the apply command:

**y**

*The system responds*

Command completed with no errors

If you are	Do
prompted to reboot the system	step <a href="#">24</a>
not prompted to reboot the system	press Enter and continue with step <a href="#">29</a>

- 24 Confirm the system reboot:

**y**

- 25** Once the system has finished rebooting, log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 26** Wait until all cards at the hardware level are in service before you proceed. Monitor the status of the cards as described in steps [27](#) and [28](#).
- 27** Access the hardware level of the maintenance interface:  
**sdmmtc hw**
- 28** Check that no faults exist on the CS 2000 Core Manager:  
**querysdm flt**

If	Do
faults are present	correct the faults using the procedures in <i>CS 2000 Core Manager Fault Management</i> , NN10082-911, and return to this step in the procedure
no faults are present	step <a href="#">29</a>

- 29** Verify if you have X.25, using your notes obtained from the “Basic pre-checks” list in [Preparing to upgrade the CS 2000 Core Manager on page 27](#). Use the following table to determine your next step.

If you	Do
have X.25	step <a href="#">30</a>
do not have X.25	step <a href="#">35</a>

- 30 Use the following table to determine your next step.

If you are upgrading	Do
from a directory created during ESD or during the procedure <a href="#">Software upgrades from tape on page 55</a>	list the filesets: apply <directory path> <b>Note:</b> <directory path> can be the /swd/sdm/esd directory.
directly from tape <b>Caution:</b> This method is not recommended. Use this method only if you are unable to upload the software from tape to a disk.	list the filesets: apply 0

- 31 Install the X.25 software:

**apply bundle x25**

If you are upgrading directly from tape, the system prompts you to confirm the apply command.

If you are	Do
prompted to confirm the apply command	step <a href="#">32</a>
not prompted to confirm the apply command	step <a href="#">35</a>

- 32 Confirm the apply command:

**y**

*The system responds*

Command completed with no errors

If you are	Do
prompted to reboot the system	step <a href="#">33</a>
not prompted to reboot the system	press Enter and continue with step <a href="#">35</a>

- 33 Confirm the system reboot:

**y**

- 34** Once the system has finished rebooting, log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 35** Wait until all cards at the hardware level are in service before you proceed. Monitor the status of the cards as described in steps [36](#) and [37](#).
- 36** Access the hardware level of the maintenance interface:  
**sdmmtc hw**
- 37** Check that no faults exist on the CS 2000 Core Manager:  
**querysdm flt**

If	Do
faults are present	correct the faults using the procedures in <i>CS 2000 Core Manager Fault Management</i> , NN10082-911, and return to this step in the procedure
no faults are present	step <a href="#">38</a>

- 38** If you have the DNBD Call Monitoring Application on your system, upgrade it by following the appropriate procedure in the International Lawful Interception NTP, and then return to step [39](#)
- 39** You have completed this procedure.

### Returning the system to service

- 40** After returning your CS 2000 Core Manager to service, consult the notes you recorded about the pre-upgrade operational status of the SBA application in step [2](#) and about the pre-upgrade operational status of the AFT application in step [19](#) of the procedure, [Taking the CS 2000 Core Manager offline on page 100](#).

**At the console connected to SP0 (VT100 or remote access)**

41 Use the following table to determine your next step.

If your core manager	Do
is connected to the CS 2000 - Compact	step <a href="#">42</a>
is not connected to the CS 2000 - Compact	step <a href="#">47</a>

42 Return the CS 2000 Core Manager to service. Access the MTC level of the maintenance interface:

```
sdmmtc mtc
```

43 Busy the CS 2000 Core Manager:

```
bsy
```

44 Return the CS 2000 Core Manager:

```
rts
```

45 Exit from SDMMTC:

```
quit all
```

46 Go to step [50](#)

**At the MAP display**

47 Access the SDM level of the MAP display:

```
mapci;mtc;appl;sdm
```

48 Change the state of the CS 2000 Core Manager from offline to busy:

```
bsy
```

49 Return the CS 2000 Core Manager to service:

```
rts
```

**Note:** It will take at least 5 minutes for the CS 2000 Core Manager to return to service on the core side.

**At the console connected to SP0 (local VT100 terminal or remote access)**

**50** Use the following table to determine your next step.

<b>If the SBA application</b>	<b>Do</b>
was not offline prior to the upgrade	step <a href="#">51</a>
was offline prior to the upgrade	step <a href="#">67</a>
is not installed on your system	step <a href="#">67</a>

**51** Access the APPL level of the maintenance interface:

```
sdmmtc appl
```

**52** Wait until the Table Access Service application is in service (InSv), then continue with the procedure. If the application does not return to service after 15 minutes, contact your next level of support.

**53** Busy the SBA:

```
bsy <application_number>
```

where

**<application\_number>**

is the number for the SuperNode Billing Application

**54** Confirm the command:

```
y
```

<b>If the SBA application</b>	<b>Do</b>
was in service prior to the upgrade	step <a href="#">55</a>
was busy prior to the upgrade	step <a href="#">67</a>

**55** Return the SBA to service:

```
rts <application_number>
```

where

**<application\_number>**

is the number next to the SuperNode Billing Application

- 56 Use the following table to determine your next step.

If the AFT application	Do
is installed on your system	step <a href="#">57</a>
is not installed on your system	step <a href="#">61</a>

- 57 Use the following table to determine your next step.

If the AFT application	Do
was not offline prior to the upgrade	step <a href="#">58</a>
was offline prior to the upgrade	step <a href="#">61</a>

- 58 Busy the AFT application:

**bsy <application\_number>**

where

**<application\_number>**

is the number next to the Automatic File Transfer application

- 59 Confirm the command:

**y**

If the AFT application	Do
was in service prior to the upgrade	step <a href="#">60</a>
was not in service prior to the upgrade	step <a href="#">61</a>

- 60 Return the AFT application to service:

**rts <application\_number>**

where

**<application\_number>**

is the number next to the Automatic File Transfer application

**At the MAP display**

- 61** Return all billing streams to service. For each stream, post the required billing stream:

```
mapci;mtc;appl;sdmbil;post<stream>
```

where

**<stream>**

is the name of the billing stream

- 62** Return the posted stream to service:

```
rts
```

- 63** Repeat steps [61](#) and [62](#) for each billing stream.

- 64** Check to ensure that all billing streams are either in-service or in recovery on the core side before continuing.

**At the console connected to SP0 (local VT100 terminal or remote access)**

- 65** Verify that billing is collecting records. Query the steam:

```
query <stream_name>
```

where

**<stream\_name>**

is the name of the billing stream, for example, ama.

- 66** Note the number of records, wait approximately 10 seconds, and repeat the query command for each billing stream.

If the number of records	Do
increased from the first query command (meaning billing is working)	step <a href="#">67</a>
did not increase from the first query command (meaning billing is not working)	contact your next level of support

- 67** Use the following table to determine your next step.

If you	Do
need to install new applications and services	step <a href="#">68</a>
do not need to install new applications and services	step <a href="#">69</a>

- 68** Install new applications and services from the console connected to SP0 (local VT100 terminal or remote access), using the procedures in the CS 2000 Core Manager information modules that correspond to the applications or services you want to install. When complete, return to this step in the procedure and proceed to step [69](#).

Only install the required Succession applications. For a list of applications required for each Succession solution, refer to [Filesets to solution mapping on page 13](#) in the Upgrades section.

- 69** You have completed this procedure. Return to the higher level task flow or procedure “Completing the CS 2000 Core Manager upgrade”, located in this document.

---

## Recovering the system from an ESUP failure

---

### Purpose

If an upgrade fails, you must recover the CS 2000 Core Manager from the failure. Follow this procedure to recover the CS 2000 Core Manager from a software failure during an enhanced SDM upgrade procedure (ESUP).

During ESUP, you can choose to abort the procedure at different stages of the upgrade, or the system can initiate an automatic fallback.

Use this procedure only under the following conditions:

- You have chosen to abort the upgrade after the system rebooted.
- After an automatic fallback occurred, your next level of support instructed you to complete this procedure.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

## Procedure

### ATTENTION

This recovery procedure applies only to ESUP upgrades. This procedure is only applicable if you aborted the upgrade after the upgrade system reboot, or if you were instructed to complete this procedure by your next level of support.

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

## Recovering the system from an ESUP failure

### *At the PC or UNIX workstation*

- 1 Determine how you will connect to the CS 2000 Core Manager.

If you choose	Do
telnet session	step <a href="#">2</a>
VT100 console	step <a href="#">7</a>

- 2 Establish a telnet connection to the CS 2000 Core Manager by opening a terminal window that is VT100 compatible.
- 3 Log onto the CS 2000 Core Manager from the terminal window prompt:
 

```
telnet <ip_address>
```

 where
 

```
<ip_address>
```

 is the IP address of the CS2000 Core Manager
- 4 Keep window size at 80x24.

### *At the VT100 console or telnet session*

- 5 If you are not already logged in and have ESUP activated, when prompted, log in as a user authorized to perform config-admin actions.

- 6 Enter the following command at the shell prompt:

**ESUP**

*The system displays the following message:*

Please BUSY the SDM now!

Enter 'go' once the SDM BSY command has been executed (go):

- 7 Use the following table to determine your next step.

If you choose	Do
If your office is equipped with a third-party Call Agent	step <a href="#">8</a>
If your office is not equipped with a third-party Call Agent	step <a href="#">15</a>

**ATTENTION**

Before the system prompts you to busy the SDM it automatically puts the AFT and SBA applications into an offline state. ESUP automatically brings them back into service after the SDM reboots and is returned into service.

***At the PC or UNIX workstation***

- 8 Establish a telnet connection to the CS 2000 Core Manager. Open a terminal window that is VT100 compatible.
- 9 Log onto the CS 2000 Core Manager from the terminal window prompt:
- ```
telnet <ip_address>
```
- where:
- ```
<ip_address>
```
- is the IP address of the CS 2000 Core Manager
- 10 When prompted, log in as a user authorized to perform config-admin actions.
- 11 Busy the CS 2000 Core Manager. Access the SDM maintenance level:
- ```
sdmmtc;mtc
```
- 12 Busy the CS 2000 Core Manager:
- ```
bsy
```



3 min.

13 Confirm the busy request:

**y**

14 Continue with step [18](#).

**At the MAP display**

15 Busy the CS 2000 Core Manager. Access the SDM level of the MAP display:

**mapci;mtc;appl;sdm**

16 Busy the CS 2000 Core Manager:

**bsy**

17 Confirm the busy request:

**y**

**At the MAP display**

18 Verify that each billing stream has entered the active backup mode by posting and querying each of your billing streams:

**sdbil;post<stream>;query**

**At the VT100 console or telnet session**

19 When the CS 2000 Core Manager is fully busy, continue the procedure:

**go**

**Note:** Until the CS 2000 Core Manager is fully busied, the system displays the following message: Waiting for SDM BSY.

The system automatically reboots. This process can take up to 10 minutes. If the abort is being done using telnet, the system reboot closes the telnet session.

20 Wait until the system has finished rebooting. Use the following table to determine your next step:

If using a	Do
telnet session	step <a href="#">21</a>
VT100 console	step <a href="#">23</a>

**At the PC or UNIX workstation**

- 21** The reboot process closed the previous telnet session. Re-establish a new telnet connection. Log onto the CS 2000 Core Manager from the terminal window prompt:

```
telnet <ip_address>
```

where

```
<ip_address>
```

is the IP address of the CS 2000 Core Manager

- 22** Keep the window size at 80x24.

**At the VT100 console or telnet session**

- 23** When prompted, log in as a user authorized to perform config-admin actions.

- 24** Enter the following command at the shell prompt:

```
esup
```

*The system displays the following message:*

```
Please RTS the SDM now!
```

```
Enter 'go' once the SDM RTS command has been
executed (go):
```

If your office is not equipped with a third-party Call Agent, go to step (the CS 2000 Core Manager automatically returns to service). Otherwise, continue with step.

- 25** Use the following table to determine your next step.

<b>If you choose</b>	<b>Do</b>
If your office is not equipped with a third-party Call Agent (the CS 2000 Core Manager automatically returns to service)	step <a href="#">28</a>
Otherwise	step <a href="#">26</a>

**At the MAP display**

- 26** Access the SDM level of the MAP display:

```
mapci;mtc;appl;sdm
```

- 27** Return the CS 2000 Core Manager to service:

```
rts
```

**At the VT100 console or telnet session**

- 28** When the system is back in service, type go and press the Enter key.

**go**

*The system responds:*

The message: Waiting for SDM RTS, is displayed until the system is fully in service. It will take 2 to 10 minutes for the CS 2000 Core Manager to return to service on the core side.

**At the MAP display**

- 29** Verify that all billing streams are either in-service or in recovery on the CS 2000 Core Manager side:

**sdbmil;post<stream>;query**

**At the PC or UNIX workstation**

- 30** The reboot process closed the previous telnet session. Establish a new telnet connection by logging onto the CS 2000 Core Manager from the terminal window prompt:

**telnet <ip\_address>**

where

**<ip\_address>**

is the IP address of the CS 2000 Core Manager

- 31** When prompted, log in as a user authorized to perform config-admin actions.
- 32** If SBA is configured on your system, query the status of any real time billing (RTB) stream that exists on your system. If the status changed from InSv to ManB after busying the CS 2000 Core Manager, manually return each affected RTB stream to service.

**Note:** To verify the initial status of each RTB stream, refer to your records from the [Pre-upgrade requirements on page 62](#) tasks described in [Upgrading CS 2000 Core Manager software using ESUP on page 60](#)

If required, refer to the following procedures in *CS 2000 Core Manager Accounting*, NN10126-811:

- “Querying the status of RTB for a billing stream”
- “Returning RTB stream instance to service”

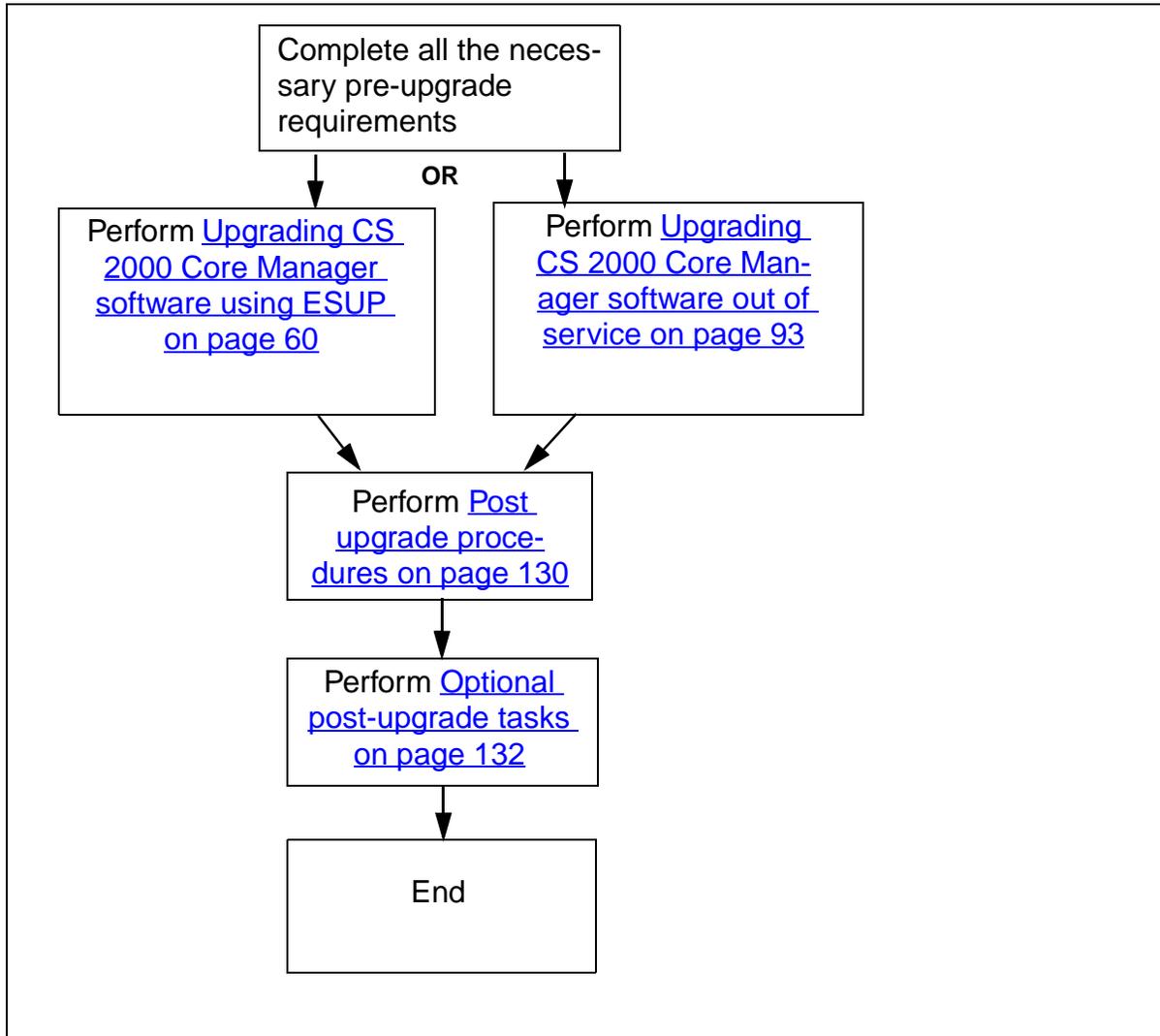
***At the VT100 console or telnet session***

- 33** The recovery process continues until the Abort complete prompt is displayed. This process can take approximately 30 minutes.
- 34** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Completing the CS 2000 Core Manager upgrade

Use the following task flow to complete the software upgrade.

### Task flow for completing the CS 2000 Core Manager upgrade



## Purpose

After completing specific software upgrade tasks, you must perform the following post-upgrade procedures:

- verify the application state, to ensure that all applications are in-service. Use the procedure [Verifying the application state on page 130](#).
- verify the current software load, to confirm that the upgrade was successful. Use the procedure [Verifying the current software load on page 131](#).
- perform a backup of your new system image. Use the procedure “Creating system image backup tapes (S-tapes)” in *CS 2000 Core Manager Administration and Security*, NN10170-611.

If the upgrade software was delivered using Electronic Software Delivery (ESD), you will have an ESD logical volume on your system, which must be removed to free up disk space. Follow the instructions in the procedure [Removing an ESD logical volume on page 133](#).

If you upgraded from tape, eject the tape from the tape drive and store it in a safe place.

Depending on the configuration of your network, you may also be required to perform the following procedures:

- remove any DDMS filesets and logical volumes which you no longer require. See the procedure [Removing DDMS filesets on page 195](#).

### ATTENTION

Carrier Voice over IP PT-AAL1 offices must perform this procedure.

- upgrade and configure client-side application software on the required workstations in your network. See the procedure [Upgrading and configuring client-side application software on page 132](#).
- apply additional software patches. Contact your Operations management office to determine if and when any patches need to be applied to your system. If you need to apply a patch, use the procedure [Upgrading the CS 2000 Core Manager with software patches on page 140](#). For more information, contact your next level of support.

## Prerequisites

There are no prerequisites for performing procedures in this post-upgrade high-level activity.

## Post upgrade procedures

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

### Verifying the application state

#### At the VT100 console

- 1 Access the application level of the core manager maintenance interface:

```
sdmmtc appl
```

- 2 Determine whether all applications are in-service (as indicated by a dot for each in-service application under the State heading).

The Passport Log Streamer application is in an offline state and unconfigured if you had the log delivery application installed and configured with the parameter: Passport 15000 present in the network, set to No prior to this upgrade. Refer to “Installing and configuring the log delivery application” in *CS 2000 Core Manager Configuration Management*, NN10104-511, to configure it and return it to service. When complete, return to this procedure and continue where you left off.

If	Do
all applications are in service	step <a href="#">7</a>
not all applications are in service	step <a href="#">3</a>

- 3 Manually busy (ManB) each application that is not in service:

```
bsy <x>
```

where

```
<x>
```

is the number next to one of the applications that is not in service

*The system responds*

Application Busied - Command complete.

4 Repeat step [3](#) for each application that is not in service.

5 Return each application to service (RTS):

```
rts <x>
```

where

<x>

is the number next to each application you busied in the previous step.

*The system responds*

Application RTS - Command complete.

6 Repeat step [5](#) to return each application to service.

7 You have completed this procedure. To confirm that the upgrade was successful, perform the procedure [Verifying the current software load on page 131](#).

### Verifying the current software load

#### *At the CS 2000 Core Manager console*

1 Exit the maintenance interface:

```
quit all
```

2 Verify that the product code, located at the top left-hand corner of the screen, shows the release that you are upgrading to:

```
# querysdm loads
```

If the product code	Do
is the correct release	step <a href="#">3</a>
is <i>not the correct release</i>	contact your next level of support

**Note:** Dashes (----) displayed next to the platform maintenance are part of a normal output.

3 You have completed this procedure. Proceed to [Updating the CS 2000 Core Manager software version number on the Integrated EMS \(IEMS\) on page 132](#).

## Updating the CS 2000 Core Manager software version number on the Integrated EMS (IEMS)

### At the IEMS

- 1 Edit the object properties in the IEMS for the CS 2000 Core Manager you just upgraded to reflect the new software version. Refer to either of the procedures that follow to update the software version in the Device Version field.
  - [Editing and viewing object properties using Web Client on page 372](#)
  - [Editing and viewing object properties using Java Web Client on page 366](#)
- 2 You have completed this procedure. Proceed to [Optional post-upgrade tasks on page 132](#).

## Optional post-upgrade tasks

### ATTENTION

If your system is configured with the Distributed Computing Environment (DCE) service, and you plan to remove it, make sure that you do not decommission the DCE until the CS 2000 Management Tools server is upgraded. Otherwise, communication outages between the CS 2000 Core Manager and the CS 2000 Management Tools server will occur.

Do not decommission DCE if your system is configured with any DCE-dependent application, such as ETA, ATA, SFT, or GR740 Pass Through.

## Upgrading and configuring client-side application software

- 1 Upgrade and configure any client-side application software on the required workstations in your network. Refer to the specific application procedures in *CS 2000 Core Manager Configuration Management*, NN10104-511.

**Note:** You may need to contact your system administrator, as client-side upgrades require secure access to the workstations.
- 2 If your CS 2000 Core Manager is upgraded to the new software load, but the CS 2000 Management Tools server is not yet upgraded, a communication outage between the server and the core can occur.

- To re-establish the communication, stop and start the DDMS proxy on the CS 2000 Management Tools server. Refer to [Stopping and starting the DDMS proxy on page 359](#).
- 3 Stop and start the Tomcat Servlet Container component on the CS 2000 Management Tools server. Refer to [Stopping and starting the Apache Web Server and Tomcat Servlet Container on page 364](#).
  - 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Removing an ESD logical volume

#### **ATTENTION**

If you choose to remove the ESD logical volume from the CS 2000 Core Manager, the removal is permanent.

#### ***At the CS 2000 Core Manager***

- 1 Access the storage level:  
**sdmmtc storage**
- 2 Remove the ESD logical volume and its contents:  
**esddel**
- 3 When prompted, confirm the Delete command:  
**y**
- 4 Exit the maintenance interface:  
**quit all**
- 5 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Performing a system image backup

- 1 Perform a backup of your new system image using the procedure "Creating system image backup tapes (S-tape)"

manually” in *CS 2000 Core Manager Administration and Security*, NN10170-611.

If you choose not to perform a backup of your new system image, the CS 2000 Core Manager will show in-service trouble (ISTb) and the status of the Backup Status alarm will show *Required* (if the alarm is enabled). You can force-clear the alarm using the procedure “Clearing a system image backup Required or Failed alarm” in *CS 2000 Core Manager Fault Management*, NN10082-911. If the backup Required alarm is disabled, the alarm will not be raised.

- 2 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Upgrading the CS 2000 SAM21 Manager GUI client application

### Application

Use this procedure to upgrade the CS 2000 SAM21 manager graphical user interface (GUI) client application to the latest software release.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	CS 2000 Core Manager Security and Administration, NN10170-611
Displaying actions a user is authorized to perform	CS 2000 Core Manager Security and Administration, NN10170-611

The CS 2000 SAM21 manager server must have the same software version as the client version to which you are upgrading. The CS 2000 SAM21 manager is a client/server application. The client runs on a Sun SPARC workstation, and the server runs on the CS 2000 Core Manager.

For SN07, the following requirements must be met to upgrade the client:

- The CS 2000 SAM21 Manager client requires a Sun SPARC workstation. The workstation must run (at a minimum) the Solaris 2.7 operating system. The CS 2000 SAM21 Manager is also supported on the Solaris 2.8 operating system. For optimum performance, Nortel recommends you have a Sun Ultra10 with 512 Mbyte of DRAM and 70 Mbyte or higher of available disk space.
- The latest versions of the following patch IDs are required for Solaris 2.7 systems:
  - Patch 106300
  - Patch 106327
  - Patch 106541

- Patch 106950
- Patch 106980
- Patch 107081
- Patch 107226
- Patch 107226
- Patch 107544
- Patch 107636
- Patch 107656
- Patch 107702
- Patch 108374

The latest versions of the following patch IDs are required for Solaris 2.8 systems:

- Patch 108652
- Patch 108921
- Patch 108940

For further details see Sun's Solaris Java patch page at:  
<http://java.sun.com/j2se/1.3/install-solaris-patches.html>

Patches can be retrieved from Sun's Patchfinder at:  
<http://sunsolve.sun.com>

- The latest SAM21 client software version must be installed.
- The CS 2000 SAM21 Manager client application requires the client machine to be configured in a pluggable authentication module (PAM) framework.

## Procedure

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

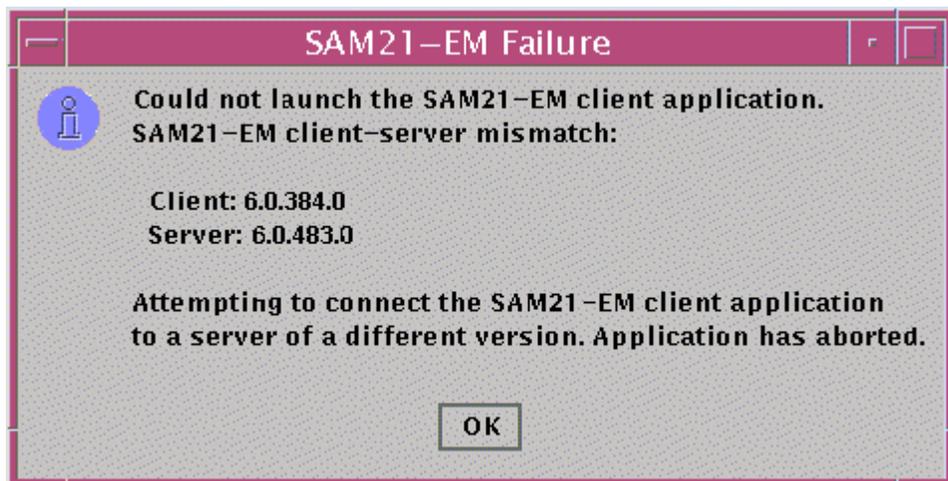
#### *At the Client Workstation*

- 1 Log onto the client workstation as a user authorized to perform config-admin actions.

**Note:** For all upgrades, the client software must be upgraded to match the server software before it is started.

If an attempt was made to launch the CS 2000 SAM21 Manager client application (by typing: >sdm/bin/sam21gui), the user will receive a mismatch error. See the following [Mismatch error](#) figure for an example of the error message. A mismatch error indicates that the client machine must be upgraded to match the version of the manager running on the CS 2000 Core Manager. This error message only occurs for MNCL or maintenance release upgrades.

#### Mismatch error



- 2 If a previous manager client has been installed, verify the client machine is still using the old version of the manager software:

```
/sdm/bin/sam21gui -version
```

The resulting version number indicates that you have not yet upgraded the client to match the server.

- 3 Access the directory where the Client Installer and Launcher (CIL) tool is to be located after the FTP operation:  
**cd /tmp**
- 4 Connect to the CS 2000 Core Manager using file transfer protocol (FTP):  
**ftp <ipaddress>**  
where  
**ipaddress**  
is the IP address of the CS 2000 Core Manager
- 5 Log on the CS 2000 Core Manager as an anonymous user:  
**Name: ftp**
- 6 When prompted for a password, ignore the prompt and press the Enter key to continue the procedure.
- 7 Get the Client Installer and Launcher tool (CIL):  
**ftp> get cil**
- 8 Quit the ftp connection to the CS 2000 Core Manager:  
**ftp> quit**
- 9 Make the CIL program executable:  
**chmod 755 cil**
- 10 Execute the CIL program:  
**./cil**  
The system responds  
SDM CLIENT SOFTWARE INSTALLATION  
  
Enter the IP address or hostname of the SDM that you want to download the client software from.  
  
SDM's Address:  
  
11 At the CIL menu, connect to the CS 2000 Core Manager:  
**SDM's Address: <ipaddress>**  
where  
**ip\_address**  
is the IP address or the host name of the CS 2000 Core Manager.

- 12** Select the CS 2000 Core Manager fileset to upgrade the client workstation:

```
cil> select <#>  
where  
    #  
        is the number of the CS 2000 Core Manager fileset.  
        An example of the fileset is  
        snm_sam21_client_7.0.xxx.n.tar.Z where xxx represents  
        the latest version and n represents the MNCL version.
```
- 13** Install the selected fileset:

```
cil> apply
```
- 14** Enter the IP address of the server when prompted for it by typing the IP address at the prompt and pressing the Enter key.
- 15** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

---

## Upgrading the CS 2000 Core Manager with software patches

---

### Purpose

Use this procedure to upgrade your CS 2000 Core Manager with software patches, also called fix filesets.

### Prerequisites

The following prerequisites apply to this procedure:

**ATTENTION**

Before continuing with patch application, verify that there are no files in the /sba/ama/closedNotSent directory. Otherwise, the billing center can receive duplicate billing records. If files exist in the /sba/ama/closedNotSent directory, perform a manual backup. If files still exist in the /sba/ama/closedNotSent directory after manual backup, contact your next level of support.

### Application

The information that follows indicates how to upgrade your CS 2000 Core Manager with software patches, and includes the following procedures:

- [Applying the SDM\\_CERTS.Certs Package on page 22](#)
- [Setting the schedule to apply fixes automatically on page 145](#)
- [Applying fix filesets manually on page 144](#)
- [Changing the default fixes directory on page 147](#)

**ATTENTION**

Before applying the fixes fileset, capture the session file. See [Capturing the pre-check session file on page 28](#).

Upgrading your CS 2000 Core Manager with software fixes (referred to in this procedure as fix filesets) involves replacing entire filesets. Fix filesets are delivered to you electronically from the Regional Patch Selector (RPS).

If software authentication has been enabled on your system, monitor the maintenance interface for any logs or alarms respecting software authentication failures. To utilize the software authentication feature in this procedure, the SDM\_CERTS.Certs package must be applied.

The Regional Patch Selector (RPS) is an automated patch management and delivery system. RPS maintains information about patches and offices, calculates which patches are required in each office, and uploads the patches to the required sites.

Once your office information is entered in RPS, you will receive any fix filesets that apply to the CS 2000 Core Manager configuration for that office. The fix filesets you receive replace installed versions of the same filesets on your CS 2000 Core Manager.

If you have multiple CS 2000 Core Manager locations, you can choose to have each location set up in RPS, or have only one location set up in RPS. When you choose to have a single location set up in RPS, you are responsible for propagating any fix filesets to the other CS 2000 Core Manager locations if and when required.

Fix filesets are sent to the location specified in RPS, which can be the CS 2000 Core Manager itself or an intermediate server that has a connection to the CS 2000 Core Manager:

- when the fix filesets are sent directly to the CS 2000 Core Manager, they are placed in a configured directory (refer to [Location of fix filesets on page 144](#) for more details on the configured directory)
- when the fix filesets are sent to an intermediate server, they are placed in a dropbox

A release notes file is sent with each fix fileset. This file is in ASCII format and contains information about the fix.

RPS collects the <cli>.informfile from the CS 2000 Core Manager itself or from the dropbox on the server at configured intervals, and delivers any fix filesets to your office as soon as they are available in RPS.

If your office is set up with an intermediate server connected to the CS 2000 Core Manager, you need to move or copy the fix filesets from the dropbox on the server to the configured directory on the CS 2000 Core Manager. You also need to ensure that your latest <cli>.informfile, located in /swd/sdm, is available in the dropbox on the server when RPS is scheduled to collect it.

You can transfer the fix filesets from the dropbox to the CS 2000 Core Manager, and the <cli>.informfile (ASCII file) from the CS 2000 Core Manager to the dropbox using file transfer protocol (FTP), Secure file transfer (SFT), or SFT2. To use SFT, refer to the procedure "Transferring and retrieving files using SFT" in *CS 2000 Core Manager Security and Administration*, NN10170-611.

You are notified through e-mail when fix filesets have been successfully delivered to your site.

Once the fix filesets are accessible in the configured directory on the CS 2000 Core Manager, they must be applied. Fix filesets that do not require user intervention can be applied automatically according to a set schedule. Refer to [Automatic installation of fix filesets on page 142](#). Fix filesets that require user intervention need to be applied manually. Refer to [Manual installation of fix filesets on page 144](#).

Once the fix filesets have been successfully applied, they are deleted from the configured directory. The associated release notes, if present, are also deleted.

At any time, you can remove a fix fileset and restore a previous version of the fileset using the remove command at the Details level of the maintenance interface.

### **Automatic installation of fix filesets**

You can set the scheduled time for when you want fix filesets to be automatically applied from the Fixes level. As shown in the following figure, the fix filesets that can be auto-applied have Y under header AA (auto apply), and the fix filesets that are scheduled to be auto-applied have a status of SCHED under Status header.

## Fixes level screen

```

SDM      CON      512      NET      APPL      SYS      HW      CLLI: MSH10
*        *        **       *        *        *        *      Host: nsh10sdn
                          **                          Fault Tolerant

Fixes
0 Quit
2 Source
3 Reload
4 Sched
5
6
7 Select
8 Apply
9
10
11
12 Up
13 Down
14 Search
15 Filter
16 View
17 Help
18 Refresh
root
Time 16:54 >

```

```

Source: the directory /swd/sdn/fixes.
Filter: OFF

```

#	Fileset	Description	Version	Status	AA
1	Generic Data Delivery		18.17.1.1	SCHED	Y
2	Platform Maintenance		18.17.1.1	SCHED	Y
3	Passport Log Streamer		18.14.0.0	SCHED	Y
4	umfioFX Run Time Environment		1.3.0.6	SCHED	Y

Available Fixes: 1 to 4 of 4

### ATTENTION

If any fix filesets have a status of INCOMP (incomplete), the fix fileset has dependencies that have not been installed and are not available. Contact your Nortel representative.

Fix filesets that are scheduled to be applied automatically can only be applied from the configured directory on the CS 2000 Core Manager. Refer to [Location of fix filesets on page 144](#) for more details on the configured directory.

You can apply fix filesets manually outside of the specified schedule. Refer to [Manual installation of fix filesets on page 144](#).

### ATTENTION

The system generates log SDM610 when a fix fileset is scheduled to be applied automatically and either applies successfully or fails to apply. If you receive this log because a fix fileset failed to apply, contact your Nortel representative.

Previous versions of patch files of a fix fileset are removed when the patch files are applied.

## Manual installation of fix filesets

You need to manually apply fix filesets that require a reboot or have prerequisite filesets that need to be installed and require a reboot. The fix filesets that you need to apply manually have N under the AA header (auto apply), and AVAIL under the Status header.

### Location of fix filesets

The directory path to the fixes default directory on your CS 2000 Core Manager, is /swd/sdm/fixes. You can change the default fixes directory using the procedure that follows.

**Note 1:** The directory must have a minimum of 200 MB of available space. The recommended amount of available space is 400 MB, which is the default.

**Note 2:** Beginning with release SDM20, the SDM maintenance interface (sdmmtc) expects a filesystem, rather than a directory, that contains patches. Prior to the SDM20 release, sdmmtc could list patches from any directory, whether or not the directory was a filesystem.

### Procedures

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

### Applying fix filesets manually

#### ATTENTION

Before continuing with patch application, verify that there are no files in the /sba/ama/closedNotSent directory. Otherwise, the billing center can receive duplicate billing records. If files exist in the /sba/ama/closedNotSent directory, perform a manual backup. If files still exist in the /sba/ama/closedNotSent directory after manual backup, contact your next level of support.

#### *At the CS 2000 Core Manager*

- 1 Log into the CS 2000 Core Manager as the root user.
- 2 Access the SWIM level:

```
sdmmtc swim
```

- 3 Access the Fixes level:  
**fixes**  
**Note:** Ensure the fix filesets are accessible in the configured directory on the CS 2000 Core Manager (refer to [Location of fix filesets on page 144](#) for more details on the configured directory).
- 4 Select the fix fileset you want to apply:  
**select <n>**  
where  
**<n>**  
is the number next to the fix fileset you want to apply
- 5 Apply the fix fileset:  
**apply**
- 6 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Setting the schedule to apply fixes automatically

#### ATTENTION

Before continuing with patch application, verify that there are no files in the /sba/ama/closedNotSent directory. Otherwise, the billing center can receive duplicate billing records. If files exist in the /sba/ama/closedNotSent directory, perform a manual backup. If files still exist in the /sba/ama/closedNotSent directory after manual backup, contact your next level of support.

#### *At the CS 2000 Core Manager*

- 1 Log into the CS 2000 Core Manager as the root user.
- 2 Access the SWIM level:  
**sdmmtc swim**
- 3 Access the Fixes level:  
**fixes**  
If you are accessing the Fixes level for the first time, you are prompted to enter the size of the fixes source directory, and the path of a new logical volume to be created for fixes. The minimum size is 200 MB and the maximum size is 1000 MB. The recommended size is 400 MB, which is the default.

*Example response:*

The /swd/sdm/fixes directory has been successfully created.  
Press ENTER to continue.

- 4 Press the Enter key to continue.
- 5 Use the following table to determine your next step.

If	Do
the system responds with the message: The directory /swd/sdm/fixes does not exist or cannot be read	step stop the procedure and contact your next level of support.
Otherwise	step <a href="#">7</a>

- 6 To set the time interval, enter the schedule level:  
**sched**

*Example response:*

Choose the interval desired:

1. Monthly
2. Weekly
3. Daily
4. None

Enter a number from 1 to 4 to make your choice or type abort:

- 7 Enter the number that is next to the interval you want, and complete the prompts for the specified interval.
- 8 When prompted, confirm your entry:

**y**

*Example response:*

Auto fix schedule has been updated.

Press Enter...

- 9 Press Enter to return to the Fixes level.
- 10 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Changing the default fixes directory

### *At the CS 2000 Core Manager*

- 1 Log into the CS 2000 Core Manager as the root user.
- 2 Access the swim level:  
**sdmmtc swim**
- 3 Access the Options level:  
**options**
- 4 Change the value of the default fixes directory:  
**change 2**
- 5 Enter the new value for the default fixes directory.  
**Note:** Enter the full directory path when specifying a directory.  
*Example response:*  
Change 2 - Command complete
- 6 Access the Fixes level:  
**fixes**
- 7 Press Enter to confirm the changed default fixes directory.
- 8 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

---

## Performing a full restore of the software from S-tape

---

### Purpose

Use this procedure to perform a full restore of the CS 2000 Core Manager software load from the system image backup tape (S-tape). You can also perform this procedure when the CS 2000 Core Manager is out-of-service because the software load has become corrupted.

### Prerequisites

**ATTENTION**

You must be a trained AIX system administrator who is authorized to perform config-admin actions to the CS 2000 Core Manager to perform this procedure.

**ATTENTION**

You must mirror all volume groups on the CS 2000 Core Manager before you perform this procedure. If you perform this procedure when disk mirroring is not at the Mirrored state, the system displays an error message.

**ATTENTION**

If your system includes the SuperNode Billing Application (SBA), Nortel recommends that you use tape drive DAT0 to perform this procedure.

You must be authorized to perform config-admin actions at a local VT100 console to perform this procedure.

### Procedures

Follow the procedures outlined in “Performing a full restore of the software from S-tape” in *CS 2000 Core Management Fault Management*, NN10082-911.

---

## Installing or upgrading DDMS

---

Use this procedure to install and configure DDMS for the first time, which consists of using two processes, [Creating user IDs on the CM](#) and [Installing or upgrading DDMS filesets](#).

The following mandatory user IDs created on the CM must also be added when you configure DDMS: SDM01, SDM02, SDM03, SDM04. These user IDs are mandatory on the CM and DDMS.

If Enhanced Password Control is in effect on the CM, the DDMS software will manage automatic password changing on the CM before the passwords expire. You therefore do not have to manually change the passwords for users SDM01-SDM04 on the CM.

When DDMS software is returned to service (rts), it reads the OFPCOPT and OFCENG tables on the CM to determine whether Enhanced Password Control is in effect. If Enhanced Password Control is in effect, the software will read the password lifetime value and automatically change passwords one day before expiry. If you make manual changes to the password lifetime value or turn on/off Enhanced Password control, then these changes must be synchronized with the DDMS software by busying/returning to service (bsy/rts) the DDMS. However, if any of the SDM01-SDM04 passwords are changed on the CM manually, you need to apply the same password changes in the DDMS configuration file. Refer to [Changing passwords in the DDMS configuration file](#).

Also use this procedure to upgrade DDMS prior to a CM one night process (ONP), which consists of [Installing or upgrading DDMS filesets](#). However, The DDMS application must be stopped before the CM Swact. Refer to procedure "Controlling SDM applications" in the *CS 2000 Core Manager Security and Administration*, NN10170-611 to stop DDMS. When the CM ONP is complete, restart DDMS using the same procedure.

## Prerequisites for DDMS installation

Following are the prerequisites for a successful DDMS installation:

- Hardware requirements
  - CS 2000 Core Manager Fault Tolerant (FT) Platform
  - VT100 terminal
- Software requirements
  - Installed CS 2000 Core Manager base software including the OM access and table access applications, and the filesets associated with the log delivery application. Refer to procedure “Installing and configuring the log delivery application” in *CS 2000 Core Manager Configuration Management*, NN10104-511.
  - The Log Delivery Service application must be in service.

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

## Creating user IDs on the CM

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

## Creating user IDs on the CM

### ATTENTION

If Enhanced Password Control is in effect on the CM, the password created must be at least six characters in length.

If any of the SDM01-SDM04 passwords are changed on the CM, you must apply the same password changes in the DDMS configuration file. Refer to [Changing passwords in the DDMS configuration file](#).

### *At the CLI prompt on the switch*

- 1 The CS 2000 Core Manager requires you to create at least four user IDs with passwords on the CM.

Use the following command create the first user id and password, then press Enter.

```
permit sdm01 <sdm01_pswd> 4 10000 english all
```

where

**<sdm01\_pswd>**

is the CM password for user sdm01

**Note:** If Enhanced Password Control is in effect on the CM, the password must be at least six characters in length.

- 2 Use the following command create the second user id and password, then press Enter.

```
permit sdm02 <sdm02_pswd> 4 10000 english all
```

where

**<sdm02\_pswd>**

is the CM password for user sdm02

- 3 Use the following command create the third user id and password, then press Enter.

```
permit sdm03 <sdm03_pswd> 4 10000 english all
```

where

**<sdm03\_pswd>**

is the CM password for user sdm03

- 4 Use the following command create the forth user id and password, then press Enter.

```
permit sdm04 <sdm04_pswd> 4 10000 english all
```

where

**<sdm04\_pswd>**

is the CM password for user sdm04

- 5 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### **Changing passwords in the DDMS configuration file**

#### ***At the CS 2000 Core Manager***

- 1 Log on the client workstation as a user authorized to perform config-admin actions.
- 2 Access the maintenance interface:  
**sdmmtc**
- 3 Access the application level:  
**appl**
- 4 Locate and busy the OSS Comms Svcs application:  
**bsy <n>**  
**<n>**  
is the number next to the OSS Comms Svcs fileset
- 5 Change the passwords in the DDMS configuration file as follows:
  - a Access the configuration level:  
**config <n>**  
**<n>**  
is the number next to the OSS Comms Svcs fileset
  - b Perform steps [8](#) through [29](#) in [Installing or upgrading DDMS filesets](#), which follows.
  - c Once you have completed the configuration, return the OSS Comms Svcs application to service:  
**rts <n>**

**<n>**

is the number next to the OSS Comms Svcs fileset

- 6** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Installing DDMS filesets

The DDMS software is located in filesets on the CS 2000 Core Manager non-CM load (NCL) digital audio tape (DAT). The following table shows the names, descriptions and contents of the DDMS filesets. These filesets are automatically installed when the schema fileset appropriate for your switch is installed.

### DDMS contents of CS 2000 Core Manager NCL DAT tape

Fileset name	Fileset description	Contents
SDM_DDMS.ossaps	OSS and Application Svcs (OSSAPS)	OSS and Application Svcs Transaction Manager (ddmstxmgr) View Server (ddmsschema) Data Input Handler (ddmsdih) Data Change Notification Handler (ddmsdcnh) Synchronizing Interface Module (ddmssimif)
SDM_DDMS.osscomms	OSS Comms Svcs (OSSCOMMS)	OSS Communications Services Communications Manager (ddmscomms) Passthru Interface Manager (ddmspim) User Administration (ddmsuAdmin) System Administration (ddmssysadm)

### Installing or upgrading DDMS filesets

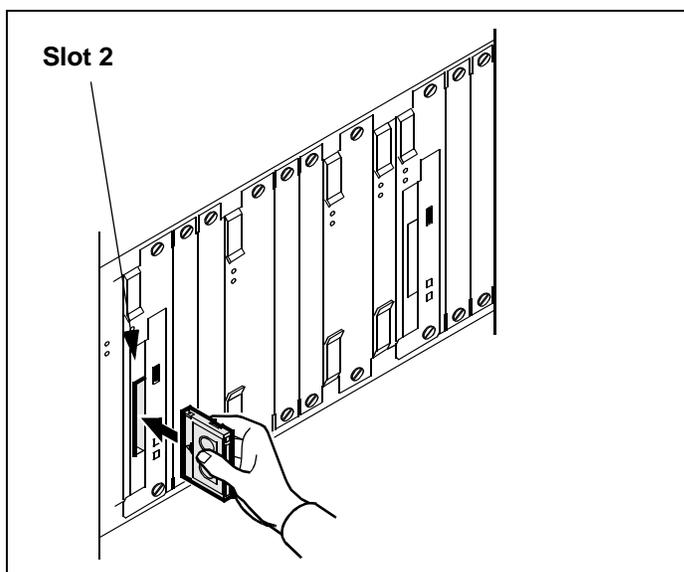
#### *At the CS 2000 Core Manager*

- 1 Log on the client workstation as a user authorized to perform config-admin actions.

- 2 Use the following table to determine your next step.

If the software is	Do
on tape	insert the tape labeled for the new software load into the tape drive in slot 2 as shown in the following figure, wait until the tape drive stabilizes (yellow LED is off), then proceed with step <a href="#">3</a>
in a directory	step <a href="#">3</a>

### Main chassis tape drive



- 3 Access the maintenance interface:

```
sdmmtc
```

- 4 Use the following table to determine your next step.

If the software is	Do
on tape	list the filesets by typing apply 0 and pressing the Enter key
in a directory	list the filesets by typing apply <directory path> and pressing the Enter key.

- 5 Select the filesets to install or upgrade:

```
select <x>
```

where

<x>

is the number next to the following filesets

- OSS Comms Svcs
- OSS and Application Svcs

*The system highlights the filesets as they are selected.*

6 Apply the selected filesets:

**apply**

*The system displays the list of required filesets.*

**y**

7 Confirm the Apply command:

**y**

*The system responds:*

```
Command in progress, 2 filesets to process.
Processing fileset 1
Applying OSS Comms Svcs 17.x.x.x
```

**Note:** Applying the filesets can take up to 10 minutes to complete.

8 When prompted, press Enter to begin configuration of the OSS and Application Svcs, and the OSS Comms Svc filesets.

9 When prompted, press Enter to start the logroute tool.

*The Logroute Main Menu appears, as shown in figure the following figure.*

#### DDMS logroute tool banner

```
#####
# Adding DDMS logroute configuration
#####
Please add DDMS log routing:
    Device type      = file
    File             = /data/logs/ossaps/ossapslog
    Routing          = addrep
    log_type         = DDMS
Press <RETURN> when ready
```

## Logroute tool main menu

```

                                Logroute Main Menu

1 - Device List
2 - Global Parameters
3 - CM Configuration File
4 - GDD Configuration
5 - Help
6 - Quit Logroute

Enter Option ==>

```

- 10** Set up a path and file to store DDMS customer logs. Select the Device List menu:

**1**

*The Device List Menu screen is displayed.*

If the list	Do
includes device /data/logs/ossaps/ossapslog	sub-step <a href="#">22</a>
does not include device /data/logs/ossaps/ossapslog	sub-step <a href="#">11</a>

- 11** Begin to add a new device:

**2**

- 12** Select a file device:

**3**

*The system responds:*

Enter file name ==> /data/logs/

- 13** Complete the path name:

**ossaps/ossapslog**

You have set up the log routing for the DDMS.

- 14** When prompted, enter the log format (from the range displayed). Use STD (the default format) or SCC2 if you want the following information to be displayed in all log reports:
- user-defined office ID, same for all logs and streams
  - the name of the node (ECORE) from which the log is generated
  - the sequence number in dual (global and device) format
- Other formats that can be used include: STD\_OLD or SCC2\_OLD
- 15** When prompted, set the ECORE option. Enter ON, if you want the log-generating node name to be displayed in all reports (requires the STD or SCC2 format). Otherwise, enter OFF.
- 16** Select addrep:
- a**
- 17** Enter the log identifier (in uppercase):
- DDMS**
- 18** Save the new device:
- y**
- The system responds:*
- ```
Save completed -- press return to continue
```
- 19** Press the Enter key to return to the Add Device screen.
- 20** Return to the Device List Menu screen:
- 5**
- 21** Return to the Device List Menu screen:
- 6**
- 22** Exit logroute:
- 6**
- 23** The CM User Setup screen is displayed as shown in the following example.
- The required CM users, SDM01-SDM04, for DDMS are added to the DDMS configuration file. The passwords for these users must be the same as those entered in [Creating user IDs on the CM](#) in this procedure, during the NCL installation. The userIDs and passwords are not case sensitive

### DDMS CM user setup screen

```
                                CM User Setup

0. QUIT
1. Add user
2. Delete user(by ID)
3. Update passwd(by ID)
4. Display users(ID)

Enter choice:
```

**24** Add a new user:

**1**

**25** When prompted, enter the user name (that is, sdm01).

**26** When prompted enter the user password.

Your first entry of a user name and password will cause a file not valid error message. Ignore this message and continue to add the other user names and passwords.

**27** Return to step [24](#) and repeat to add other new users.

**28** Exit the CM User Setup screen:

**0**

*The DDMS Clients Configuration screen is displayed as shown in the following figure.*

### DDMS Clients Configuration screen

```
                                DDMS Clients Configuration

0. Quit
1. Add new clients
2. Remove existing clients
3. List existing clients

Enter choice:
```

**29** Configure the DDMS clients. Add a new client:

**1**

**Note:** The DDMS clients are the CS 2000 Management tools servers with the SESM load.

- 30 When prompted, enter the IP address for each of the CS 2000 Management tools servers. Press the Enter key after each entry and type **done** once you have entered all the IP addresses.
- 31 Exit the DDMS clients configuration screen:  
0
- 32 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure

## Upgrading DCE

---

### Purpose

Use this procedure to upgrade your Distributed Computing Environment (DCE).

### Application

**ATTENTION**

This procedure will upgrade the DCE system files and provide the cell\_admin user with sdm\_admin sub administrator account access permissions.

Access permissions allow the cell\_admin to default to the sdm\_admin user id when prompted elsewhere in SDM upgrade and administration actions. If the cell\_admin declines to enter the user id and password in this procedure, the cell\_admin user id and password must be specified when performing subsequent CS 2000 Core Manager DCE administration and upgrade tasks.

For more information about DCE, refer to the following procedures:

- “Creating a DCE user” in *CS 2000 Core Manager Security and Administration*, NN10170-611
- “Configuring an SDM in a DCE cell” in *CS 2000 Core Manager Configuration Management*, NN10104-511
- “Removing an SDM from a DCE cell” in *CS 2000 Core Manager Configuration Management*, NN10104-511
- “Deleting a DCE user” in *CS 2000 Core Manager Security and Administration*, NN10170-611
- “Updating DCE principal names” in *CS 2000 Core Manager Security and Administration*, NN10170-611

### Procedure

#### Upgrading DCE

**ATTENTION**

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

**At the CS 2000 Core Manager**

- 1 Begin the DCE upgrade:

**dceupgrade**

The system displays the status of each step during the DCE upgrade.

*Example response:*

```
Update mkdce file now...
Stop dce daemons now...
Update rc.dce file and restart the dce daemons
now...
It may take about 3 minutes, please wait...
You are required to login as cell_admin for the
following operations
```

```
DCE administrator user ID [cell_admin]:
```

- 2 At the prompt, enter the DCE cell\_admin user ID.

If you do not have a DCE cell\_admin user ID, press the Enter key to accept the default user ID (cell\_admin).

*Example response:*

```
DCE administrator password:
```

- 3 At the prompt, enter the password for the DCE cell\_admin user ID.

*Example response:*

```
Update access permission for sdm_admin now...
Dceupgrade command complete
The DCE upgrade is complete.
```

- 4 If you did not have a DCE cell\_admin user ID and you pressed Enter in step 2 to accept the default DCE user ID, press Enter at the password prompt.

*The response indicates that the DCE login failed; however, the DCE upgrade completed correctly and you can continue.*

- 5 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Installing and configuring the OM Data Delivery application

### Purpose

Use this procedure to install and configure the Operational Measurements (OM) Data Delivery application.

### Application

The OM Data Delivery application collects and stores operational measurement (OM) data from the call server core. The application stores the data in comma separated value (CSV) files which are sent to the client operations support system (OSS).

The application's Tuple Number option allows you to activate or disable a tuple number so that it can be included in or exclude from a CSV file with other OM information. You must activate or disable the Tuple Number option at the Config menu level on the CS 2000 Core Manager.

#### ATTENTION

You must busy (BSY) and return to service (RTS) the OM Data Delivery application for the Tuple Number option to be either activated or disabled.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

| Procedure                                          | Document                                                              |
|----------------------------------------------------|-----------------------------------------------------------------------|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

If you are installing the OM Data Delivery application for the first time, ensure that the OM Access Service and Table Access Service

application filesets are installed and in service on your CS 2000 Core Manager before executing this procedure.

For the wireless market, the Nortel support group must increase the buffer size within the OM Access Service to 2.5 MB. This is done to accommodate the amount of data being transferred by the front end for a transfer period of every 30 minutes.

## Procedures

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

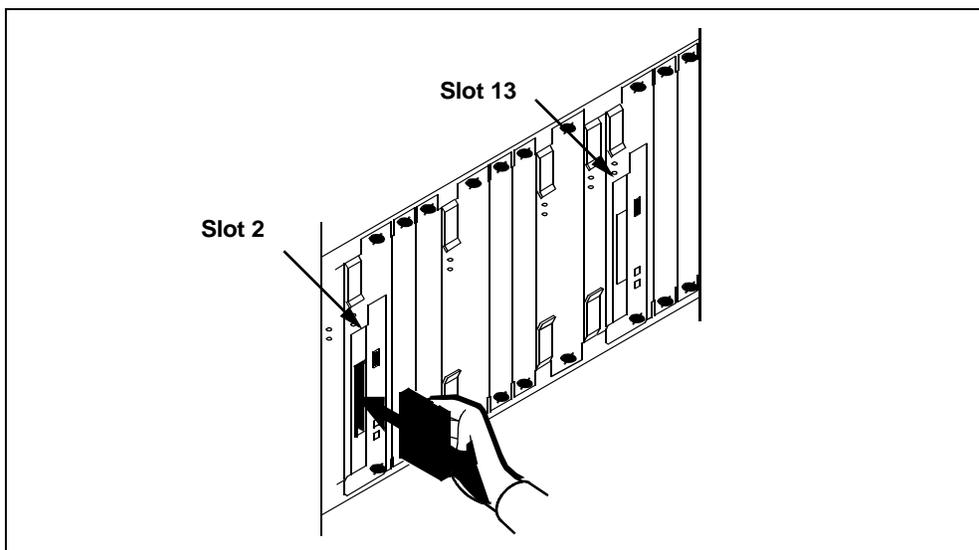
## Installing the OM Data Delivery application

### At the CS 2000 Core Manager

- 1 Insert the tape for the software load into one of the tape drives (slot 2 or slot 13) of the main chassis, as shown in the following figure.

Wait until the tape drive stabilizes (yellow LED is off) before you proceed.

### Inserting a tape into the slot 2 tape drive of the main chassis



**At the maintenance interface**

- 2 Determine the installation method.

| <b>If you choose to install OM Data Delivery by</b>                                | <b>Do</b>                                                                                                                                        |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| logging onto a local VT100 terminal connected directly to the CS 2000 Core Manager | log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions at the VT-100 terminal, and go to step <a href="#">6</a> |
| using telnet from a remote UNIX workstation to the CS 2000 Core Manager            | step <a href="#">3</a>                                                                                                                           |

- 3 Open a VT-100 compatible terminal window at the remote UNIX workstation.

**Note:** To install the OM Data Delivery application using a remote UNIX workstation, verify that telnet is enabled on the CS 2000 Core Manager.

- 4 Log into the CS 2000 Core Manager from the terminal window prompt:

```
telnet <ip_address>
```

where

**<ip\_address>**

is the IP address of the CS 2000 Core Manager you want to install the OM Data Delivery application on.

- 5 When prompted, enter the login ID and password for a user authorized to perform config-admin actions.

- 6 Access the maintenance interface level:

```
sdmmtc
```

- 7 Access the software inventory manager (SWIM) level:

```
swim
```

*The CS 2000 Core Manager lists the software applications currently installed.*

- 8 List the contents of the tape you previously inserted:

```
apply <n>
```

where

**<n>**

is either 0 (slot 2) or 1 (slot 13).

- 9** Locate the OM Data Delivery application fileset.

If necessary, use the up (enter 12, u, or up) and down (enter 13, d, or down) commands to locate the OM Data Delivery application fileset.

**Note:** If you have a previous release of the OM Data Delivery application installed, its release number appears in the *Current* column, while the new version you are installing appears in the *Available* column.

- 10** Select and install the new OM Data Delivery application fileset:

**apply <n>**

where

**<n>**

is the number next to the OM Data Delivery application fileset.

*Example response:*

```
You have selected to install the following new
filesets or fileset updates.OM Delivery
Application 19.0.xx.0. Do you wish to proceed?
Please confirm ("YES", "Y", "NO", or "N"):
```

- 11** Confirm the apply command:

**y**

*Example response:*

```
Command in progress.
```

```
APPLYING fileset: 9
SDM_OMDD.OMD 19.0.XX.0
```

## Configuring the OM Data Delivery application

### *At the CS 2000 Core Manager console*

- 1** Access the Config menu:

**sdmmtc config**

- 2** Configure OM Data Delivery:

**config <n>**

where

<n>

is the number next to OM Data Delivery under fileset description

| If OM Data Delivery                                               | Do                     |
|-------------------------------------------------------------------|------------------------|
| is being initially installed or upgraded to the new software load | step <a href="#">3</a> |
| has already been installed and is currently active                | step <a href="#">4</a> |
| has already been installed and is currently disabled              | step <a href="#">5</a> |

- 3 Determine if the Tuple Number option is undefined.

*Example response:*

```
The Tuple number inclusion option is currently
undefined.
```

```
Do you want the Tuple number to be provided with the
OM Group information (Y/N) [N]?
```

**Note:** For fresh installations or upgrades from releases prior to CS2E0070, the default value is *disabled (N)*.

| If you                                          | Do                                                                     |
|-------------------------------------------------|------------------------------------------------------------------------|
| activate the Tuple Number option                | enter <b>y</b> , press the Enter key, and go to step <a href="#">6</a> |
| do not want to activate the Tuple Number option | press the Enter key, and go to step <a href="#">6</a>                  |

- 4 The system indicates that the Tuple Number option is active.

*Example response:*

```
The Tuple number inclusion option is currently
active.
```

```
Do you want the Tuple number to be provided with the
OM Group information (Y/N) [Y]?
```

| If you                                         | Do                                                                     |
|------------------------------------------------|------------------------------------------------------------------------|
| want to disable the Tuple Number option        | enter <b>n</b> , press the Enter key, and go to step <a href="#">6</a> |
| do not want to disable the Tuple Number option | press the Enter key, and go to step <a href="#">6</a>                  |

**5** Determine if the Tuple Number option is disabled.*Example response:*

The Tuple number inclusion option is currently disabled.

Do you want the Tuple number to be provided with the OM Group information (Y/N) [N]?

| If you                                          | Do                                                                     |
|-------------------------------------------------|------------------------------------------------------------------------|
| want to activate the Tuple Number option        | enter <b>y</b> , press the Enter key, and go to step <a href="#">6</a> |
| do not want to activate the Tuple Number option | press the Enter key, and go to step <a href="#">6</a>                  |

*The system prompts you to confirm if the MDM and SDM are integrated.*

Are the MDM and SDM integrated [Y|N]?

**6** Confirm the MDM and SDM are integrated:**y****7** Configure the CS 2000 Core Manager to communicate with the Preside MDM. When prompted, enter the IP address of the first MDM:**8** When prompted, enter the hostname of the first MDM**9** When prompted, enter the IP address of the second MDM**10** When prompted, enter the hostname of the second MDM**11** When prompted, enter the port for 5-minute PM data**12** When prompted, enter the port for 30-minute PM data**13** When prompted, indicate whether you want to use custom retry settings.

| If you                                   | Do                                                                             |
|------------------------------------------|--------------------------------------------------------------------------------|
| do not want to use custom retry settings | type <b>n</b> , press the Enter key, and go to step <a href="#">15</a>         |
| want to use custom retry settings        | type <b>y</b> , press the Enter key, and continue with step <a href="#">14</a> |

- 14 Respond to the prompts with your custom retry settings and press the Enter key after each entry:

**Note:** The retry setting values shown here are examples. Retry setting values are in seconds (values higher than 300 seconds are not recommended as they can adversely affect recovery time).

**Enter the first connection retry interval: 2**

**Enter the number of retry attempts at that interval: 10**

**Enter the second connection retry interval: 10**

**Enter the number of retry attempts at that interval: 40**

**Enter the third connection retry interval: 60**

- 15 When prompted, confirm the data:

**y**

- 16 Determine the state of the OM Data Delivery application.

| If the OM Data Delivery application            | Do                      |
|------------------------------------------------|-------------------------|
| is ManB or Offl                                | step <a href="#">17</a> |
| is in any state <i>other</i> than ManB or Offl | step <a href="#">18</a> |

- 17 The system indicates that the configuration is complete.

*Example response:*

Configuration complete. Please press Enter . . .

Press the Enter key, and go to step [19](#).

- 18 The system indicates that the changes will take place after the OM Data Delivery application is restarted.

*Response:*

Changes will take effect after OM Delivery is restarted.  
Configuration complete. Please press Enter . . .

Press the Enter key, and go to step [19](#).

- 19 Exit the CS 2000 Core Manager maintenance interface:

**quit all**

- 20** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure

## Installing or upgrading OpenSSH

### Purpose

Use this procedure to install the OpenSSH filesset.

For more information on OpenSSH, refer to section “OpenSSH overview” in *CS 2000 Core Manager Basics*, NN10018-111.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

| Procedure                                          | Document                                                              |
|----------------------------------------------------|-----------------------------------------------------------------------|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

### Procedure

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### At the CS 2000 Core Manager

- 1 Log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions.

| If the software is | Do                     |
|--------------------|------------------------|
| on tape            | step <a href="#">2</a> |
| in a directory     | step <a href="#">3</a> |

- 2 Insert the tape labeled for the new software load into the tape drive in slot 2. Wait until the tape drive stabilizes (yellow LED is off) before you proceed.

- 3 Access the maintenance interface:

**sdmmtc**

| If the software is | Do                                        |
|--------------------|-------------------------------------------|
| on tape            | list the filesets: apply 0                |
| in a directory     | list the filesets: apply <directory_path> |

- 4 Select the latest version of the OpenSSH fileset:

**select <x>**

where

<x>

is the number next to the OpenSSH fileset.

- 5 Apply the selected fileset:

**apply**

- 6 Confirm the apply command:

**y**

- 7 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure

## Installing or upgrading Reach Through SPM

### Purpose

This procedure provides instructions on how to install or upgrade the Reach Through SPM application on the CS 2000 Core Manager.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

| Procedure                                          | Document                                                              |
|----------------------------------------------------|-----------------------------------------------------------------------|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

### Procedure

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### Installing Reach Through SPM

##### *At the CS 2000 Core Manager*

- 1 Log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions.

| If the software is | Do                     |
|--------------------|------------------------|
| on tape            | step <a href="#">2</a> |
| in a directory     | step <a href="#">3</a> |

2 Insert the new software tape into slot 2 of the tape drive. Wait until the tape drive stabilizes (yellow LED is off) before you proceed.

3 Access the maintenance interface:

**sdmmtc**

| If the software is | Do                                           |
|--------------------|----------------------------------------------|
| on tape            | list the filesets: apply 0                   |
| in a directory     | list the filesets: apply<br><directory path> |

4 Select the Reach Through SPM fileset:

**select <n>**

where

<n>

is the number next to the Remote Registration System fileset.

5 Apply the selected fileset:

**apply**

6 Confirm the apply command:

**y**

7 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure

## Installing or upgrading the GR740PT application server

### Purpose

Use this procedure to install or upgrade the GR740 Pass Through (PT) application server on the core manager.

### Prerequisites

To ensure a successful GR740PT application server operation, the following must first be configured:

- the settings for office parameters `eadas_dc_interface` and `eadas_nm_interface` in table OFCVAR, and the settings for EADAS SOCs OAM00005 and OAM00006 are correct for your configuration.
- OAM00004 for EADAS/DC is ON and that office parameters `eadas_mpc_and_link` and `netminder_mpc_and_link` are appropriately datafilled in table OFCVAR, when BX25 connectivity is required.

The following table lists the supported configurations for EADAS GR740PT application server.

### CM EADAS TCP/IP configurations

| Supported configurations               | Setting for <code>eadas_dc_interface</code> | Setting for <code>eadas_nm_interface</code> | SOC OAM00005 | SOC OAM00006 |
|----------------------------------------|---------------------------------------------|---------------------------------------------|--------------|--------------|
| DC and NM over BX25                    | X25                                         | N/A                                         | ON           | IDLE         |
| DC and NM over TCP/IP                  | TCP_IP                                      | N/A                                         | ON           | IDLE         |
| DC and Netminder over BX25             | X25                                         | X25                                         | IDLE         | ON           |
| DC over BX25 and Netminder over TCP/IP | X25                                         | TCP_IP                                      | IDLE         | ON           |
| DC over TCP/IP and Netminder over BX25 | TCP_IP                                      | X25                                         | IDLE         | ON           |
| DC and Netminder over TCP/IP           | TCP_IP                                      | TCP_IP                                      | IDLE         | ON           |

The following table lists the channel assignments for EADAS. Note that DC EADAS channels 1, 2 and 3 support TR-740/746 compliant header

and message. NM EADAS channels 1, 2 and 3 support SR3942 and TR746 to Netminder.

### EADAS channel assignments

| Description   | Service name       | TCP port | MTS offset |
|---------------|--------------------|----------|------------|
| DC EADAS lc 1 | DC_EADAS_LOG_CHAN1 | 9550     | 234        |
| DC EADAS lc 2 | DC_EADAS_LOG_CHAN2 | 9551     | 235        |
| DC EADAS lc 3 | DC_EADAS_LOG_CHAN3 | 9552     | 236        |
| NM EADAS lc 1 | NM_EADAS_LOG_CHAN1 | 9553     | 237        |
| NM EADAS lc 2 | NM_EADAS_LOG_CHAN2 | 9554     | 238        |
| NM EADAS lc 3 | NM_EADAS_LOG_CHAN3 | 9555     | 239        |

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

| Procedure                                          | Document                                                              |
|----------------------------------------------------|-----------------------------------------------------------------------|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

## Procedure

### Installing the GR740PT application server

#### At the core manager

- 1 Log in to the core manager as a user authorized to perform config-admin actions.

| If the NCL filesets are | Do                     |
|-------------------------|------------------------|
| on tape                 | step <a href="#">2</a> |

| If the NCL filesets are | Do                     |
|-------------------------|------------------------|
| in a directory          | step <a href="#">3</a> |

**2** Insert the new software tape in slot 2 of the tape drive. Wait until the tape drive stabilizes (yellow LED is off) before you proceed.

**3** Access the maintenance interface:

```
# sdmmtc
```

*The maintenance menu appears, with menu selections highlighted in the left column.*

**4** Use the following table to determine your next step.

| If the NCL filesets are | Do                                             |
|-------------------------|------------------------------------------------|
| on tape                 | list the filesets: > apply 0                   |
| in a directory          | list the filesets: > apply<br><directory path> |

**5** Select the GR740 fileset:

```
> select <x>
```

where

```
<x>
```

is the number next to the GR740 TCP/IP Pass Through fileset

**6** Apply the GR740 fileset:

```
> apply
```

**7** Confirm the apply command:

```
> y
```

*The system responds:*

```
GR740PT application server Installation
```

```
Command in Progress, x filesets to process.  
Processing fileset x.
```

```
APPLYING GR740PT xx.xx.xx.xx
```

```
Since the following filesets were applied to the system  
for the first time, their configuration programs will  
now be executed.
```

- 8** Press Enter to begin the configuration. Use the following table to determine your next step.

If	Do
you are configuring GR740PT in non-secure mode	Go to step <a href="#">9</a>
you are configuring GR740PT in local secure mode	Go to step <a href="#">13</a>
you are configuring GR740PT in DCE secure mode	Go step <a href="#">17</a>

- 9** Use the following table to determine your next step.

If	Do
your system is configured for DCE	Step <a href="#">10</a>
your system is not configured for DCE	Step <a href="#">11</a>

- 10** In response to the prompt that asks whether you want to configure the GR740PT fileset using DCE, respond by typing N or No.
- 11** In response to the prompt: Enter mode of security, select 1 (Non-secure mode).  
*After the configuration is complete, the system displays a response indicating successful installation.*
- 12** Go to step [19](#)
- 13** Use the following table to determine your next step.

If	Do
your system is configured for DCE	Step <a href="#">14</a>
your system is not configured for DCE	Step <a href="#">15</a>

- 14** In response to the prompt that asks whether you want to configure the GR740PT fileset using DCE, respond by typing N or No.
- 15** In response to the prompt: Enter mode of security, select 2 (Local [SSH] secure mode).  
*After the configuration is complete, the system displays a response indicating successful installation.*

- 16** Go to step [19](#)
- 17** In response to the prompt that asks whether you want to configure the GR740PT filesset using DCE, respond by typing Y or Yes.

*You are prompted for the DCE administrator's ID (sdm\_admin) and password.*

- 18**

**ATTENTION**

If you decide not to configure GR740PT in DCE secure mode (selection 3), then to complete the configuration, choose either 1 (and go to step [9](#)) for non-secure mode or 2 (and go to step [13](#)) for local secure mode.

Select 3 (DCE security Secure mode) in response to the prompt to enter the mode of security.

*After the configuration is complete, the system displays a response indicating successful installation.*

- 19** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Installing and configuring the Backup Restore Manager application on the CS 2000 Core Manager

### Purpose

Use this procedure to install and configure the Backup Restore Manager application on the CS 2000 Core Manager

### Application

The Backup Restore Manager application functionality requires the appropriate software resident and configured on platforms that require synchronized imaging. Although no CS 2000 Core Manager data is backed up through the Backup Restore Manager, the Backup Restore Manager software must be installed on the CS 2000 Core Manager to allow control of the XA-core and 3PC (Compact) backup.

### Prerequisites

You must be a user authorized to perform config-admin actions.

Before executing this procedure, ensure that a user name and password used for logging into the core to initiate an image dump is created and enabled. For assistance refer to procedure, "Creating the backup user ID on the core for SBRM" in *CS 2000 Core Manager Configuration Management*, NN10104-511, or in *ATM/IP Solution-level Security and Administration*, NN10402-600.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

## Procedures

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

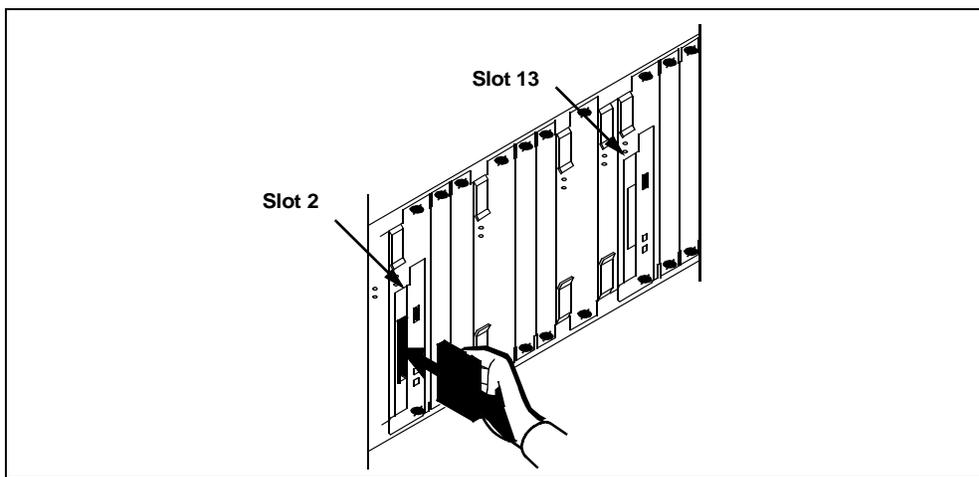
Use the following table to determine the correct procedure to use.

If	Do
you are installing and configuring the Backup Restore Manager application on the CS 2000 Core Manager for the first time	procedure <a href="#">Installing and configuring the Backup Restore Manager application on the CS 2000 Core Manager</a>
you are only reconfiguring the user name and password for an existing Backup Restore Manager application on the Core Manager	procedure <a href="#">Reconfiguring the Backup Restore Manager application on the CS 2000 Core Manager on page 185</a>

### Installing and configuring the Backup Restore Manager application on the CS 2000 Core Manager

#### At the CS 2000 Core Manager

- 1 Insert the tape for the software load into one of the tape drives (slot 2 or slot 13) of the main chassis, as shown in the following figure. Wait until the tape drive stabilizes (yellow LED is off) before you proceed.



**At the maintenance interface**

- 2 Determine the installation method.

<b>If you choose to install OM Data Delivery by</b>	<b>Do</b>
logging onto a local VT100 terminal connected to the CS 2000 Core Manager	log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions at the VT-100 terminal, and go to step <a href="#">6</a>
using telnet from a remote UNIX workstation to the CS 2000 Core Manager	step <a href="#">3</a>

- 3 Open a VT-100 compatible terminal window at the remote UNIX workstation.

- 4 Log onto the CS 2000 Core Manager from the terminal window prompt:

```
telnet <ip_address>
```

where

**<ip\_address>**

is the IP address of the CS 2000 Core Manager you want to install the Backup Restore Manager application on.

- 5 When prompted, enter the login ID and password for a user authorized to perform config-admin actions.

- 6 Access the maintenance interface level:

```
sdmmtc
```

- 7 Access the software inventory manager (SWIM) level:

```
swim
```

*The CS 2000 Core Manager lists the software applications currently installed.*

- 8 List the contents of the tape you previously inserted:

```
apply <n>
```

where

**<n>**

is either 0 (slot 2) or 1 (slot 13).

- 9 Locate the Java Runtime Environment (JRE) 1.3 packages.  
**Note:** If necessary, use the up (enter 12, u, or up) and down (enter 13, d, or down) commands to locate the JRE 1.3 packages.
- 10 Select and install the Java Runtime Environment Executables 1.3.0.0 package:  
**apply <n>**  
where  
**<n>**  
is the number next to the Java Runtime Environment Executables 1.3.0.0 package.
- 11 Confirm the apply command:  
**y**
- 12 Select and install the Java Runtime Environment Libraries 1.3.0.0 package:  
**apply <n>**  
where  
**<n>**  
is the number next to the Java Runtime Environment Libraries 1.3.0.0 package.
- 13 Confirm the apply command:  
**y**
- 14 Select and install the Java Runtime Environment Executables 1.3.0.15 package:  
**apply <n>**  
where  
**<n>**  
is the number next to the Java Runtime Environment Executables 1.3.0.15 package.
- 15 Confirm the apply command:  
**y**
- 16 Select and install the Java Runtime Environment Libraries 1.3.0.15 package:  
**apply <n>**  
where

- <n>**  
is the number next to the Java Runtime Environment Libraries 1.3.0.15 package.
- 17** Confirm the apply command:
- y**
- 18** Select and install Succession Provisioning Data Sync Manager (or Backup Restore Manager fileset, SDM\_BKM.bkm).
- apply <n>**  
where  
**<n>**  
is the number next to the Backup Restore Manager fileset, SDM\_BKM.bkm (or Succession Prov Data Sync Manager)
- 19** Confirm the apply command:
- y**  
*The application installation script runs.*
- 20** As part of the Backup Restore Manager application installation, a script runs that enables you to configure access to the core for the Synchronous Backup Restore Manager (SBRM). As the script runs, you are prompted for the user name. The script restricts the name to a maximum of 16 characters.

**ATTENTION**

The user name must be one that exists and is used to log in to the core to initiate an image dump. The user name you enter must also be enabled on the core. For assistance, refer to procedure, "Creating the backup user ID on the core for SBRM" in *CS 2000 Core Manager Configuration Management*, NN10104-511, or in *ATM/IP Solution-level Security and Administration*, NN10402-600.

- 21** You are prompted for the password of the user you entered in the previous step. The script restricts the password to a maximum of 16 characters.

**ATTENTION**

This password is set up when the user name in the previous step is created. For assistance refer to procedure, "Creating the backup user ID on the core for SBRM" in *CS 2000 Core Manager Configuration Management*, NN10104-511, or in *ATM/IP Solution-level Security and Administration*, NN10402-600.

- 22 You are prompted for the logical volume where the backup is stored. This is the device on which the core image dump is stored. Ensure that this device has enough space to store the backup.
- 23 You are prompted for the core type: either XA-core or Compact.  
**Note:** This information is needed in order for the software to know whether the core will also have a Message Switch load.
- 24 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Reconfiguring the Backup Restore Manager application on the CS 2000 Core Manager

At any time after the configuring the Backup Restore Manager is complete, you wish to reconfigure user access to the core for the SBRM

### *At the maintenance interface*

- 1 Access the config level of the SDM maintenance interface:  
**sdmmtc config**
- 2 From the list of filesets that display, locate the application number of the Succession Provisioning Data Sync Manager fileset or Backup Restore Manager fileset, SDM\_BKM.bkm, then type:  
**config <n>**  
where  
**<n>**  
is the application number for the Succession Provisioning Data Sync Manager fileset or Backup Restore Manager fileset, SDM\_BKM.bkm
- 3 If applicable, confirm the config command:  
**y**  
*The Backup Restore Manager application script runs that enables you to reconfigure access to the core for the Synchronous Backup Restore Manager (SBRM).*

- 4 You are prompted for the user name. The script restricts the name to a maximum of 16 characters.

**ATTENTION**

The user name must be one that exists and is used to log in to the core to initiate an image dump. The user name you enter must also be enabled on the core. For assistance, refer to procedure, "Creating the backup user ID on the core for SBRM" in *CS 2000 Core Manager Configuration Management*, NN10104-511, or in *ATM/IP Solution-level Security and Administration*, NN10402-600.

- 5 You are prompted for the password of the user you entered in the previous step. The script restricts the password to a maximum of 16 characters.

**ATTENTION**

This password is set up when the user name in the previous step is created. For assistance refer to procedure, "Creating the backup user ID on the core for SBRM" in *CS 2000 Core Manager Configuration Management*, NN10104-511, or in *ATM/IP Solution-level Security and Administration*, NN10402-600.

- 6 You are prompted for the logical volume where the backup is stored. This is the device on which the core image dump is stored. Use the same logical volume used previously, unless otherwise specified.
- 7 You are prompted for the core type: either XA-core or Compact. Enter the same core type previously used, unless otherwise specified.

**Note:** This information is needed in order for the software to know whether the core will also have a Message Switch load.
- 8 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Installing CEM filesets

### Purpose

Use this procedure to install the following Core Element Manager (CEM) filesets in the order listed:

- AX4<release>-dmsDataSrv-CSU-000.tape
- AX4-<release>-TntFTPHandl-CSU-000.tape
- AX4-<release>-SAF-CSU-000.tape

For more information about the CEM filesets, refer to *CS 2000 Core Manager Basics*, NN10018-111.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

## Procedure

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### At the CS 2000 Core Manager

- 1 Log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions.

If the software is	Do
on tape	step <a href="#">2</a>
in a directory	step <a href="#">3</a>

- 2 Insert the tape labeled for the new software load into the tape drive in slot 2. Wait until the tape drive stabilizes (yellow LED is off) before you proceed.

- 3 Access the maintenance interface:

```
sdmmt c
```

- 4 Use the following table to determine your next step.

If the software is	Do
on tape	list the filesets: apply 0
in a directory	list the filesets: apply <directory_path>

- 5 Select the latest version of AX4<release>-dmsDataSrv-CSU-000.tape fileset:

```
select AX4<release>-dmsDataSrv-CSU-000.tape
```

- 6 Apply the selected fileset:

```
apply
```

- 7 Confirm the apply command:

```
y
```

- 8 Select the latest version of one of the AX4-<release>-TntFTPHandl-CSU-000.tape fileset:

```
select AX4-<release>-TntFTPHandl-CSU-000.tape
```

- 9 Apply the selected fileset:  
**apply**
- 10 Confirm the apply command:  
**y**
- 11 Select the latest version of one of the AX4-<release>-SAF-CSU-000.tape fileset:  
**select AX4-<release>-SAF-CSU-000.tape**
- 12 Apply the selected fileset:  
**apply**
- 13 Confirm the apply command:  
**y**
- 14 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Commissioning X.25 connectivity

### Purpose

Use this procedure to commission or recommission X.25 connectivity on the CS 2000 Core Manager from the configuration level (sdmconfig). You can also commission or recommission X.25 from the X25 level of the maintenance interface (sdmmtc x25). The same commands are used at both levels to set the X.25 base and controller licenses, and the Data Terminal Equipment (DTE) addresses for both X.25 ports.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

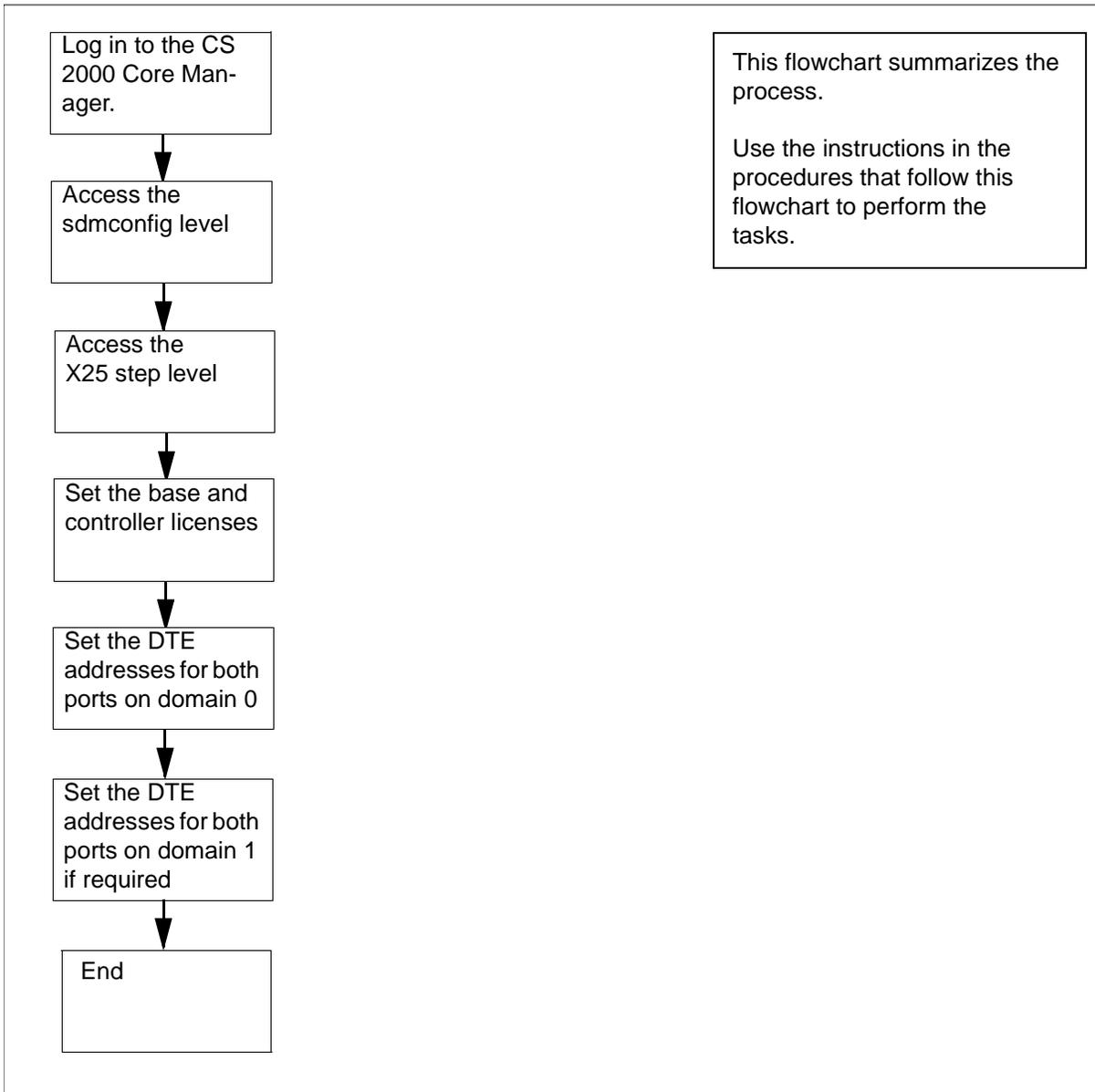
#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

### Procedure

The following task flow diagram provides an overview of the process for commissioning X.25 connectivity. Use the instructions in the procedure that follows the flowchart to complete the tasks.

## Task flow for commissioning X25 connectivity



If you are commissioning X.25 connectivity for the first time, follow the instructions in the following procedure [Configuring X.25 licences](#). If you are recommissioning X.25 on domain 0 or domain 1, follow the instructions in [Configuring DTE addresses on page 193](#).

## Configuring X.25 licences

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

### *At the CS 2000 Core Manager*

- 1 Log in to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Access the configuration level:  
**sdmconfig**
- 3 Access the X.25 commissioning step level:  
**step <#>**  
*where*  
**<#>**  
is the number next to the X.25 commissioning step.
- 4 Initiate the configuration process:  
**change**
- 5 When prompted, enter the new Base license key. The Base license key is the 28 alphanumeric character string for the X.25 hardware that you are commissioning.
- 6 When prompted, enter the new Controller license key. The Controller license key is the 28 alphanumeric character string for the X.25 hardware that you are commissioning.  
*Example response:*  
X25 Connectivity values to be changed:  
  
Base license key: 3xcmwj6p4wmnxhyknmnbwvqzr2aa  
Controller license key:  
5me5q7itsuba5hyknmnbwvqzr2aa  
  
Proceed with these values?  
Enter Y to confirm, N to reject, or E to edit:
- 7 When prompted, confirm the values:  
**y**

*Example response:*

Change - Command submitted.

- 8** You have completed this procedure. Continue commissioning X.25 connectivity, by following the instructions in the procedure [Configuring DTE addresses](#).

## Configuring DTE addresses

### At the CS 2000 Core Manager

- 1** If you are not already at the commissioning step level, complete steps 1 through 3 of procedure [Configuring X.25 licences](#), then go the next step of this procedure. Otherwise, go to the next step.

- 2** Configure the DTE addresses of the X25 ports on domain 0:

**change 0 <port>**

where

**<port>**

is 0 or 1

- 3** Enter the DTE address (5 to 15 digits) that corresponds to the port.

*Example response*

X25 Connectivity values to be changed:

DTE address for domain 0 port 0: 123456

This action will affect service on the specified port.

Proceed with these values?

Enter Y to confirm, N to reject, or E to edit:

- 4** Confirm the values:

**y**

*Example response:*

Change 00 - Command submitted.

- 5** Repeat steps [2](#) to [4](#) for the other port in domain 0.

If the system	Do
has an X25 card in domain 1	step <a href="#">6</a>
does not have an X25 card in domain 1	step <a href="#">10</a>

- 6** Configure the DTE addresses of the X25 ports on domain 1:  
**change 1 <port>**  
*where*  
**port**  
is 0 or 1
- 7** Enter the DTE address (5 to 15 digits) that corresponds to the port, and press the Enter key.  
*Example response:*  
X25 Connectivity values to be changes:  
  
DTE address for domain 1 port 0: 123456  
  
This action will affect service on the specified port.  
  
Proceed with these values?  
Enter Y to confirm, N to reject, or E to edit:
- 8** Confirm the values:  
**y**  
*Example response:*  
Change 10 - Command submitted.
- 9** Repeat steps [6](#) through [8](#) for the other port in domain 1.
- 10** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Removing DDMS filesets

### Purpose

Use this procedure to remove the DDMS filesets, as well as the DDMS logical volumes.



#### CAUTION

This procedure completely removes all information used by DDMS. Use this procedure only if DDMS is no longer required on your system.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

## Procedure

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

### Removing DDMS filesets

#### *At the local VT100 console*

- 1 Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Access the SWIM level of the maintenance interface:  
**sdmmtc swim**
- 3 Access the Details level:  
**details**
- 4 Remove the DDMS filesets:  
**remove <n>**  
where  
**<n>**  
is the number next to each of the following DDMS filesets:  
OSS and Application Svcs and OSS Comms Svcs
- 5 When prompted, confirm the remove command:  
**y**
- 6 Delete the file log device for DDMS. Start the log delivery commissioning tool if it does not automatically appear:  
**logroute**  
*The Logroute Main Menu screen appears.*

#### Logroute Main Menu

- 1 - Device List
- 2 - Global Parameters
- 3 - CM Configuration File
- 4 - Gdd Configuration
- 5 - Help
- 6 - Quit Logroute

Enter Option ==>

**7** Access the Device List Menu:**1***The Device List Menu screen appears.*

```
Device List Menu

1 - View Device
2 - Add Device
3 - Delete Device
4 - Modify Device
5 - Help
6 - Return to Main Menu

Enter Option ==>
```

**8** Access the Delete Device menu screen:**3***The system displays the list of configured devices and prompts you to enter the number of the device that you want to delete.**Example response:*

```
Delete Device Menu

Enter ABORT to return to Device List Menu

Devices:
1 - HOST: any          PORT: 8551      Type: TCPIN
2 - HOST: 10.102.4.4  PORT: 14450     Type: TCP
3 - /data/logs/faults Type: FILE

Enter device number to delete ==>
```

**9** Delete the file log device for DDMS:**<x>**

where

**<x>**

is the number next to the file log device for DDMS  
(/data/logs/ossaps/ossapslog)

*The system responds:*

Device will be deleted permanently. Continue...  
(Y/N) [N]:

**10** Confirm that you want to delete the selected device:

**y**

*The system responds:*

Save data completed -- press return to continue

**11** Return to the Device List menu screen:

**abort**

**12** Return to the Logroute Main menu screen:

**6**

**13** Quit the logroute tool:

**6**

**14** List the DDMS logical volumes:

**df -k**

The logical volumes you need to remove are

- /osscomms
- /ossapslog
- /ossaps

**15** Proceed with the removal. Change directory to the root level:

**cd /**

**16** Unmount the /ossaps directory:

**umount /ossaps**

**17** Unmount the /ossapslog directory:

**umount /ossapslog**

**18** Unmount the /osscomms directory:

**umount /osscomms**

**19** Remove the /ossaps file system:

**rmfs /ossaps**

**20** Remove the /ossapslog file system:

**rmfs /ossapslog**

- 21 Remove the /osscomms file system:  
**rmfs /osscomms**
- 22 Remove the /ossaps directory:  
**rmdir /ossaps**
- 23 Remove the /ossapslog directory:  
**rmdir /ossapslog**
- 24 Remove the /osscomms directory:  
**rmdir /osscomms**
- 25 Remove the /ossaps file in the /data/logs directory:  
**rm /data/logs/ossaps**
- 26 Remove the /ossaps file in the /data directory:  
**rm /data/ossaps**
- 27 Remove the /ossapslogs file in the /data directory:  
**rm /data/ossapslog**
- 28 Remove the /osscomms file in the /data directory:  
**rm /data/osscomms**
- 29 Change directory to the /sdm directory:  
**cd /sdm**
- 30 Remove the osscomms directory along with all files and directories inside osscomms, without verification:  
**rm -rf osscomms**
- 31 Remove the ossaps directory along with all files and directories inside ossaps without verification:  
**rm -rf ossaps**
- 32 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Removing CS 2000 Core Manager application filesets

### Purpose

Use this procedure to remove application filesets that reside on the CS 2000 Core Manager.

You can display the list of application filesets available on the CS 2000 Core Manager at the DETAILS level of the maintenance interface, including the version and status of each application fileset. An application fileset can be in one of the following states:

- **APPLIED**—the CS 2000 Core Manager is using the software. If a previous version of the fileset exists in the archived state, the applied fileset can be removed. In that case, the previous version is restored.
- **ARCHIVED** — a backup version of the fileset is available and can be restored.
- **FAILED**— the fileset failed and must be reinstalled before use.
- **OBSOLETE**—the fileset is no longer active

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

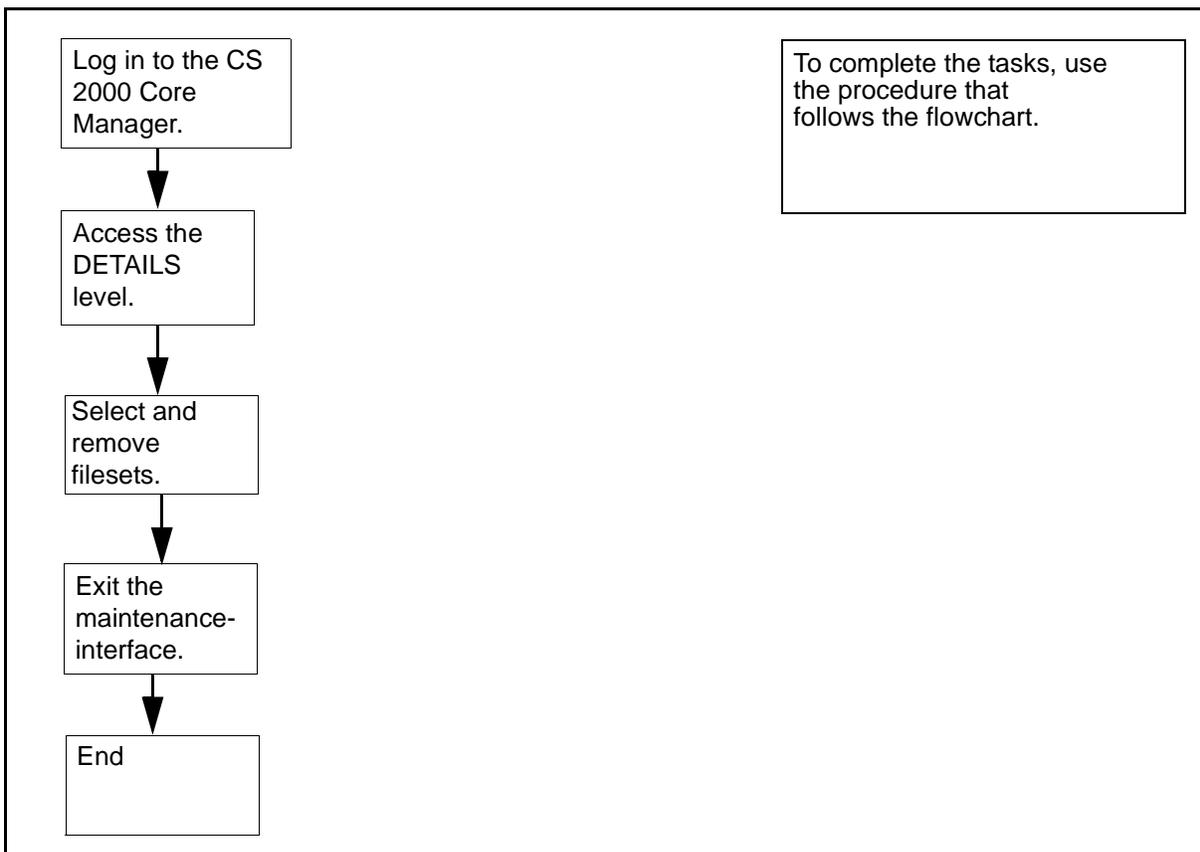
#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

### Procedure

The following task flow diagram summarizes the process. To complete the tasks, use the instructions in the procedure that follows the flowchart.

## Task flow for Removing application filesets



### Removing application filesets

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### *At the local or remote VT100 console:*

- 1 Log in to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Access the DETAILS level of the maintenance interface:  
`sdmmtc details`

- 3 Remove one or more filesets:  
**remove <#>**  
where  
    **<#>**  
        is the number next to the fileset you want to remove  
**Note:** To remove multiple filesets at one time, specify as many fileset numbers as you want, without using commas to separate them.
- 4 When prompted, confirm the remove command:  
**y**
- 5 Exit the maintenance interface:  
**quit all**
- 6 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Upgrading the CPU controller modules

### Purpose

Use this procedure to upgrade the CPU controller modules independently from a CS 2000 Core Manager software upgrade. Refer to “Hardware Baseline” in *Upgrading the CS 2000 Core Manager*, NN10060-461, for a list of the CPU modules that are supported by this upgrade procedure.

#### ATTENTION

Upgrading a pair of CPUs can require two to four hours of a maintenance window to complete.



#### CAUTION

This activity causes a service disruption. This hardware upgrade requires the complete shutdown of the CS 2000 Core Manager and all its applications including the CS 2000 Core Manager billing Application. Ensure that adequate backup space is available on the core before continuing with this procedure.

### Prerequisites

You must be a user authorized to perform config-admin actions.

You must determine the amount of backup space needed during the hardware upgrade. Refer to section “Disk space requirements in “Preparing for SBA installation and configuration” in *CS 2000 Core Manager Accounting*, NN10126-811. To set up the backup space, refer to “Configuring the SBA on the core” in *CS 2000 Core Manager Accounting*, NN10126-811.

#### ATTENTION

Perform a system image backup before you upgrade the CPUs. Refer to the procedure “Creating system image backup tapes (S-tapes) manually” in the *CS 2000 Core Manager Security and Administration*, NN10170-611.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

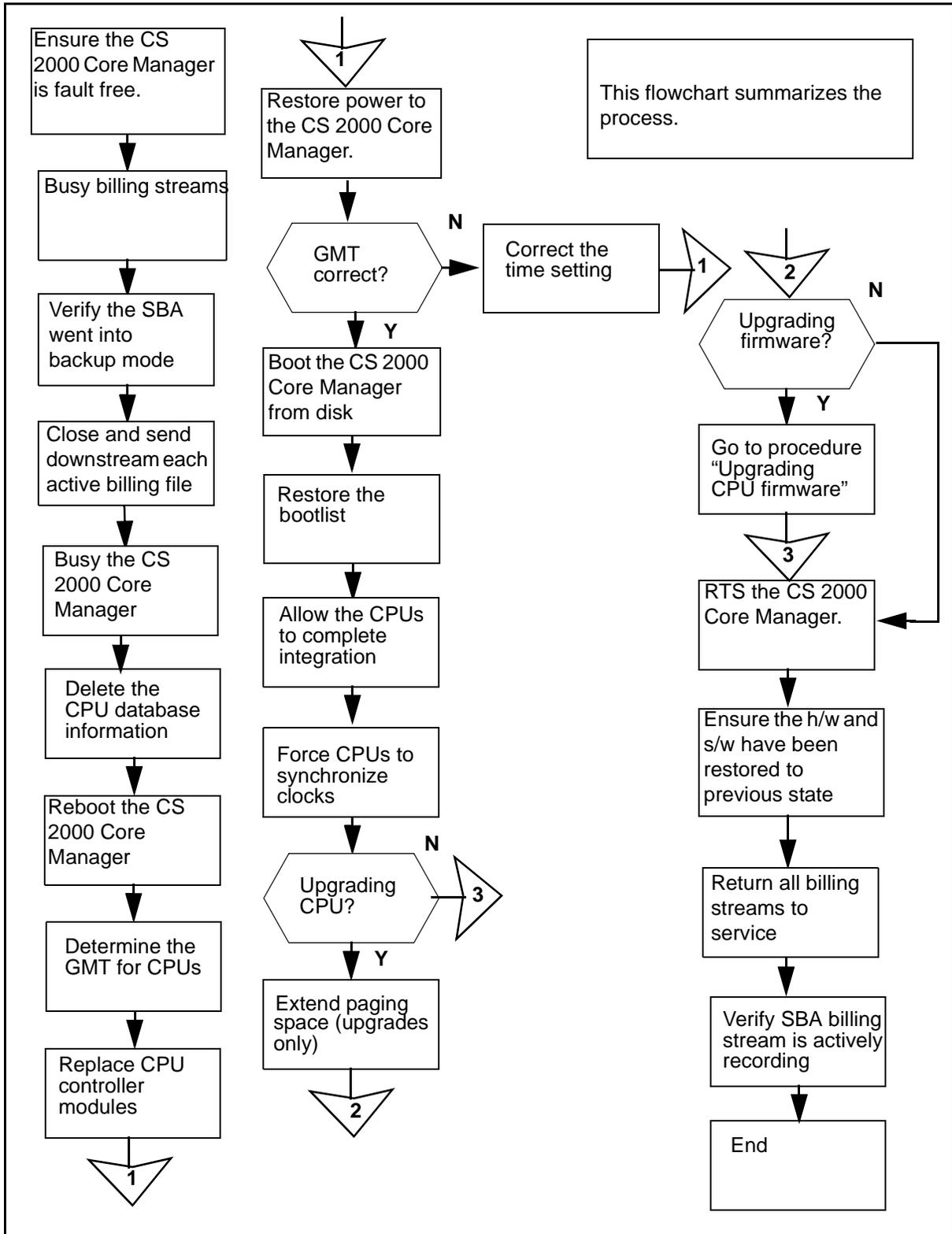
### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

## Procedure

The following task flow diagram provides an overview of the upgrade process. Use the instructions in the procedures that follow the flowchart to complete the tasks.

### Task flow for Upgrading the CPU controller modules



## Procedure

### Upgrading the CPU controller modules

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### ATTENTION

Verify the keystrokes that are required to perform a "Break" on your VT100 console. If necessary, consult your site system administrator for assistance.

#### *At the MAP display*

- 1 Ensure that you have configured adequate backup space and performed a system image backup.
- 2 Ensure that the CS 2000 Core Manager hardware and software applications are fault-free, or that known faults are investigated and acceptable.

Any alarms that recur after a CPU upgrade must be investigated, and any new alarms must be resolved without delay. If this does not occur, contact your next level of support.

- 3 Busy all billing streams on the core. Post the required billing stream:

```
mapci;mtc;appl;sdmbil;post<stream>
```

where

**<stream>**

is the name of the billing stream

- 4 Busy the posted stream:  
**bsy**
- 5 Repeat steps [3](#) to [4](#) for each configured billing stream.
- 6 For each configured billing stream, verify that at least one backup file exists on at least one of the configured backup volumes.

Display the names of the backup volumes configured for the specified billing stream:

```
mapci;mtc;appl;sdbil;conf view <stream>
```

where

**<stream>**

is the name of the billing stream

- 7 Verify that an SBA backup file exists on at least one of the displayed backup volumes:

```
diskut;lf <backup_volume>
```

where

**<backup\_volume>**

is the name of the selected backup volume

**Note:** The name of each backup file is prefixed with the word BACK.

- 8 Repeat steps [6](#) and [7](#) for each billing stream.

#### **At the local or remote VT100 console**

- 9 Log on to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 10 Close and send downstream all unprocessed billing files. Refer to *CS 2000 Core Manager Accounting*, NN10126-811 and use the following table to determine your specific method.

Task	File transfer mode	Procedure to use in CS 2000 Core Manager Accounting, NN10126-811
Close billing files	All	"Closing billing files"
Send billing files downstream	Outbound file transfer (OFT)	"Sending billing files from disk"
	Inbound file transfer (IFT)	"Retrieving billing files for a stream set to inbound file transfer"
	Real-time billing (RTB)	"Sending billing files from disk"

Task	File transfer mode	Procedure to use in <i>CS 2000 Core Manager Accounting</i> , NN10126-811
	Automatic file transfer (AFT)	<p>No manual action is required. Wait for SBA to deliver pending billing files to the downstream destination. There must be no more than one pending file for each AFT session.</p> <p>Use the following commands to query AFT sessions: billmtc, appl, aft, aftcfg, list.</p> <p>To verify which billing files for each session are still pending, enter the following commands: billmtc, appl, aft, query &lt;session_name&gt;.</p>

- 11** To display the details about a stream, refer to the procedure “Listing billing streams” in the Accounting document. To list all files currently stored in a stream, refer to procedure “Listing billing files” in *CS 2000 Core Manager Accounting*, NN10126-811.
- 12** If you are unable to send billing files to a downstream destination and you want to proceed with the upgrade, back up the billing files to a DAT tape. If required, refer to procedure “Copying billing files to tape (backup)” in *CS 2000 Core Manager Accounting*, NN10126-811.
- 13** If you need to restore the billing files from tape and you have AFT or IFT configuration, contact your next level of support for instructions. For any other configuration, you can send the billing files from tape using the procedure “Sending billing files from tape” in *CS 2000 Core Manager Accounting*, NN10126-811.

#### ***At the MAP display***

- 14** Access the CS 2000 Core Manager level of the MAP display:

**mapci ; mtc ; appl ; sdm**

Example response:

SDM InSv

- 15** Busy the CS 2000 Core Manager:

**bsy**

*Example response:*

```
SDM is in service
This command will cause a service interruption.
Do you wish to proceed?
Please confirm ('YES', 'Y', 'N', or 'NO')
```

- 16** Confirm the busy command:

**y**

*Example response:*

```
SDM Bsy initiated.
SD Bsy completed.
```

**At the local or remote VT100 console**

- 17** Log in to the CS 2000 Core Manager as a user authorized to perform config-admin actions.

- 18** List information for the root volume group (rootvg):

**lsvg -p rootvg**

Example response

```
root vg:
PV NAME    PV STATE   TOTAL PPs   FREE PPs   FREE
DISTRIBUTION
hdisk0     active     1013        499
           175..31..00..125
   ..168
hdisk7     active     1013        499
           170..137..00..00
   ..192
```

- 19** Record the names of the hard disks (physical volumes) that provide rootvg storage on the CS 2000 Core Manager. (In the example shown in step [18](#), the hard disks are hdisk0 and hdisk7.)
- 20** Delete the CS 2000 Core Manager configuration database information for the CPU controller modules currently installed on the system:
- ftcpuclean**
- 21** Shut down the CS 2000 Core Manager and initiate a reboot:
- shutdown -Fr**

**Note:** The message: COLD start, appears within approximately 2 minutes.

- 22** Interrupt the boot process when the COLD start message appears by pressing the Break key.

*Example response*

FX-Bug>

- 23** Determine the current Greenwich Mean Time (GMT) setting on the existing CPU controller modules:

**FX-Bug> time**

*Example response:*

FRI NOV 16 18:41:49:00

**Note:** The time setting is the correct GMT setting. It does not necessarily reflect your site's local date and time.

- 24** Record the date and time response.

If you are using local time to set the GMT on the new CPU controller modules, use the response in step [23](#) to calculate the number of hours that your local time differs from GMT.

#### ***At the modular supervisory panel (MSP)***

- 25** Interrupt power to the CS 2000 Core Manager by turning off the MSP breakers, located at the front of the MSP, which supply power to the CS 2000 Core Manager. Proceed according to the chassis structure of your system.

<b>If your system contains</b>	<b>Do</b>
a main chassis only	turn the top two breakers off
a main chassis and I/O expansion chassis	turn all four breakers off

#### ***At the front of the CS 2000 Core Manager***

- 26** Replace the CPU controller modules using the procedure "Replacing a CPU controller module during an upgrade". When complete, return here, and continue with step [27](#).

**At the MSP**

- 27** Restore power to the CS 2000 Core Manager by turning on the MSP breakers. Proceed according to the chassis structure of your system.

If your system contains	Do
a main chassis only	turn top two breakers on
a main chassis and I/O expansion chassis	turn all four breakers on

*When power is restored, both LEDs on the CPU controller modules turn on briefly, then turn off. This action is normal and indicates that the module is seated correctly, is receiving power, and has passed its self tests.*

**At the local or remote VT100 console****28****ATTENTION**

Verify the keystrokes that are required to perform a "Break" on your VT100 console.

Interrupt the boot process when the COLD start message appears by pressing the Break key.

**Note:** The COLD start message appears within approximately 5 minutes.

- 29** If the following message appears after you press the Break key: Break detected; Self test/boots about to begin; press <Break> anytime to abort all, press the Break key again after the prompt to stop the self/boot process.

*Example response:*

```
FX-Bug>
```

- 30** Determine the current Greenwich Mean Time (GMT) setting on the new CPU controller modules:

```
FX-Bug> time
```

*Example response:*

```
FRI NOV 16 18:41:49:00
```

- 31** Determine if the GMT setting for the new CPU controller modules is correct.

If the GMT setting is	Do
incorrect	step <a href="#">32</a>
correct	step <a href="#">33</a>

- 32**



**CAUTION**

Potential loss of service

Ensure that the GMT setting on the new CPU controller modules is later than the setting on the previous modules (recorded in step [24](#)). Do not reboot the system if the GMT setting is earlier than the time of the shutdown. This action can corrupt the system configuration and status information.

Correct the time setting to the current GMT:

```
FX-bug> set <mmddyymm>
```

**where**

mm is the numeric month of the year (01 to 12)

dd is the numeric day of the month (01 to 31)

yy is the last two digits of the current year (00 to 99)

hh is the current hour (01-12)

mm is the current minute (00 to 59)

- 33** Ensure that the environment parameters are set to the default values:

```
FX-bug> env;d
```

*Example response:*

```
Update with Auto-Configuration Defaults
```

```
Update Non-Volatile RAM (Y/N)?
```

- 34** Enter Y to confirm the NVRAM update.

*Example response:*

```
Reset Local System (CPU) (Y/N)?
```

- 35** Enter Y to reset the system.

- 36 Interrupt the reboot process by pressing the Break key.

*Example response:*

FX-bug>

- 37 Boot the CS 2000 Core Manager from disk:

**FX-bug> pboot 1 0**

**Note:** During this time, the CPU firmware is automatically upgraded.

If you	Do
return to the FX-bug prompt again	step <a href="#">38</a>
do not return to the FX-bug prompt again	step <a href="#">39</a>

- 38 Boot the CS 2000 Core Manager again:

**FX-bug> pboot 1 0**

- 39 At the login prompt, log in to the CS 2000 Core Manager a user authorized to perform config-admin actions.

- 40 Restore the bootlist:

**bootlist -m normal <hdisk\_x> <hdisk\_y>**

**where**

<hdisk\_x> and <hdisk\_y> are the two physical disks that provide rootvg storage, as recorded in step [19](#).

- 41 Check the CPU firmware for the CPU in domain 0:

**ftbugver -1 CPU-0**

**Note:** The “-1” is a lower-case L.

- 42 Check the CPU firmware for the CPU in domain 1:

**ftbugver -1 CPU-2**

**Note:** The “-1” is a lower-case L.

- 43 Access the maintenance interface:

**sdmmtc**

- 44 Access the hardware level:

**hw**

- 45 Check the CPU integration status:

**querysdm flt**

- 46 Once the CPU controller modules have been integrated, exit the maintenance level:

```
quit all
```

- 47 Force each CPU controller module to assume mastership to synchronize their clocks:

```
ftctl -switch
```

Repeat the command for the other CPU controller module.

- 48 Proceed according to whether you have upgraded or downgraded a module.

If you have	Do
upgraded a module	step <a href="#">49</a>
downgraded a module	step <a href="#">53</a>

- 49 View the current paging space to ensure that it is twice the memory size of the CPU:

```
lsps -a
```

Example response:

```
Page Space   Physical Volume   Volume Group   Size %Used   Active Auto   Type
hd6          hdisk0            rootvg         512MB  1    yes  yes   lv
```

This response is an example of the paging space for a 256-MByte CPU controller module. In the example, the Size column, which represents the memory size, indicates 512MB. This is twice the size of the CPU.

If the paging space is	Do
twice the size of the CPU	step <a href="#">53</a>
not twice the size of the CPU	step <a href="#">50</a>

- 50 Increase the paging space:

```
sdmconfig cpu
```

The paging space is now reset at twice the memory size of the CPU.

- 51 Verify the paging space has been increased:

```
lsps -a
```

*Example response:*

```
Page Space   Physical Volume   Volume Group   Size %Used   Active Auto Type
hd6          hdisk0             rootvg        1024MB 1         yes  yes  lv
```

This response is an example of the paging space for a 512-MByte CPU controller module. In the previous example, the Size column, which represents the memory size, shows a 1024MB paging size, which is twice the size of the CPU.

- 52** Use the following table to determine your next step.

If	Do
If the paging space did not increase	repeat steps <a href="#">50</a> and <a href="#">51</a> .  If, after repeating these steps the paging space still does not increase, contact your next level of support.
If the paging space did increase	step <a href="#">53</a>

### ***At the MAP display***

- 53** Access the SDM level of the MAP display:

```
mapci;mtc;appl;sdm
```

*Example response:*

```
SDM ManB
```

- 54** Return the CS 2000 Core Manager to service:

```
rts
```

*The system responds:*

```
SDM RTS initiated.
SDM RTS completed.
```

The system automatically returns all modules to service.

- 55** Ensure the CS 2000 Core Manager hardware and software applications have been restored to the previous in-service state (before the upgrade).

- 56** Investigate any CS 2000 Core Manager or CM alarms not recorded in pre-checks. For any alarms that cannot be resolved, contact your next level of support.

**57** Return all billing streams to service. For each billing stream, complete steps [58](#) through 54.

**58** Post the required billing stream:

```
mapci;mtc;appl;sdmbil;post<stream>
```

where

**<stream>**

is the name of the billing stream

**59** Return the posted stream to service:

```
rts
```

**60** Post each billing stream again (see step [58](#)) and make sure that each stream is in-service (InSv).

**61** Verify that billing is collecting records:

```
query <stream_name>
```

where

**<stream\_name>**

is the name of the billing stream, for example, ama.

Note the number of records, wait approximately 10 seconds, and repeat the query command.

If the number of records	Do
increased from the first query command (billing is working)	step <a href="#">62</a>
did not increase from the first query command (billing is not working)	contact your next level of support

**62** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Upgrading the CPU firmware

### Purpose

Use this procedure to upgrade the CPU firmware after you have upgraded the CPU controller module, you must check the version of the firmware. If the CPUs do not have the current firmware version, you must perform a firmware upgrade. You can also perform this procedure at any time in order to check the status of the CPU firmware.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

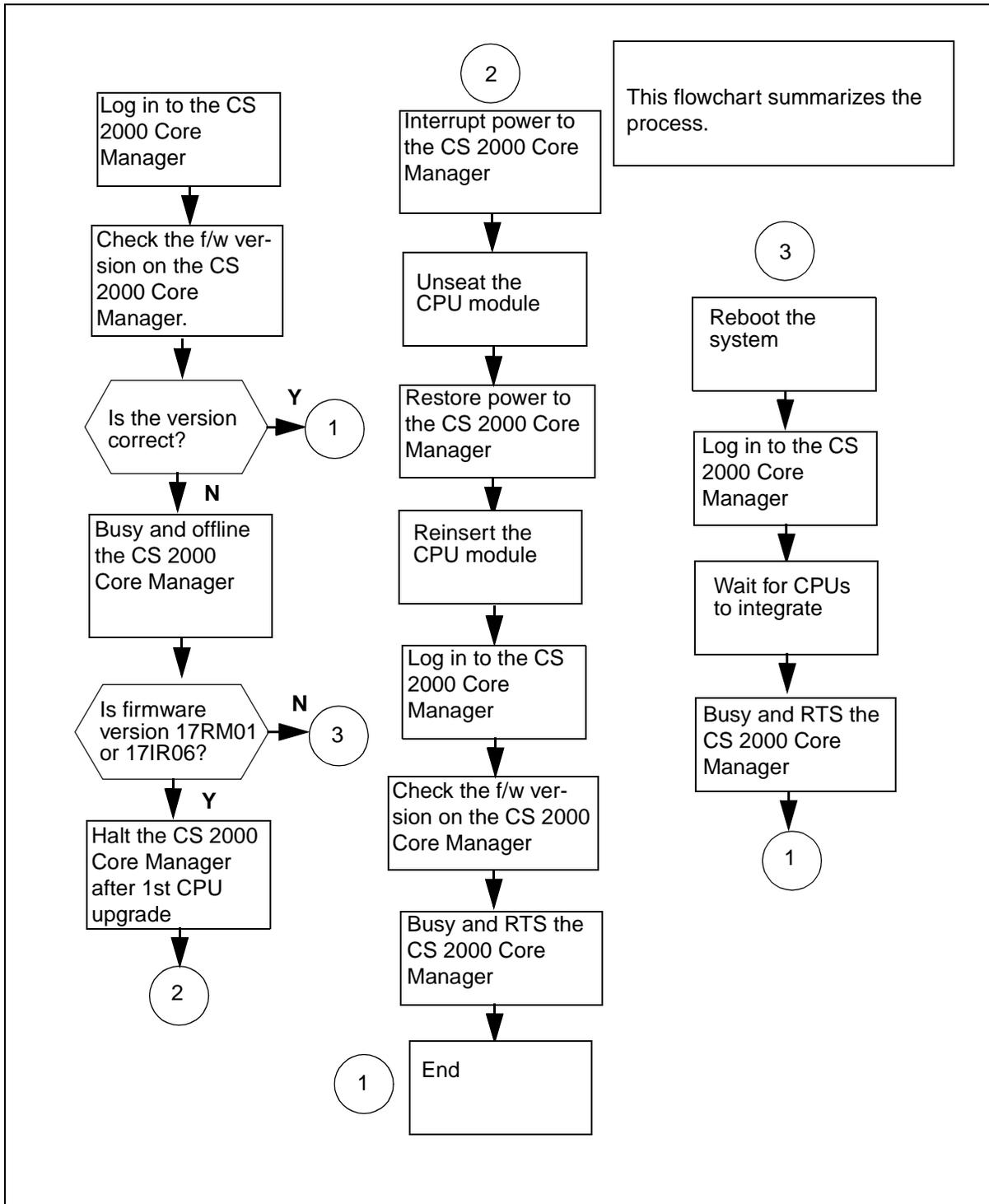
#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

### Procedure

The task flow diagram that follows provides a summary of this process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

**Task flow for upgrading the CPU firmware**



## Procedure

### Upgrading the CPU firmware

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### *At the CS 2000 Core Manager local VT100 console*

- 1 Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Run the firmware process:

**sdmfirmware**

The system runs through the process and indicates whether a firmware upgrade is required. Record the current firmware version.

If the firmware	Do
needs to be upgraded	step <a href="#">3</a>
does not need to be upgraded	step <a href="#">31</a>

#### *At the MAP*

- 3 Access the SDM level:  
**mapci;mtc;appl;sdm**
- 4 Busy the CS 2000 Core Manager:  
**bsy**
- 5 Confirm the busy command:  
**y**
- 6 Take the CS 2000 Core Manager offline:  
**offl**

**At the CS 2000 Core Manager local VT100 console**

- 7 Proceed with the firmware upgrade by pressing the Enter key.

**If the firmware version noted in step 2**

	<b>Do</b>
is 17RM01	step <a href="#">16</a>
is not 17RM01	step <a href="#">8</a>

- 8 Print the instructions displayed on the system, so that you can execute them after the system has rebooted. Also note the CPU number.
- 9 Press the Enter key to reboot the system, and wait for the FX-Bug prompt.
- 10 At the FX-Bug prompt, enter:  
**FX-Bug> switch <cpu> ;h**  
 where  
     <cpu>  
     is the CPU number (0 or 2) from step [8](#)
- 11 Boot the system:  
**FX-Bug> gevboot**
- 12 Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.

**At the CS 2000 Core Manager VT100 console**

- 13 Run the firmware process:  
**sdmfirmware**
- 14 Wait for the CPU modules to integrate.
- 15 Press the Enter key to continue, and go to step [33](#).

**At the CS 2000 Core Manager VT100 console**

- 16 Before you halt the CS 2000 Core Manager, record the CPU that the system has directed you to pull.  
*The system prompts you to halt the CS 2000 Core Manager after the firmware upgrade on one CPU is complete. The system also indicates that you must pull the CPU after the halt is complete.*
- 17 Halt the CS 2000 Core Manager by pressing the Enter key.

- 18** Wait for the halt to complete before continuing the procedure.

If	Do
the system does not halt	step <a href="#">19</a>
halts	step <a href="#">22</a>

- 19** Halt the CS 2000 Core Manager again. Interrupt the reboot process to access the FX-Bug prompt by pressing the Break or Esc key several times.
- 20** When the CS 2000 Core Manager is at the FX-Bug prompt, interrupt the power to the CS 2000 Core Manager.
- 21** Under some circumstances, the CS 2000 Core Manager reboots and does not halt. If this happens, wait for the reboot to complete, log into the CS 2000 Core Manager, and halt the SDM again.

***At the MSP***

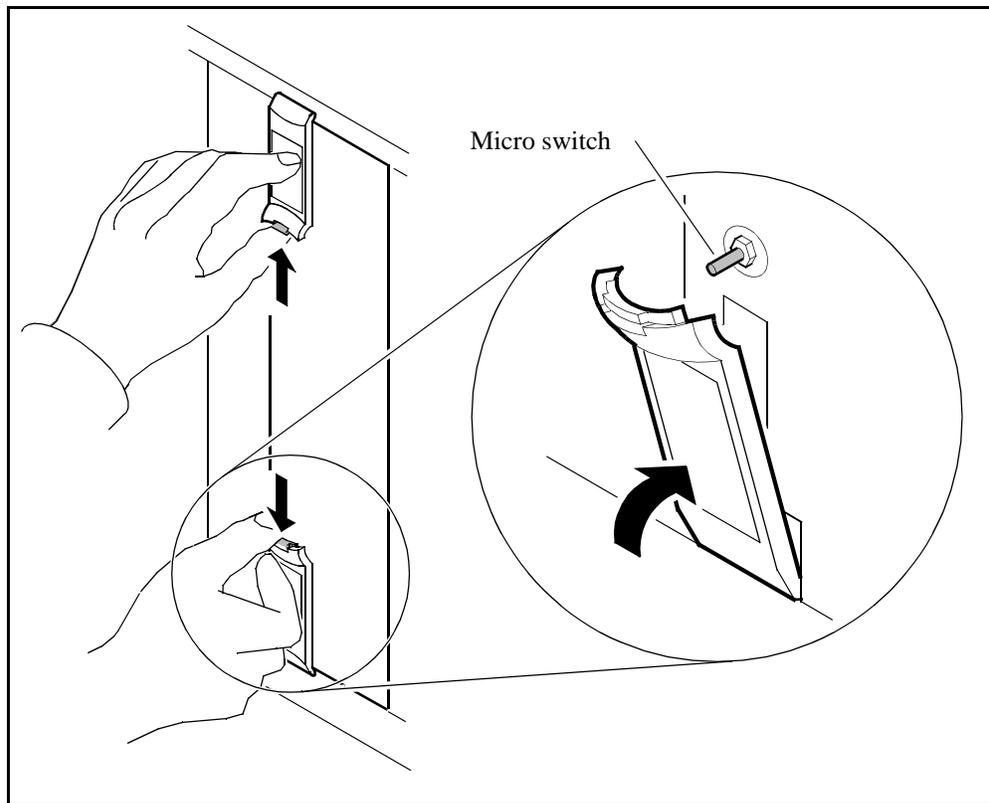
- 22** Interrupt power to the CS 2000 Core Manager by turning off both of the MSP breakers. The MSP breakers, located at the front of the MSP, supply power to the CS 2000 Core Manager.

If your system contains	Do
a main chassis only	turn the top two breakers off
a main chassis and I/O expansion chassis	turn all four breakers off

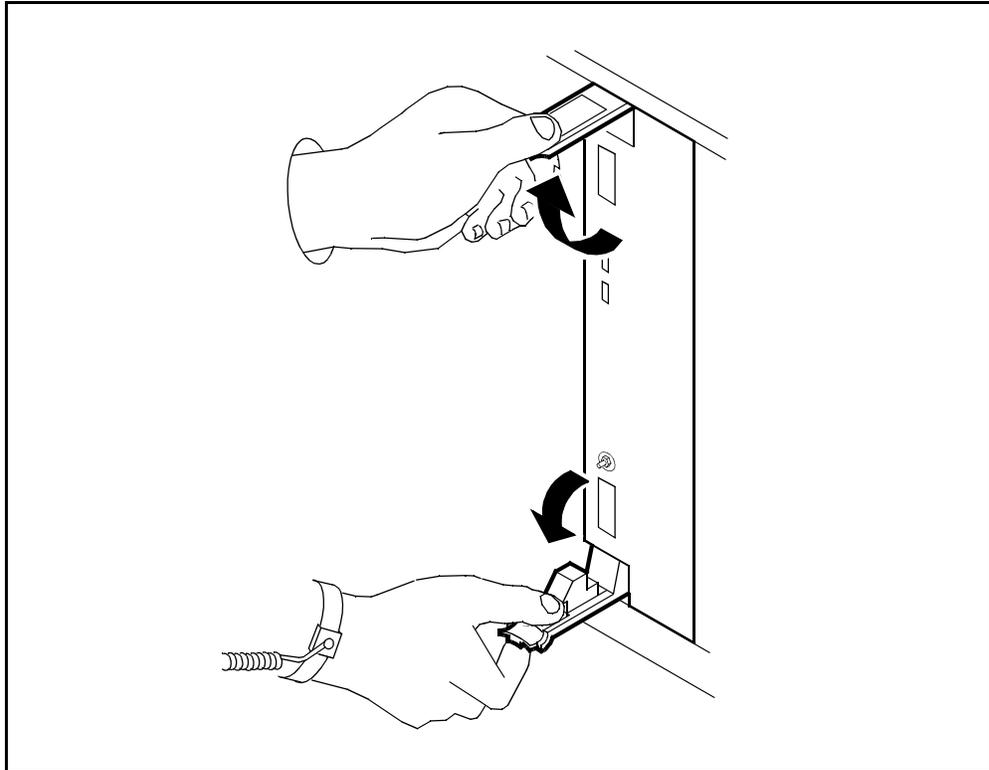
***At the front of the CS 2000 Core Manager***

- 23** Unscrew the thumbscrews located on the top and bottom of the CPU module noted in step [16](#). The thumbscrews are the captive type, and you cannot remove them from the module.

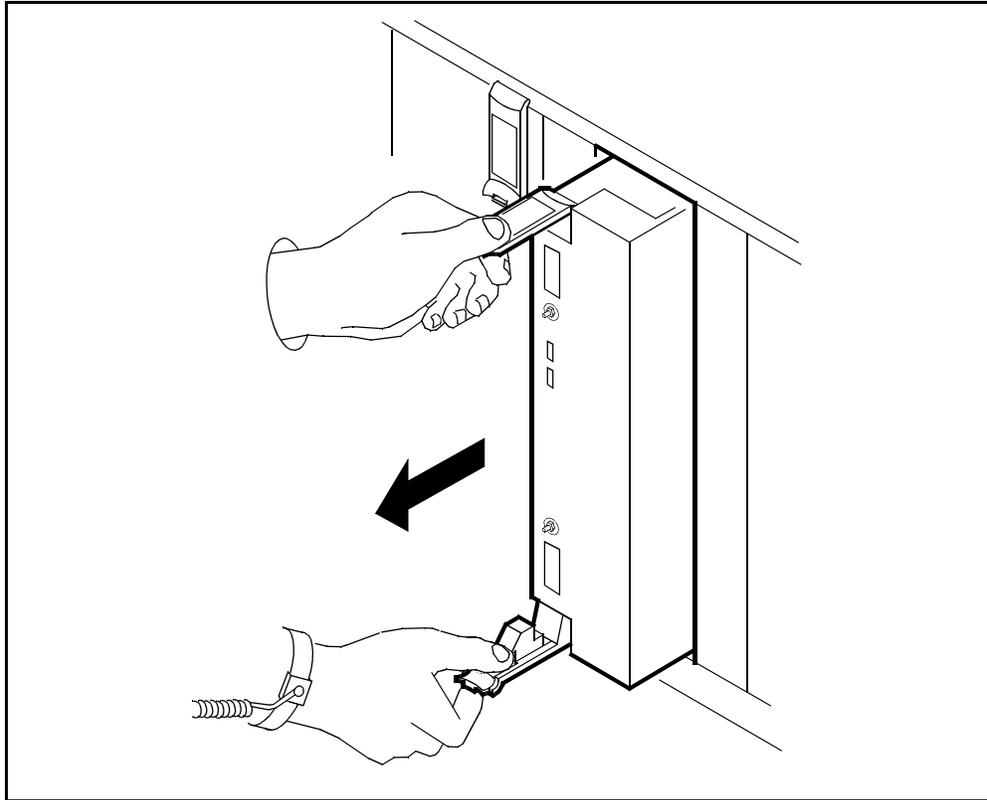
- 24** Depress the tips of the locking levers on the face of the CPU module.



- 25 Open the locking levers on the face of the module by moving the levers outwards.



- 26** While grasping the locking levers, gently pull the module towards you until it protrudes about 2 in. (5 cm) from the CS 2000 Core Manager shelf.



**At the MSP**

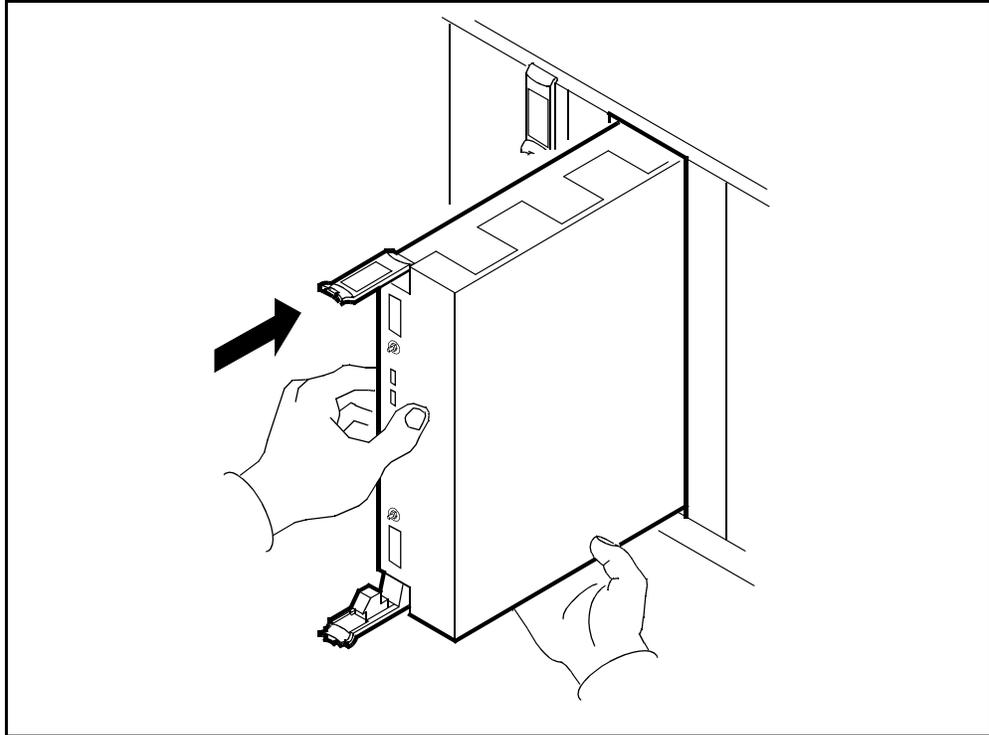
- 27** Restore the power to the CS 2000 Core Manager by turning on the MSP breakers, according to the chassis structure of your system.

If your system contains	Do
a main chassis only	turn the top two breakers on
a main chassis and I/O expansion chassis	turn all four breakers on

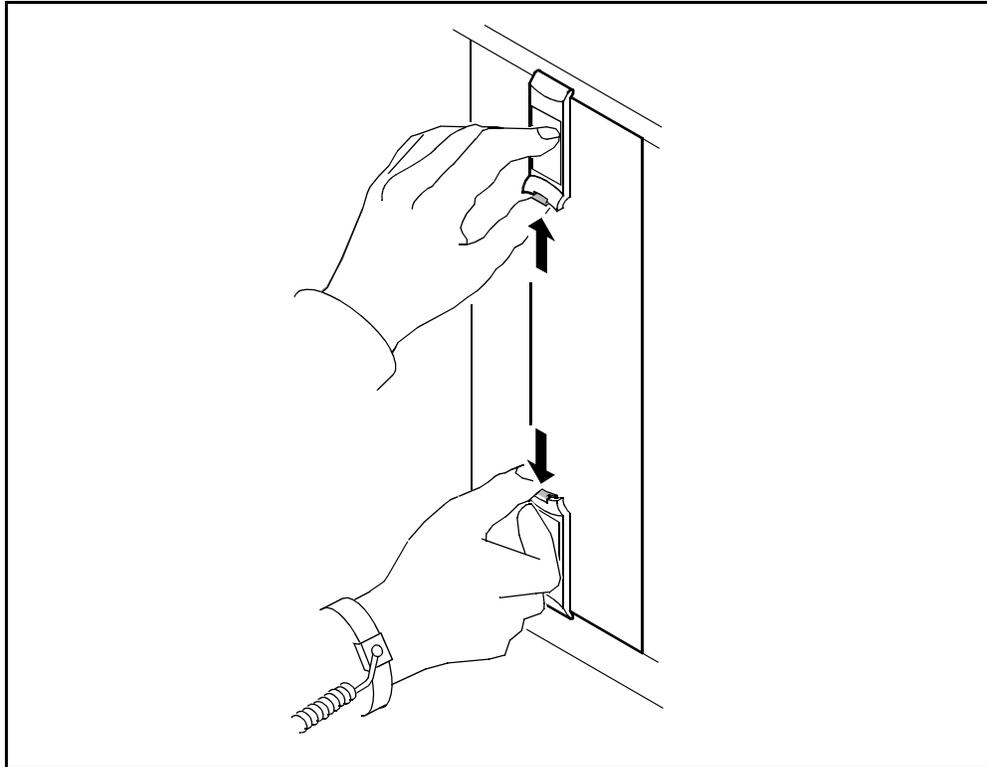
**Note:** Wait at least 15 seconds before re-inserting the pulled CPU.

***At the front of the CS 2000 Core Manager***

- 28** After 15 seconds, gently push the CPU module that you pulled out in step [26](#) back into the slot.



- 29** Close the locking lever to secure the module. Ensure that both the top and bottom micro switches are lined up with the locking levers to seat the module properly.



- 30** Tighten the thumbscrews on the module.

When you put the CPU controller module back into the slot, both LEDs on the module turn on briefly and then off. This action indicates that

- you have seated the module correctly
- the module is receiving power
- the module has passed all self-tests

***At the local VT100 console***

- 31** Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.

*The firmware on the other CPU is upgraded automatically when you log into the CS 2000 Core Manager, dependent on the successful completion of step [7](#), followed by steps [16](#) through [30](#).*

- 32** Once the system indicates that the CPU modules have fully integrated with the CS 2000 Core Manager, and that they have

the correct firmware, press the Enter key to continue the procedure.

**33** Return the CS 2000 Core Manager to service:

**rts**

**34** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Installing an X.25 controller module and personality module

### Purpose

Use this procedure if you have an MFIO hardware module and want to upgrade the CS 2000 Core Manager to incorporate an X.25 controller module (NTRX50FY) and an X.25 personality module (NTRX50FZ).

### Prerequisites

You must be a user authorized to perform config-admin actions.

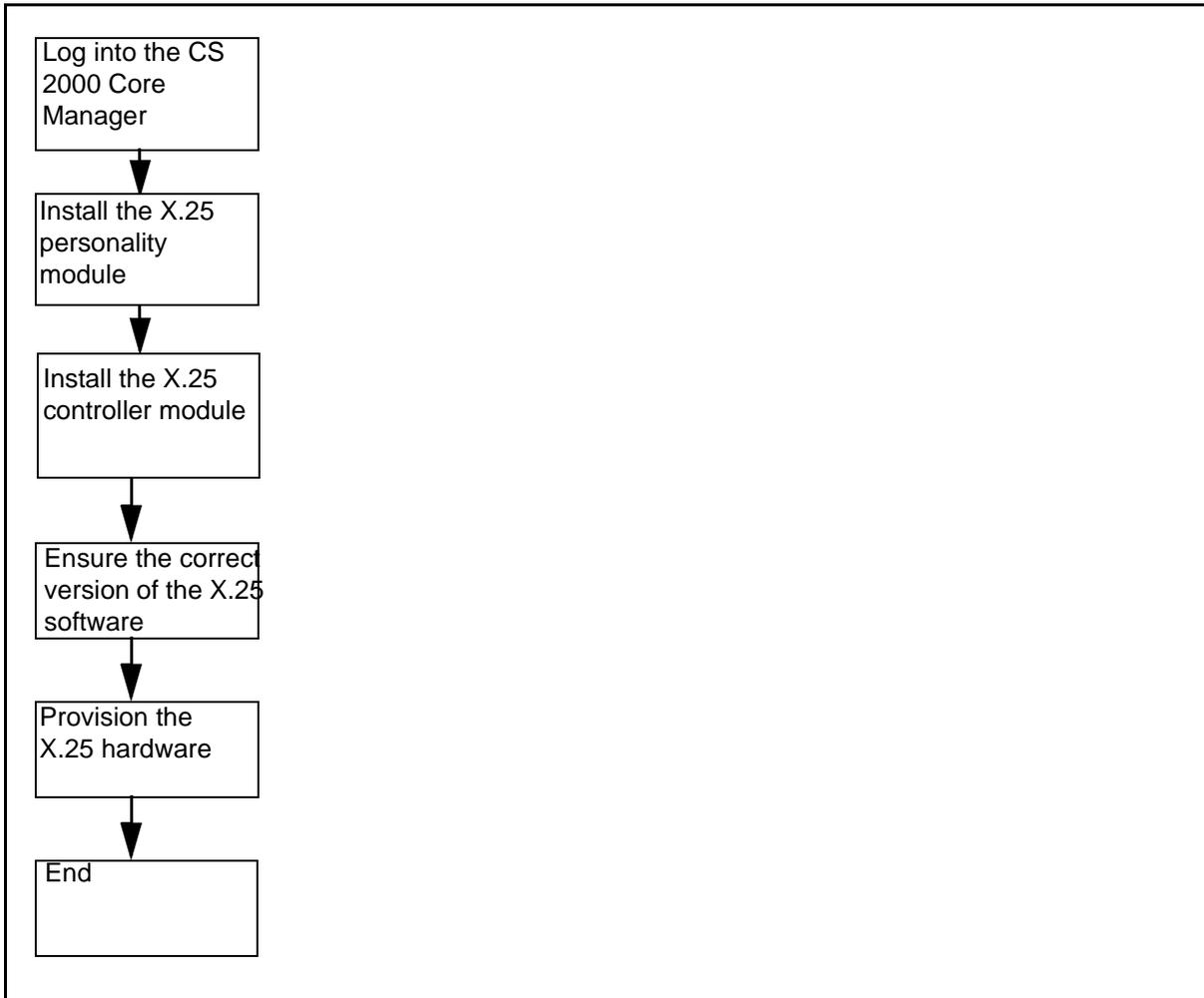
For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

### Task flow diagram

The task flow diagram that follows provides a summary of this process. Use the instructions in the procedures that follow the flowchart to perform the tasks.

**Task flow for Installing an X.25 controller module and personality module****Procedures****Installing an X.25 controller module and personality module****ATTENTION**

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

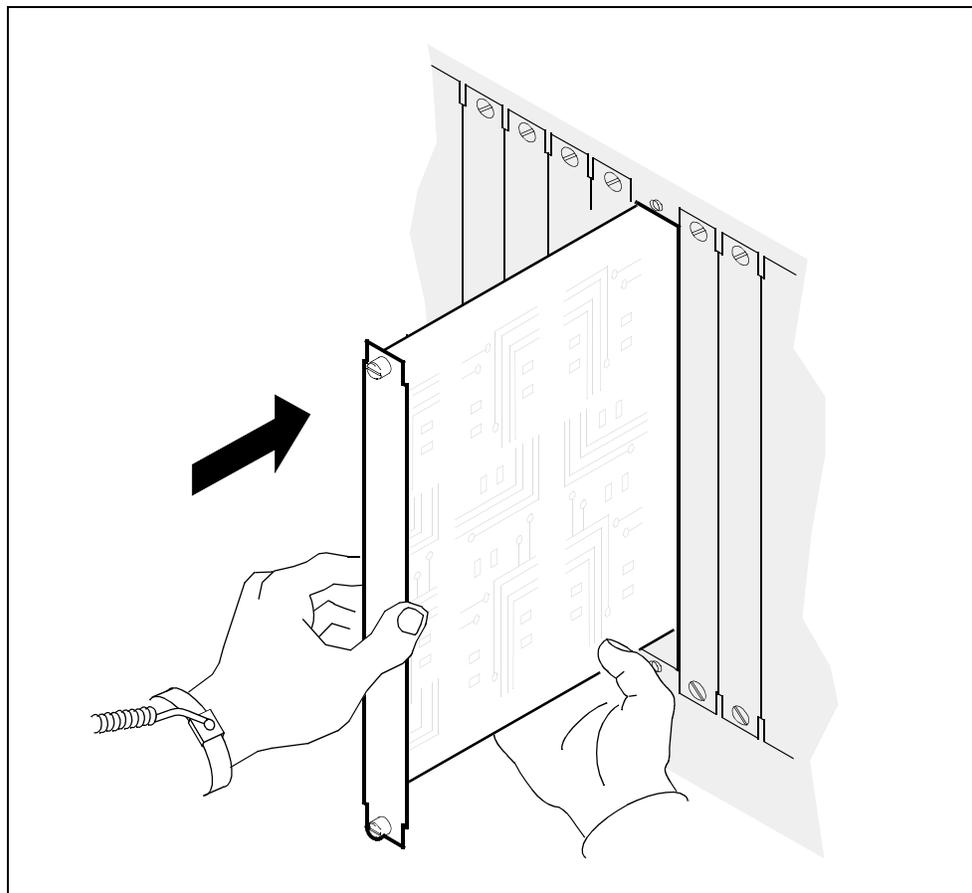
**At the back of the CS 2000 Core Manager****1****WARNING**

Static electricity damage

Wear an electrostatic discharge (ESD) grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

Insert the new X.25 personality module into the CS 2000 Core Manager shelf.

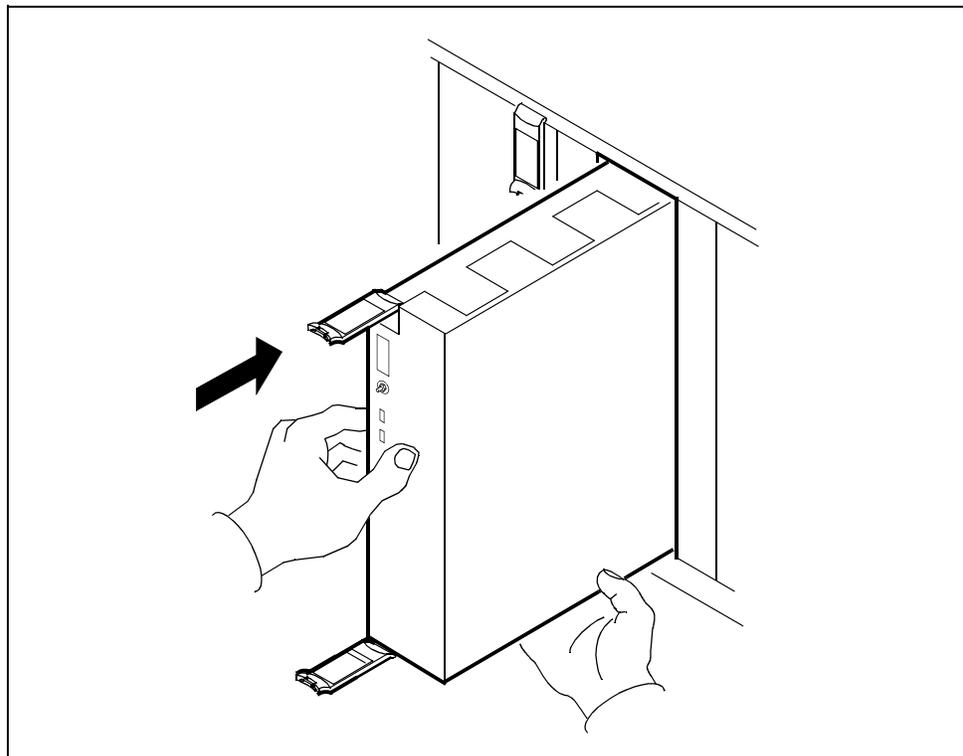
- 2** Gently slide the X.25 personality module into the shelf until it is fully inserted.



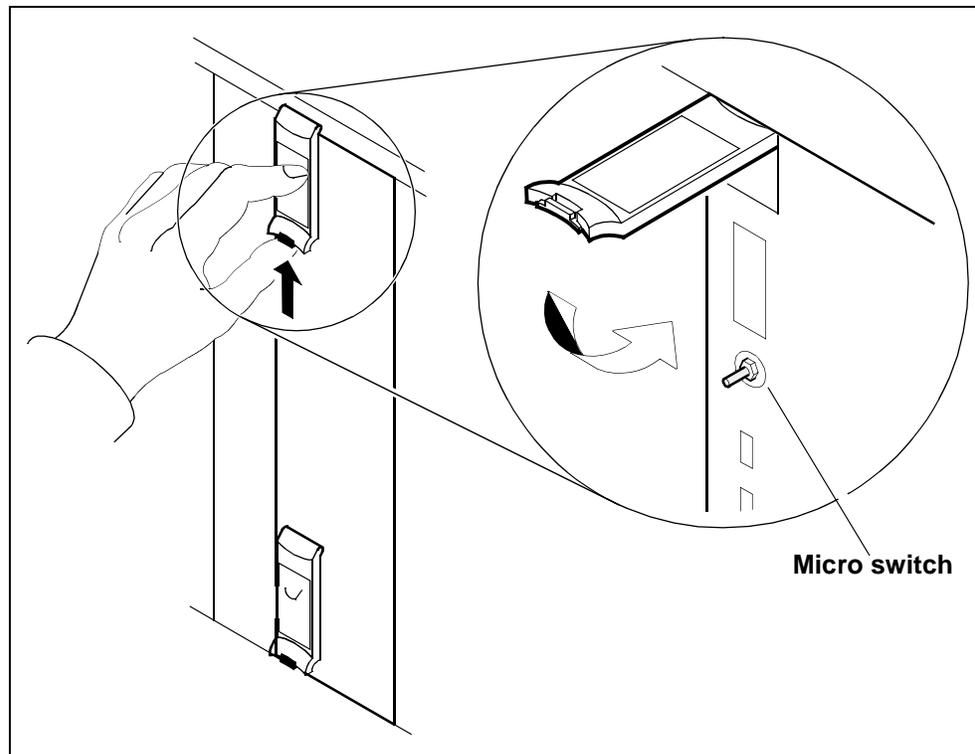
- 3** Tighten the thumbscrews at the top and bottom of the X.25 personality module.

***At the front of the CS 2000 Core Manager***

- 4 Put on an electrostatic discharge grounding wrist strap.
- 5 Remove the filler plates covering the slots where you will install the new modules.
- 6 Determine whether you are installing a single X.25 module or two X.25 controller modules as a logical pair in either the main or expansion chassis.
  - If you are installing a single X.25 module, you must install it on domain 0.
  - If you are installing an X.25 pair, the two slots used must be exactly 8 slot positions apart (for example, slots 1 and 9, or 2 and 10) and both modules in a logical pair must have the same PEC.
- 7 Insert the X.25 controller module(s) into the CS 2000 Core Manager shelf. Gently slide the module into the shelf until it is fully inserted.



- 8 Close the locking lever to secure the module. Ensure that the top micro switch is lined up with the locking lever to seat the module properly.



- 9 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Provisioning the X.25 hardware

#### **ATTENTION**

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### ***At the local or remote VT100 console***

- 1 Log in to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Ensure that the latest version of the X.25 software is available on the system. Insert the tape labeled: for the new software load,

into slot 2 and wait until the tape drive stabilizes (yellow LED is off) before you proceed.

- 3 Access the maintenance interface:

```
sdmmtc
```

- 4 Display the contents of the tape:

```
apply 0
```

- 5 Install the X.25 software:

```
apply bundle x25
```

- 6 Confirm the command:

```
y
```

*Example response:*

```
Command completed with no errors
```

- 7 Access the hardware level of the Maintenance Interface:

```
hw
```

- 8 Add the X.25 hardware:

```
add <chassis> <slot> <PEC> [SIMPLEX]
```

*where*

**<chassis>**

is sdmm for the main chassis, and sdme for the expansion chassis

**<slot>**

is the slot number of the X.25 card in domain 0

**<PEC>**

is the PEC code of the X.25 controller module (NTRX50FY)

**[SIMPLEX]**

is an optional parameter. Enter this parameter if you are installing only one X.25 module on the system.

*Example response:*

```
Add sdme 5 ntrx50fy - Command complete.
```

- 9 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Removing a standalone X.25 interface

### Purpose

Use this procedure to remove the following X.25 hardware modules from the CS 2000 Core Manager:

- NTRX50FY - X.25 controller module
- NTRX50FZ - X.25 personality module



#### CAUTION

If you delete only one X.25 controller module, it must be the X.25 controller module in domain 1.

### Prerequisites

You must be a user authorized to perform config-admin actions.

To perform this procedure, you must obtain the following information:

- the chassis (SDMM for main chassis; SDME for expansion chassis) for the installed X.25 module(s)
- the slot number of the X.25 controller module(s)

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

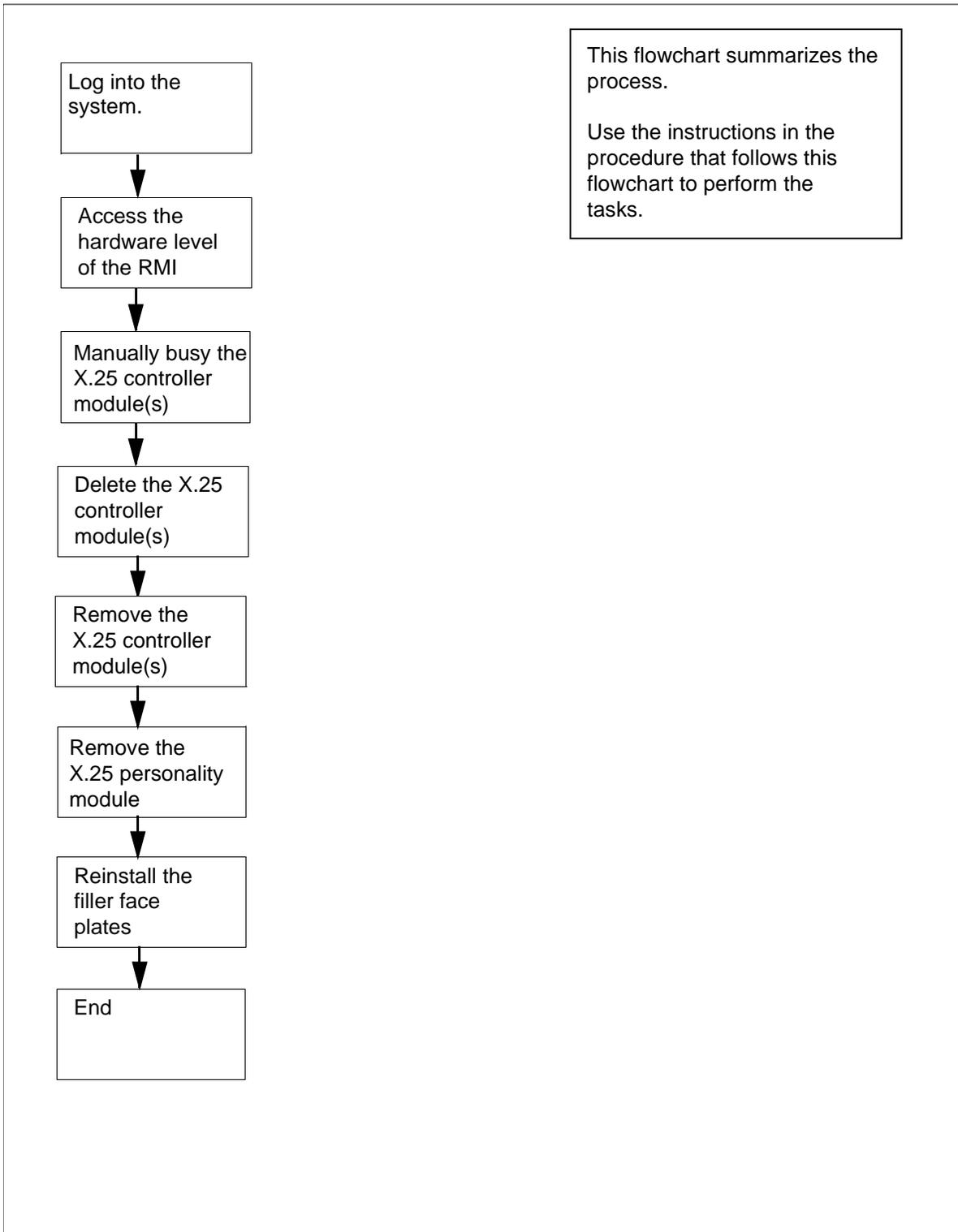
#### Other activities related to using this procedure

Procedure	Document
Logging in to the CS 2000 Core Manager	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611
Displaying actions a user is authorized to perform	<i>CS 2000 Core Manager Security and Administration</i> , NN10170-611

### Task flow diagram

The following task flow diagram provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

## Task flow for Removing the standalone X.25 interface



## Procedure

### Removing a standalone X.25 interface

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### *At the local or remote VT100 console*

- 1 Log in to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Access the top menu level of the remote maintenance interface (RMI):

```
sdmmtc
```

- 3 Access the hardware (Hw) menu level:

```
hw
```

- 4



#### CAUTION

Deleting an X.25 controller module requires you to put the module into a ManB state. These modules will not be in service. If you are deleting only one X.25 module, put only the module in domain 1 in the ManB state.

Manually busy the module in each domain:

```
bsy <domain> X25
```

*where*

**<domain>**

is the domain (0 or 1) of the X.25 controller module that you are removing

Example: `bsy 1 X25`

*Example response:*

```
Hardware Bsy - Domain 1 Device X25
This action will bring service down for all X.25
Ports in I/O domain 1.
```

```
Do you wish to proceed?
Please confirm ("YES", "Y", "NO", "N"):
```

**5** Confirm the Bsy command:

**y**

*Example response:*

```
Hardware Bsy : Command submitted. Hardware Bsy
: Domain 1 Device X25.
```

**6** When the Bsy command is finished, observe that the message: `Please wait`, along the command confirmation disappear. The status of the domain transitions from initiated to submitted and finally to complete.

*Example response:*

```
Hardware Bsy : Domain 1 Device X25 - Command
complete.
```

**7** Use the following table to determine your next step.

If	Do
you have not yet manually busied the module(s) you wish to delete	step <a href="#">4</a>
you have manually busied the module(s) you wish to delete	step <a href="#">8</a>

**Note:** After you see the response to the Bsy command, the X.25 controller module state changes to M at the hardware menu level of the RMI.

**8** Use the Locate command to determine the chassis and slot number of the module to delete. Use the Enter key to scroll through the display:

**locate**

*Example response:*

```
Site Flr RPos Bay_id Shf Description Slot Eq
PEC
```

```
HOST 00 00 CSDM SDME X25(0) 05
NTRX50FY FRNT HOST 00 00 CSDM SDME
X25 05 NTRX50FZ BACK HOST 00 00 CSDM
SDME X25(1) 13 NTRX50FY FRNT HOST 00 00
CSDM SDME X25 13 NTRX50FZ BACK
```

**Note:** The example shown only displays part of the information generated from the Locate command.

**9** Delete the module:

```
delete <chassis> <slot> [SIMPLEX]
```

where

**<chassis>**

is the chassis where the module is located (SDMM for the main chassis or SDME for the I/O expansion chassis)

**<slot>**

is the slot number (from 1 to 16) where the module is located

**[SIMPLEX]**

is an optional parameter. Enter this parameter if you are deleting only one X.25 module from the system.

**ATTENTION**

If you do not specify SIMPLEX, the module in the corresponding slot of the other domain is also deleted.

Example 1: Deleting only one module

```
delete sdme 13 SIMPLEX
```

*Example 1 response:*

```
Module in slot 13 of SDME will be deleted.
X.25(1) will be deleted.
Do you wish to proceed?
Please confirm ("YES", "Y", "NO", "N"):
```

Example 2: Deleting both modules

```
delete sdme 5
```

*Example 2 response:*

```
Module in slot 5 of SDME will be deleted.
X.25(0) will be deleted. Module in slot 13 of
SDME will also be deleted. X.25(1) will be
deleted.
```

Do you wish to proceed?  
Please confirm ("YES", "Y", "NO", "N"):

- 10** Confirm that this is the module you want to delete:

**Y**

*The delete command can take several minutes to complete. When the command is finished, the following message is displayed:*

*Example 1 response*

*If you are deleting both modules, after a few seconds the module disappears from the listing shown at the hardware menu level of the RMI. If you are deleting one module, domain 1 will show a dash at the hardware menu level of the RMI.*

Delete sdme 13 SIMPLEX - Command complete.

*Example 2 response*

*Delete sdme 5 - Command complete.*

### **At the front of the CS 2000 Core Manager**

- 11** Wear an electrostatic discharge grounding wrist strap and connect the clip to the chassis ground.

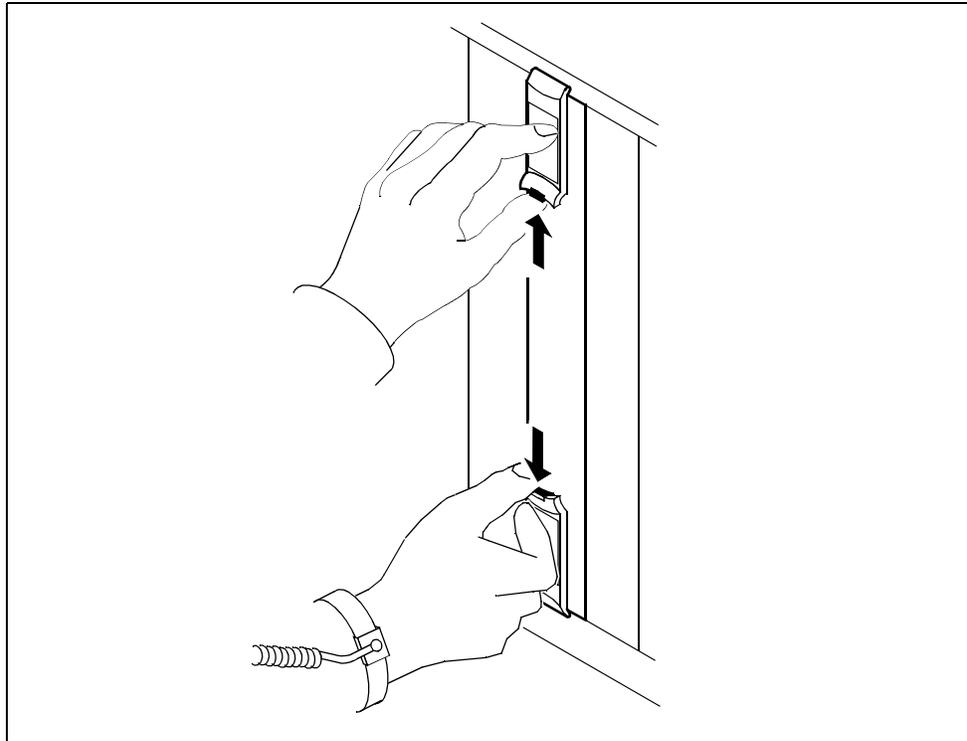


#### **CAUTION**

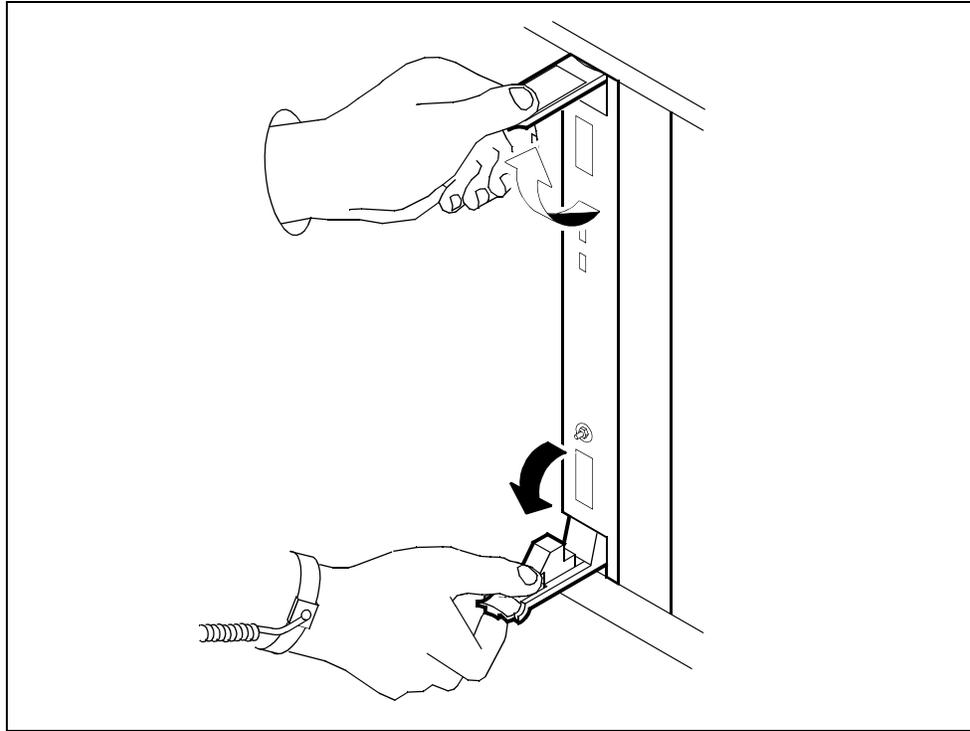
##### **Damage from Static Electricity**

Wear an ESD grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

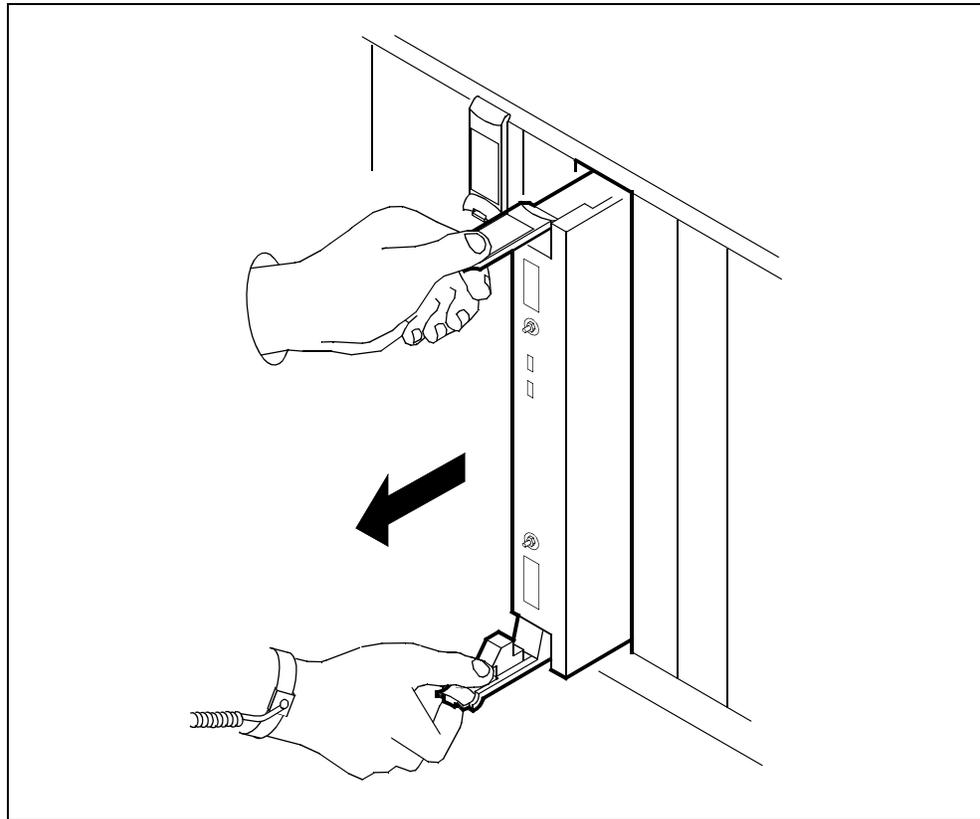
- 12** Depress the tips of the locking levers on the face of the X.25 controller module.



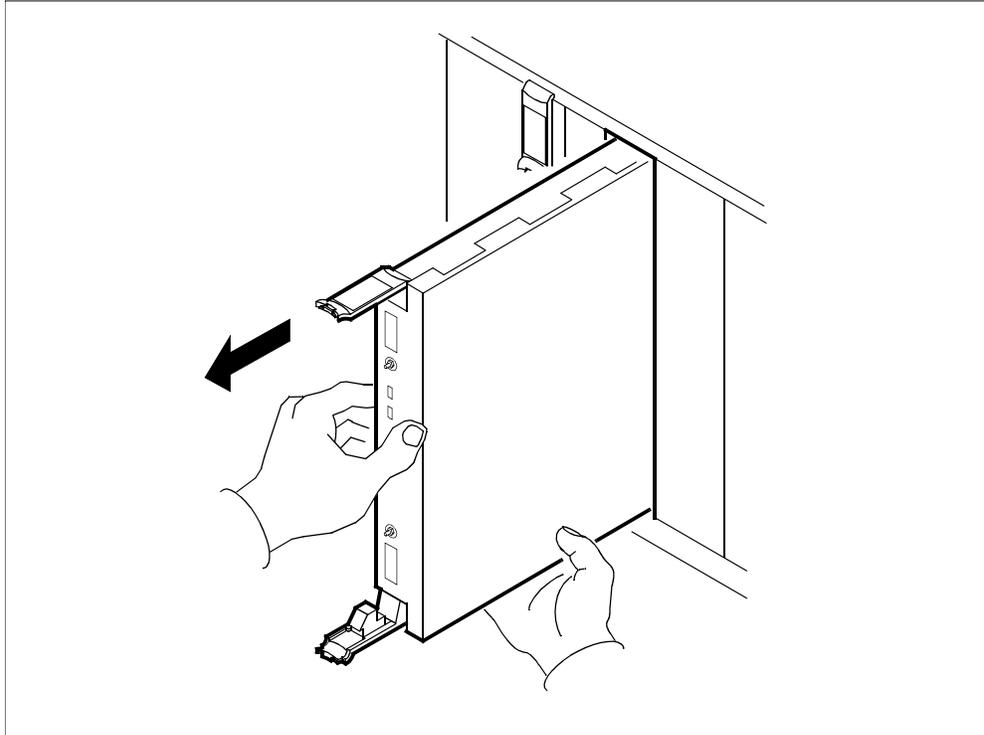
- 13 Open the locking levers on the face of the module by moving the levers outwards.



- 14** While grasping the locking levers, gently pull the module towards you until it protrudes about 2 in. (5 cm) from the shelf.



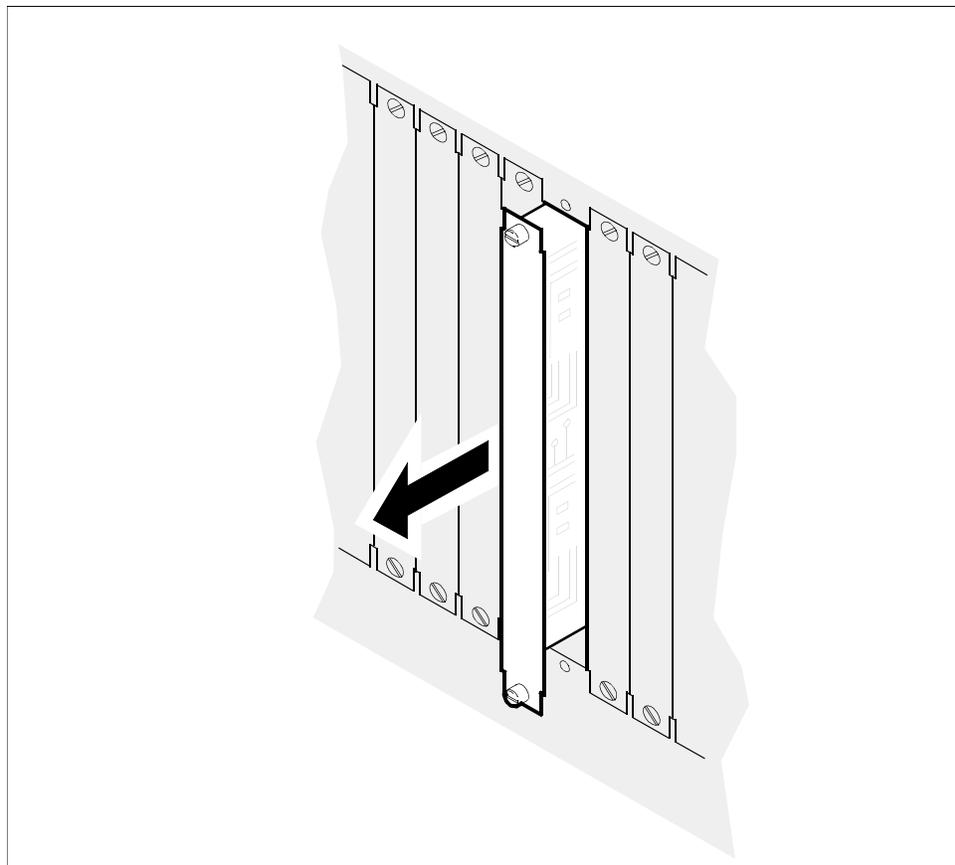
- 15** Hold the module by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



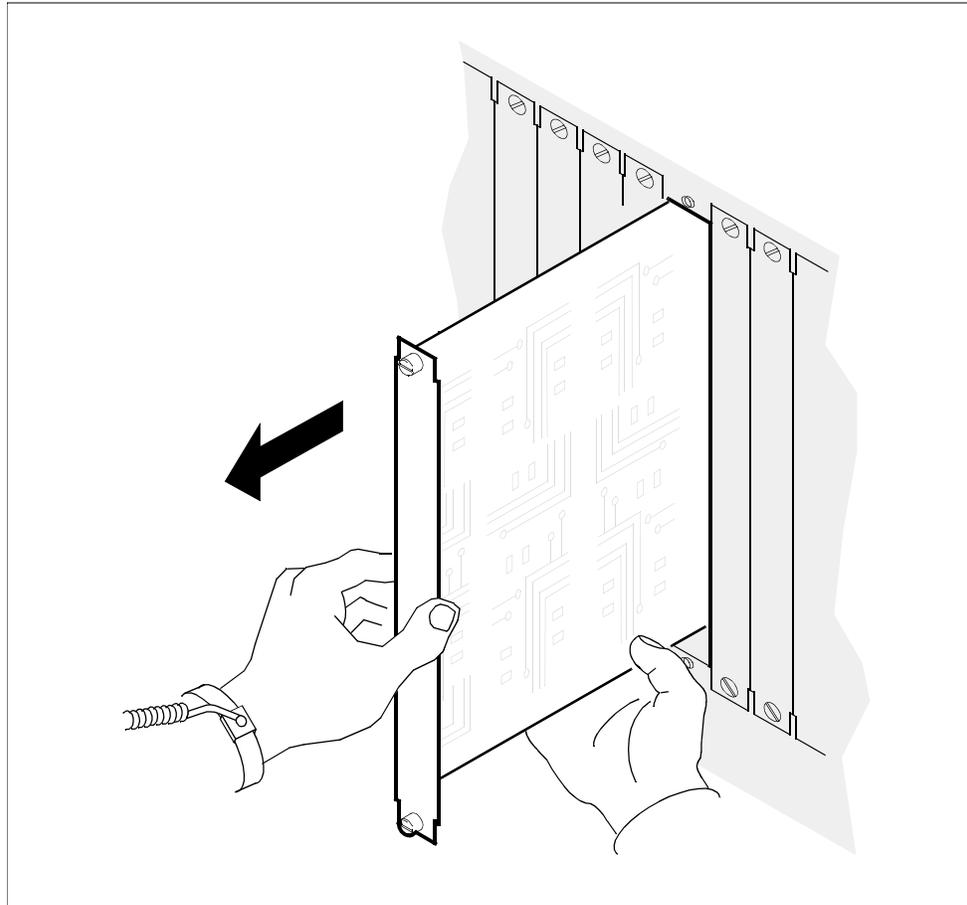
- 16** Place the module you have removed in an ESD protective container.

**At the rear of the CS 2000 Core Manager**

- 17 Disconnect one or both X.25 modem connection cables from the X.25 personality module, depending on whether the X.25 module is commissioned to use one or both of its X.25 ports.
- 18 Loosen the two captive type thumbscrews located at the top and the bottom of the X.25 personality module.  
**Note:** The captive type thumbscrews cannot be removed from the module.
- 19 While grasping the thumbscrews, gently pull the X.25 personality module towards you until it protrudes about 2 in (5 cm) from the shelf.



- 20** Hold the X.25 personality module by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



- 21** Place the X.25 personality module you have removed in an ESD protective container.
- 22** Reinstall the filler plates covering the slots from which you removed the modules.
- 23** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

---

## Removing X.25 from your system

---

### Purpose

This procedure only applies to SYNC X25 modules (standalone), and does not apply to X25 as part of the UMFIOs. The process of removing X.25 from the system has three phases:

- Removing the X.25 modules from the system (this procedure)
- Deleting the X.25 software (this procedure)
- Removing the X.25 hardware modules from the CS 2000 Core Manager (refer to the procedure [Removing a standalone X.25 interface on page 234](#))

### Procedures

#### Removing X.25 modules from the system

##### *At the CS 2000 Core Manager*

1 Log in to the CS 2000 Core Manager as the root user.

2 Stop the X.25 daemon:

```
# /etc/rc.psx25 stop
```

3 Take the X.25 controller module offline:

```
# modchange -o1 SYNC-<domain_num> -y
```

where

##### **<domain\_num>**

is the domain number (0 or 1) of the X.25 controller module that you are taking offline

- 0 if the module is located in one of the slots from in one of the slots from
  - 1 to 6 on the main chassis, or
  - 1 to 8 on the expansion chassis
- 1 if the module is located in one of the slots from in one of the slots from
  - 10 to 16 on the main chassis, or
  - 9 to 16 on the expansion chassis

Example of command:

```
# modchange -o1 SYNC-0 -y
```

*The system responds with warnings about the items that are about to go offline:*

Warning: This request will not allow SYNC-0 to stay online.

Warning: This request will not allow pgen-0 to stay online.

Warning: This request will not allow SYNC-PM to stay online.

**4** Take the X.25 personality module offline:

```
# modchange -ol SYNC-PM-<domain_num>
```

*where*

**<domain\_num>**

is the domain number (0 or 1) of the X.25 personality module that you are taking offline.

- 0 if the module is located in one of the slots from in one of the slots from
  - 1 to 6 on the main chassis, or
  - 1 to 8 on the expansion chassis
- 1 if the module is located in one of the slots from in one of the slots from
  - 10 to 16 on the main chassis, or
  - 9 to 16 on the expansion chassis

Example of command:

```
# modchange -ol SYNC-PM-0
```

**5** Take the logical device offline:

```
# modchange -ol pgen<domain_num>
```

*where*

**<domain\_num>**

is the domain number (0 or 1) of the logical device that you are taking offline

- 0 if the module is located in one of the slots from in one of the slots from
  - 1 to 6 on the main chassis, or
  - 1 to 8 on the expansion chassis
- 1 if the module is located in one of the slots from in one of the slots from
  - 10 to 16 on the main chassis, or
  - 9 to 16 on the expansion chassis

Example of command:

- ```
# modchange -ol pgen0
```
- 6** Delete the logical device:
- ```
# rmdev -dRI pgen<domain_num>
```
- where
- <domain\_num>**  
is the domain number (0 or 1) of the logical device that you are deleting:
- 0 if the module is located in one of the slots from in one of the slots from
    - 1 to 6 on the main chassis, or
    - 1 to 8 on the expansion chassis
  - 1 if the module is located in one of the slots from in one of the slots from
    - 10 to 16 on the main chassis, or
    - 9 to 16 on the expansion chassis

Example of command:

```
# rmdev -dRI pgen0
```

*Example response:*

```
pgen0 deleted
```

- 7** Delete the X.25 controller module:
- ```
# rmdev -dRI SYNC-<domain_num>
```
- where
- <domain\_num>**  
is the domain number (0 or 1) of the controller module that you are deleting:
- 0 if the module is located in one of the slots from in one of the slots from
    - 1 to 6 on the main chassis, or
    - 1 to 8 on the expansion chassis
  - 1 if the module is located in one of the slots from in one of the slots from
    - 10 to 16 on the main chassis, or
    - 9 to 16 on the expansion chassis

Example of command:

```
# rmdev -dRI SYNC-0
```

*Example system response:*

```
SYNCPM-0 deleted  
SYNC-0 deleted
```

- 8** Repeat steps [3](#) through [7](#) for each X.25 module installed in the system.

**9**



**CAUTION**

Loss of service

Do not delete the X.25 software until you have removed all X.25 modules from the system using steps [3](#) through [7](#).

Delete the X.25 software:

```
# /usr/lpp/psx25/tmp/psx25_remove
```

*The system can take several minutes to remove X.25 software. During this time the screen can display messages indicating that filesets are being removed from the system. The command prompt appears when all X.25 software is removed.*

- 10** Remove all X.25 hardware installed on the system using procedure [Removing a standalone X.25 interface on page 234](#).
- 11** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

---

## Adding I/O controller modules

---

### Purpose

Use this procedure to add one of the following hardware modules to the CS 2000 Core Manager:

- NTRX50FU - I/O controller module with two 2-Gbyte disk drives and Ethernet
- NTRX50GP - I/O controller module with two 4-Gbyte disk drives and Ethernet
- NTRX50NL - I/O controller module with two 36-Gbyte disk drives and Ethernet
- NTRX50NY - X.25 controller module

### Application

I/O controller modules do not require LAN personality modules (NTRX50FS) installed at the back of the CS 2000 Core Manager except for the mandatory NTRX50GN I/O controller modules located in slots 2 and 3, and 13 and 14.

#### Slot positions

I/O controller modules can be added to slots 4 and 5, and 15 and 16, of the CS 2000 Core Manager main chassis, and added to unoccupied slots in the I/O expansion chassis.

All available slots can be used in the I/O expansion chassis to install two I/O controller modules as a logical pair. However, the left slot position of the left I/O controller module must be 8 slot positions apart from the left slot position of the right I/O controller module of the pair.

For example, if the left I/O controller module of the pair occupies slots 1 and 2, the right I/O controller module must occupy slots 9 and 10. Both modules in a logical pair must have the same PEC.

#### LAN personality module

The rear LAN personality module I/O controller module must occupy the lower number of the two rear slots that are associated with the front module. For example, if the new I/O controller module occupies front slots 4 and 5, its associated LAN personality module must be installed in rear slot 4. The unused rear slots remain covered by filler plates.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

### Other activities related to using this procedure

| Procedure  | Document  |
|--|---|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

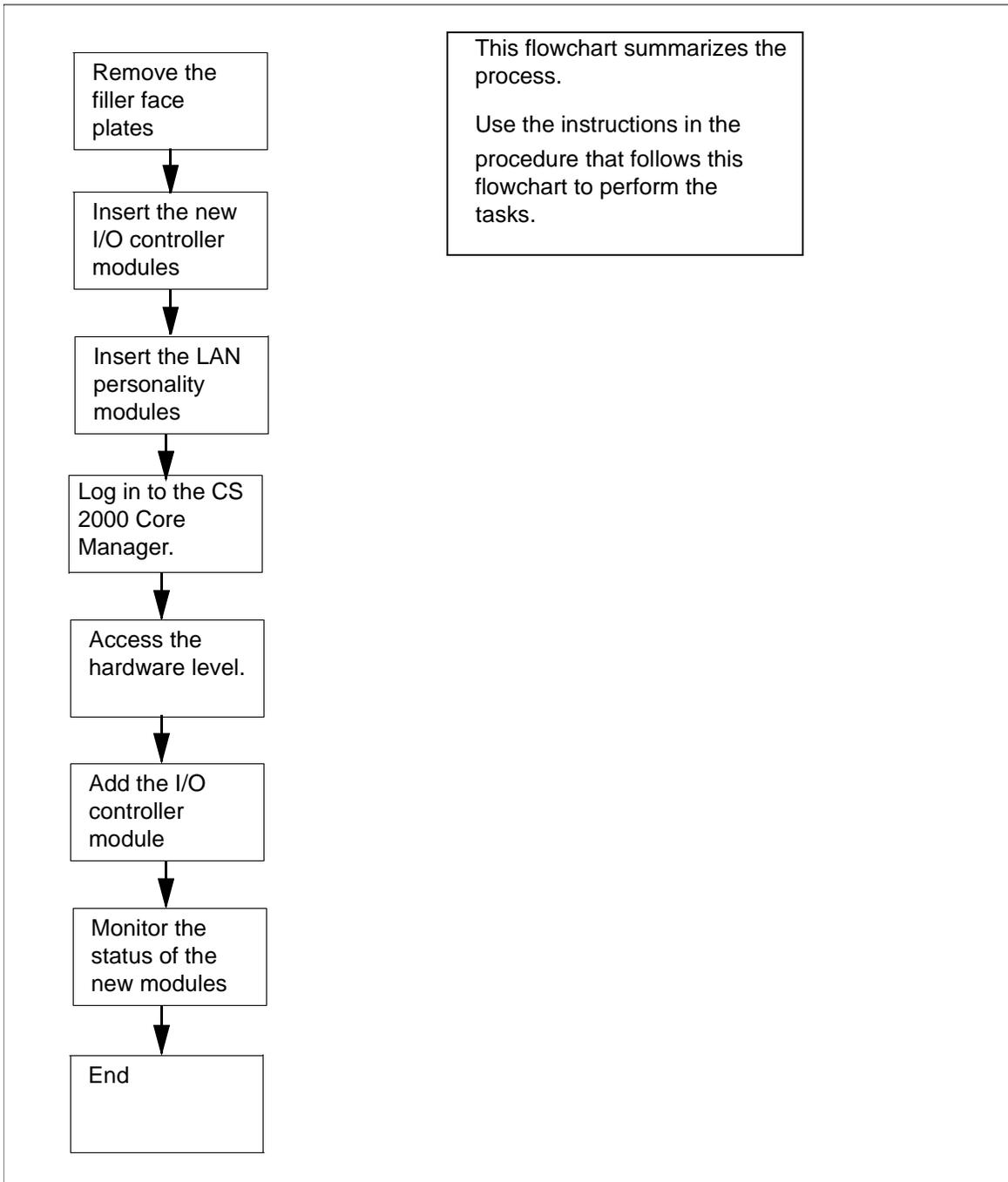
To perform this procedure, you must have the following information:

- the chassis type (SDMM for a main chassis; SDME for an I/O expansion chassis) used for housing the modules
- the I/O controller module's slot number (from 1 to 16)
- the I/O controller module's product engineering code (PEC)

## Procedure

The following flowchart provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the task.

## Task flow for Adding I/O controller modules



## Procedure

### Adding I/O controller modules

#### **ATTENTION**

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### ***At the front of the CS 2000 Core Manager***

- 1 Wear an ESD grounding wrist strap connected to the C28B cabinet when handling a module.



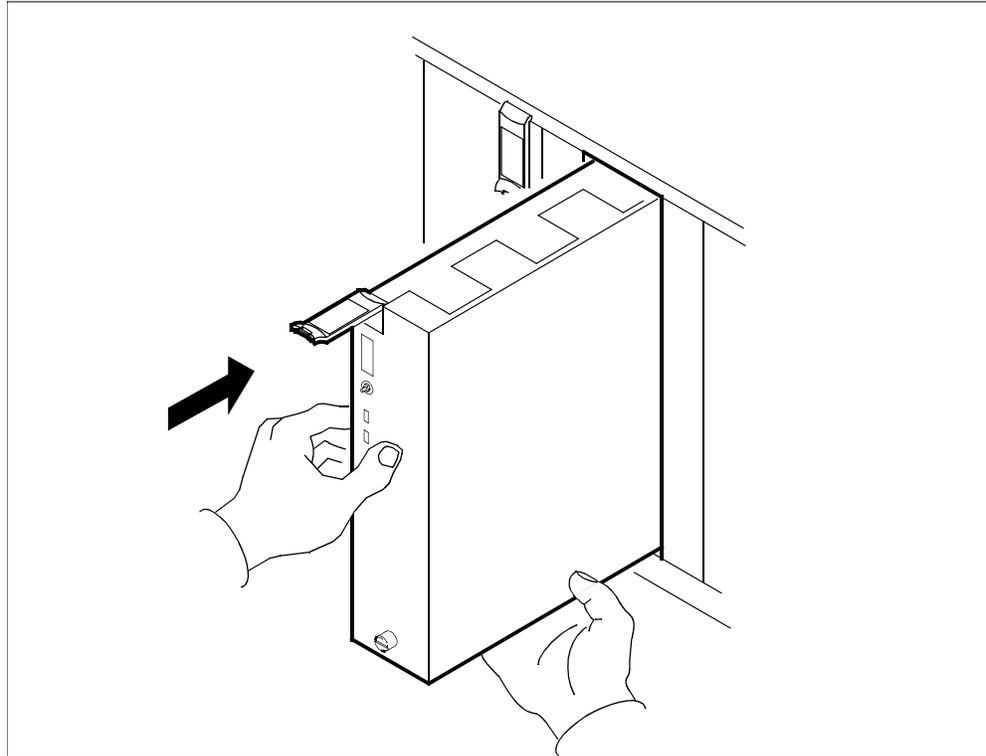
#### **WARNING**

**Static electricity damage**

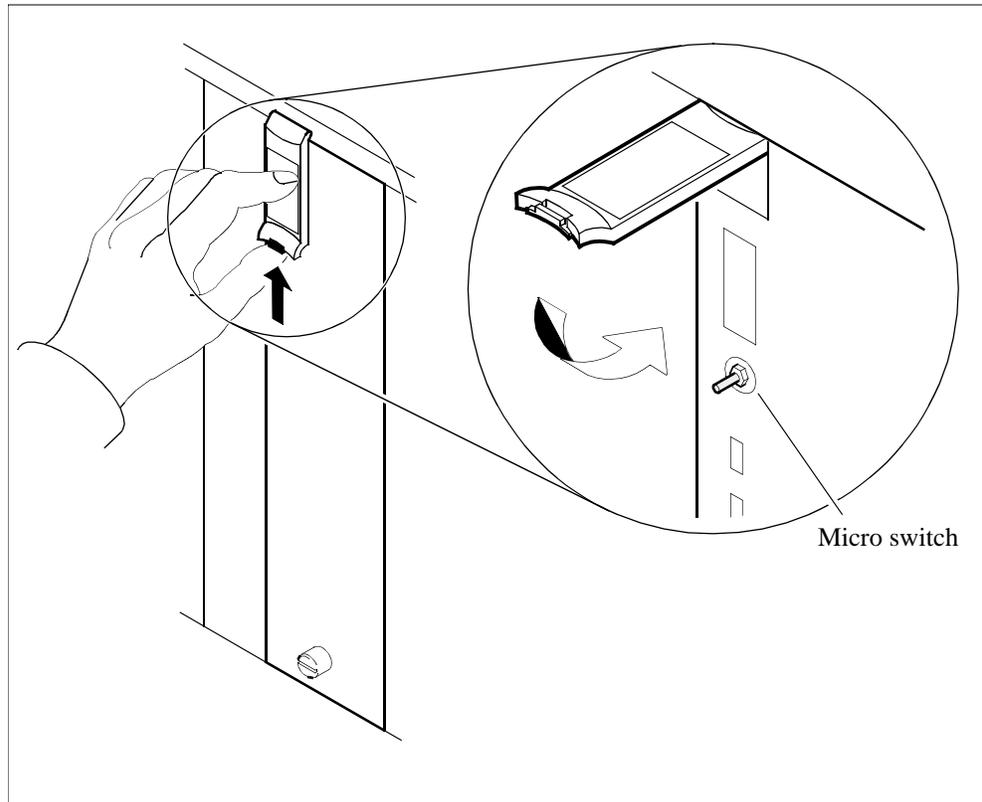
Wear an ESD grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

- 2 Remove the filler plates covering the slots in which you will install the new modules.

- 3 Insert the replacement module into the CS 2000 Core Manager shelf.
- 4 Gently slide the module into the shelf until it is fully inserted.



- 5** Close the locking lever to secure the module. Ensure that the top micro switch is lined up with the locking lever to properly seat the module.

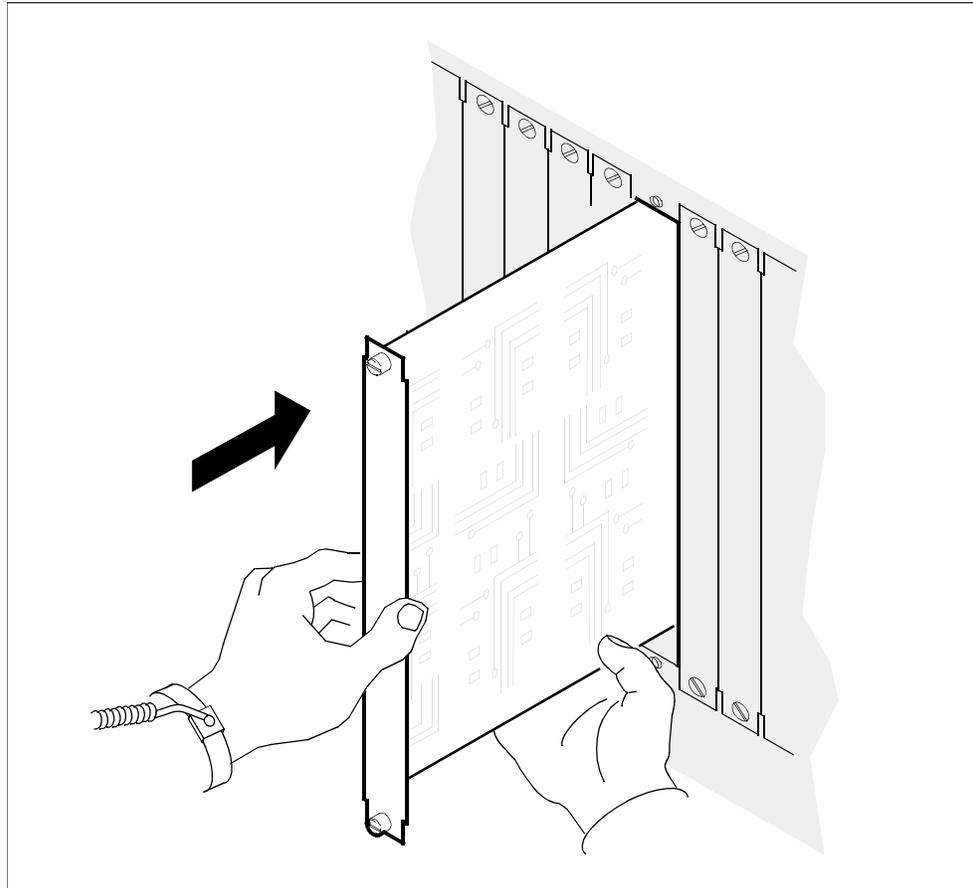


- 6** Tighten the thumbscrews on the module.

| If you  | Do                      |
|---|-------------------------|
| need to install a LAN personality module        | step <a href="#">7</a>  |
| do not need to install a LAN personality module | step <a href="#">10</a> |

**At the back of the CS 2000 Core Manager**

- 7 Insert the new LAN personality module into the CS 2000 Core Manager shelf.
- 8 Gently slide the LAN personality module into the shelf until it is fully inserted.



- 9 Tighten the thumbscrews at the top and the bottom of the LAN personality module.

**At the local or remote VT100 console**

- 10 Log in to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 11 Access the maintenance interface:  
**sdmmtc**
- 12 Access the hardware (Hw) level:  
**hw**

- 13 Add the logical pair of I/O controller modules simultaneously:

```
add <chassis> <slot> <pec>
```

where

**<chassis>**

is the chassis where the module will be located (SDMM for a main chassis or SDME for an I/O expansion chassis)

**<slot>**

is the lower of the two physical slot numbers the module occupies

**<pec>**

is the product engineering code (PEC) of the I/O controller module you want to add

**Note:** To add a single I/O controller module to domain 0, use the command: **add <chassis> simplex <slot> <pec>**

- 14 The add command can take several minutes to complete. When the command is finished, the following message is displayed:

*Example response:*

```
Hardware Add Module - Command complete.
```

- 15 Monitor the status of the new hardware at the hardware (Hw) level.

The system does not initially show the new hardware that has been added.

```

I F C E D 5 D X
C A P T S 1 A 2
M N U H K 2 T 5

```

```

Domain 0 . . . . .
Domain 1 . . . . .

```

*The system takes a few seconds to display the new hardware elements (DSK<sub>n</sub> for hard disks). Previously installed disks on the system are automatically renumbered as necessary to reflect the new hardware configuration. The status of the new hardware elements can initially appear as F (failed).*

*Example response:*

```

I F C E D D D D 5
C A P T S S S A 1
M N U H K K K T 2
          1 2 3
Domain 0 . . . . . F F . .
Domain 1 . . . . . F F . .

```

The modules are automatically put into service and their status changes to in-service (indicated by the in-service dot).

*Example response:*

```
I F C E D D D D 5
C A P T S S S A 1
M N U H K K K T 2
          1 2 3
```

```
Domain 0 . . . . .
Domain 1 . . . . .
```

- 16** If necessary, use the Locate command to verify slot numbers since devices have been renumbered.
- 17** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Removing I/O controller modules

### Purpose

Use this procedure to delete the following hardware modules from the CS 2000 Core Manager:

- NTRX50FU - I/O controller module with two 2-GByte disk drives and Ethernet
- NTRX50GP - I/O controller module with two 4-GByte disk drives and Ethernet

#### ATTENTION

Contact Nortel personnel before you remove any I/O controller modules. You cannot remove I/O controller modules until Nortel deletes the data volume group (datavg) to which the module belongs. Nortel also recommends that you remove I/O controller modules in pairs.

If necessary to change or correct the physical location of the modules, this procedure can be followed by the procedure [Adding I/O controller modules on page 250](#)

**Note:** The I/O controller modules (NTRX50GN) in slots 2 and 3, and 13 and 14, of the main chassis are mandatory for system operation and cannot be removed.



#### CAUTION Removing a module

Do not delete modules that are part of a volume group. If the module is not part of a volume group, continue with this procedure.



#### CAUTION Re-using an I/O controller module

An I/O controller module must be manually busied and deleted before it can be re-used in a different slot.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

### Other activities related to using this procedure

| Procedure  | Document  |
|--|---|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

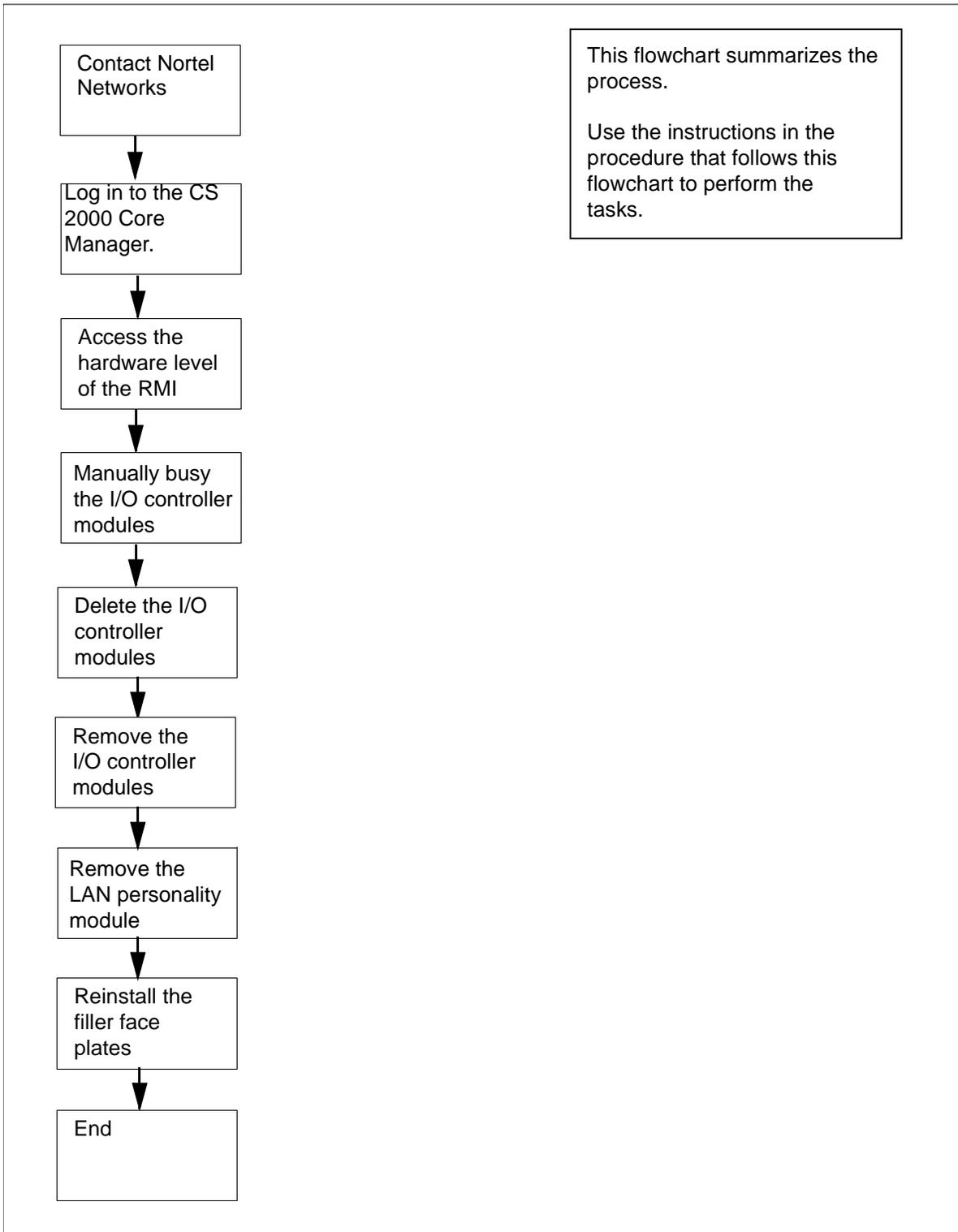
To perform this procedure, you must know the following information:

- the chassis (SDMM for main chassis; SDME for I/O expansion chassis) where the modules will be removed from
- the I/O controller module's slot number (from 1 to 16)

### Task flow diagram

The following task flow diagram provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the task.

## Task flow for Removing I/O controller modules



## Procedure

### Removing I/O controller modules

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### *At the local or remote VT100 console*

- 1 Log in to the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Access the top menu level of the remote maintenance interface (RMI):

```
sdmmtc
```

- 3 Access the hardware (Hw) menu level:

```
hw
```

- 4 Determine the devices on the I/O controller module:

```
locate
```

- 5



#### CAUTION

**Deleting an I/O controller module**

Deleting an I/O controller module requires you to put the module in both domains in a ManB state. These modules are out of service.

Manually busy the module in each domain:

```
bsy <domain> dsk <n>
```

*where*

**<domain>**

is the domain (0 or 1) of the I/O controller module that you are replacing:

- 0 if the module is located in slots
  - 4 and 5 of the main chassis
  - any two slots from 1 to 8 in the I/O expansion chassis
- 1 if the module is located in slots
  - 15 and 16 of the main chassis
  - in any two slots from 9 to 16 of the I/O expansion chassis

**<n>**

is the disk number that you are replacing (Use the Locate command to determine the disk number of the module.)

*Example response:*

```
Hardware Bsy - Domain 1 Device DSK2
Busying DSK2(1) will also busy DSK3(1).
```

```
Do you wish to proceed?
Please confirm ("YES", "Y", "NO", "N"):
```

**6** Confirm the Bsy command:**y***Example response:*

```
Hardware Bsy: Domain 1 Device DSK2 - Command
initiated.
Please wait...
```

When the Bsy command is finished, observe that the message: `Please wait` along the command confirmation disappear. The status of the domain transitions from initiated to submitted and finally to complete.

*Example response:*

```
Hardware Bsy: Domain 1 Device DSK2 - Command
complete.
```

**7** Repeat steps [5](#) through [7](#) for the other domain. Once you have manually busied the module in both domains, go to step [8](#).

**Note:** After you see the response to the Bsy command, the I/O controller module's state changes to M at the hardware level.

- 8 Use the Locate command to determine the chassis and slot number of the module you wish to delete. Press the Enter key to scroll through the display to see all the information:

**locate**

*Example response:*

```
Site Flr RPos Bay_id Shf Description Slot
EQPEC
HOST 00 00 CSDM SDME DSK2(0),DSK3(0) 02
NTRX50FU FRNT
```

- 9 Delete the module:

**delete <chassis> <slot>**

*where*

**<chassis>**

is the chassis where the module is located (SDMM for the main chassis or SDME for the I/O expansion chassis)

**<slot>**

is the slot number (from 1 to 16) where the module is located

**Note:** The module in the corresponding slot of the other domain will also be deleted.

*Example response:*

```
Module in slot 4 of SDMM will be deleted.
DSK2(0), DSK3(0) will be deleted.
Module in slot 15 of SDMM will also be deleted.
```

```
Do you wish to proceed?
Please confirm ("YES", "Y", "NO", "N"):
```

- 10 Confirm that you want to delete the module:

**y**

*The delete command can take several minutes to complete. When the command is finished, the following message is displayed:*

```
Hardware Del Module - Command complete.
```

*Within a few seconds, the module disappears from the listing shown at the hardware level, and the device numbers change on the screen display.*

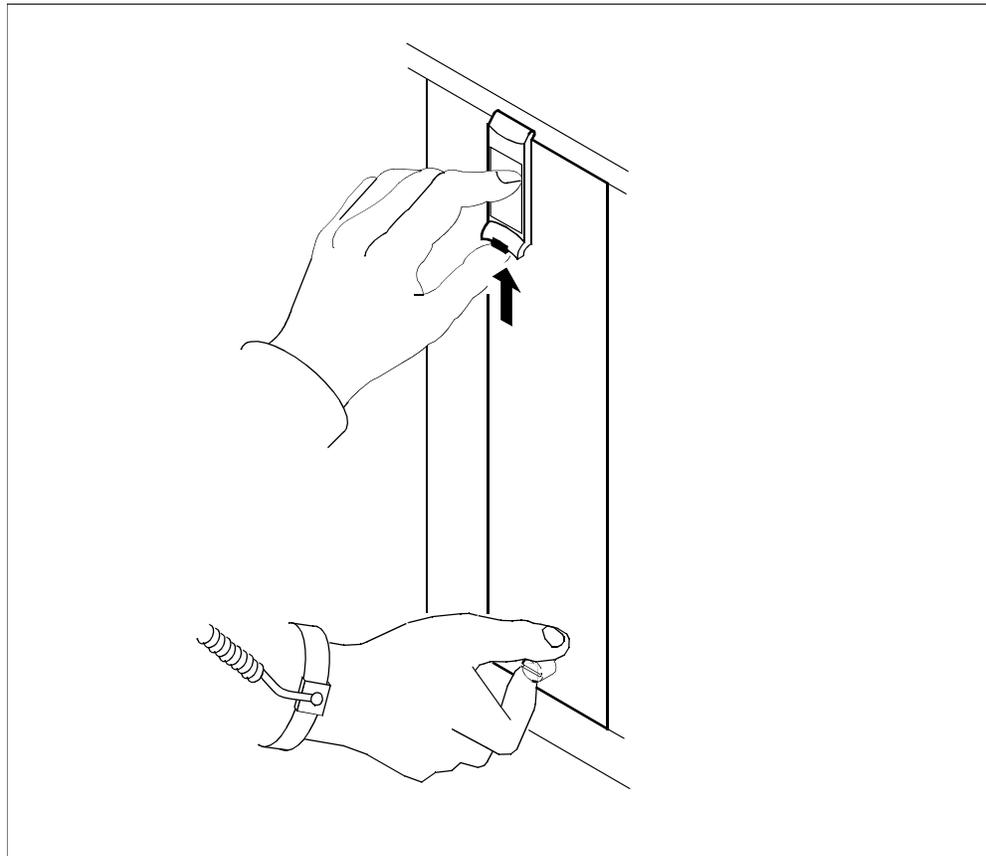
**At the front of the CS 2000 Core Manager****11****WARNING**

Static electricity damage

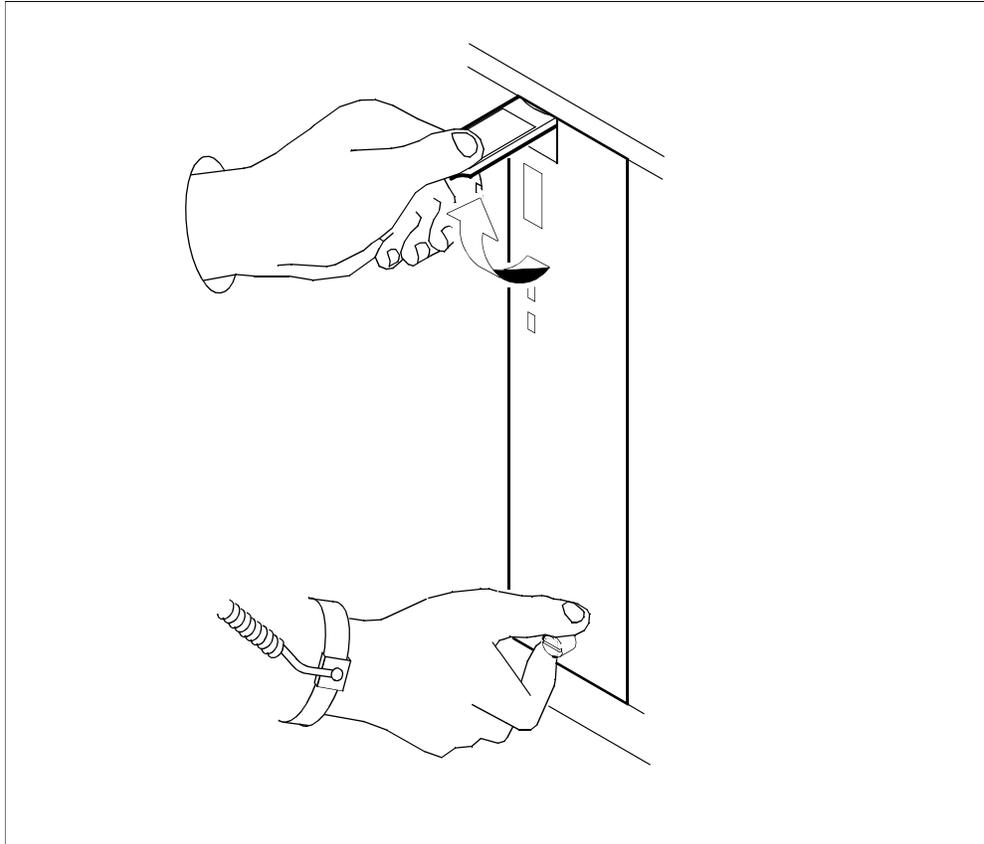
Wear an electrostatic discharge (ESD) grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

Wear an electrostatic discharge (ESD) grounding wrist strap.

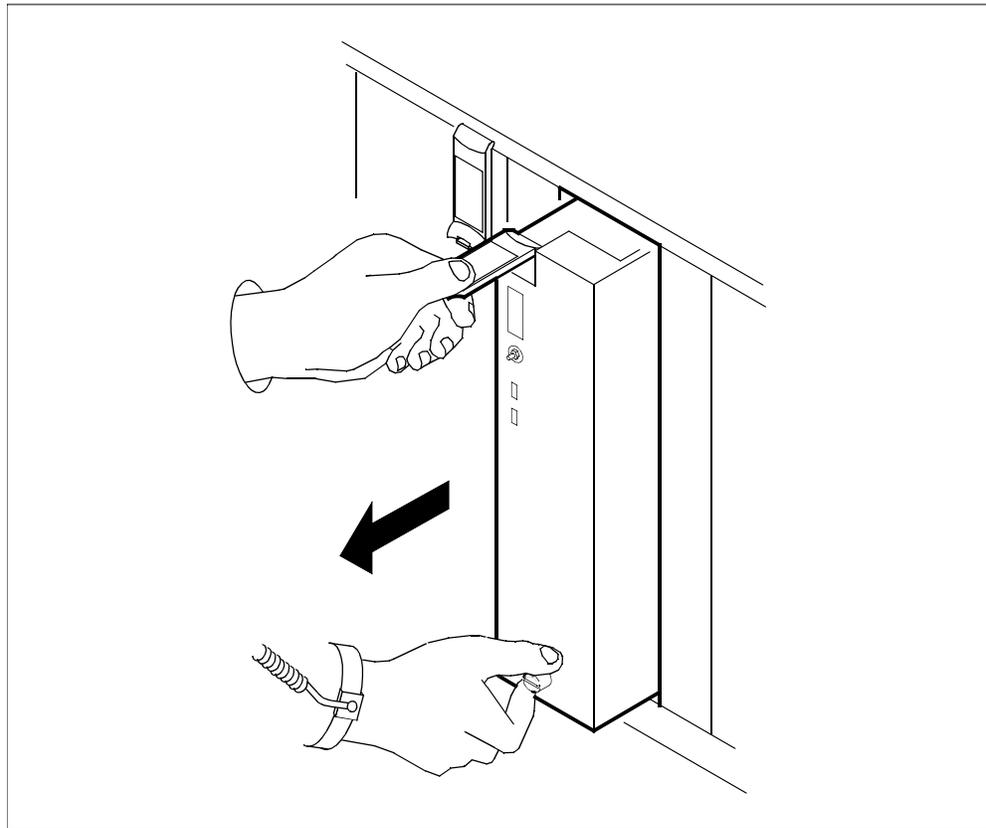
- 12** Undo the thumbscrews located on the top and the bottom of the I/O controller module. The thumbscrews are the captive type, and cannot be removed from the module.
- 13** Depress the tip of the locking lever on the face of the I/O controller module.



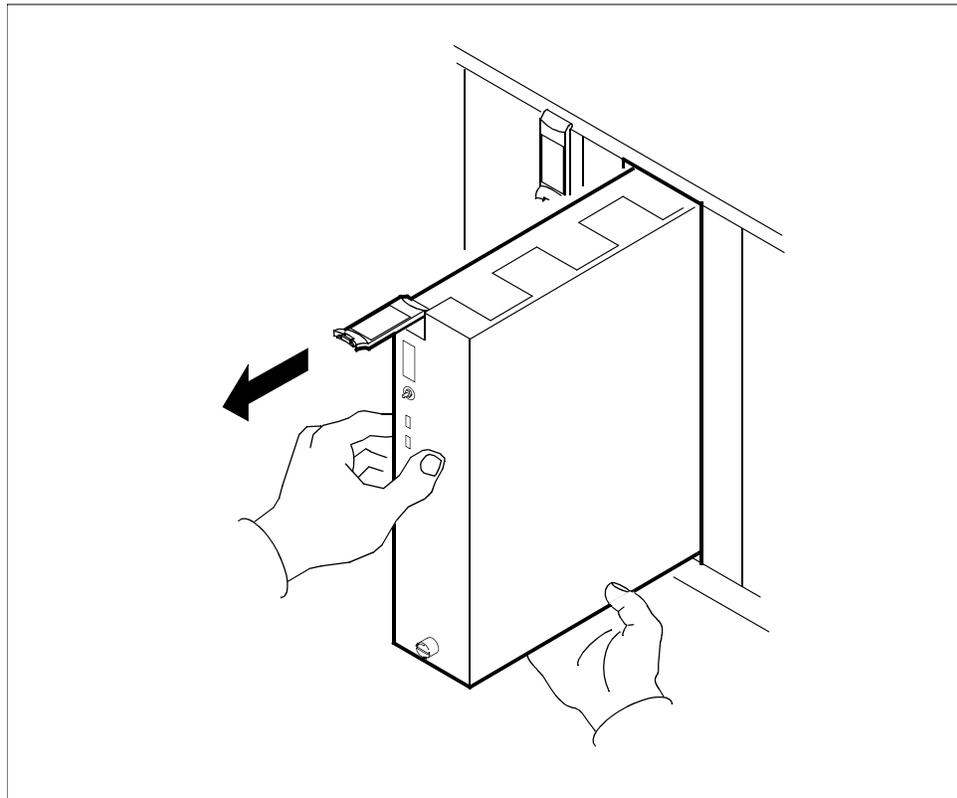
- 14 Open the locking lever on the face of the module by moving the lever outwards.



- 15 While grasping the locking lever, gently pull the module towards you until it protrudes about 2 inches (5 cm) from the CS 2000 Core Manager shelf.



- 16** Hold the module by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



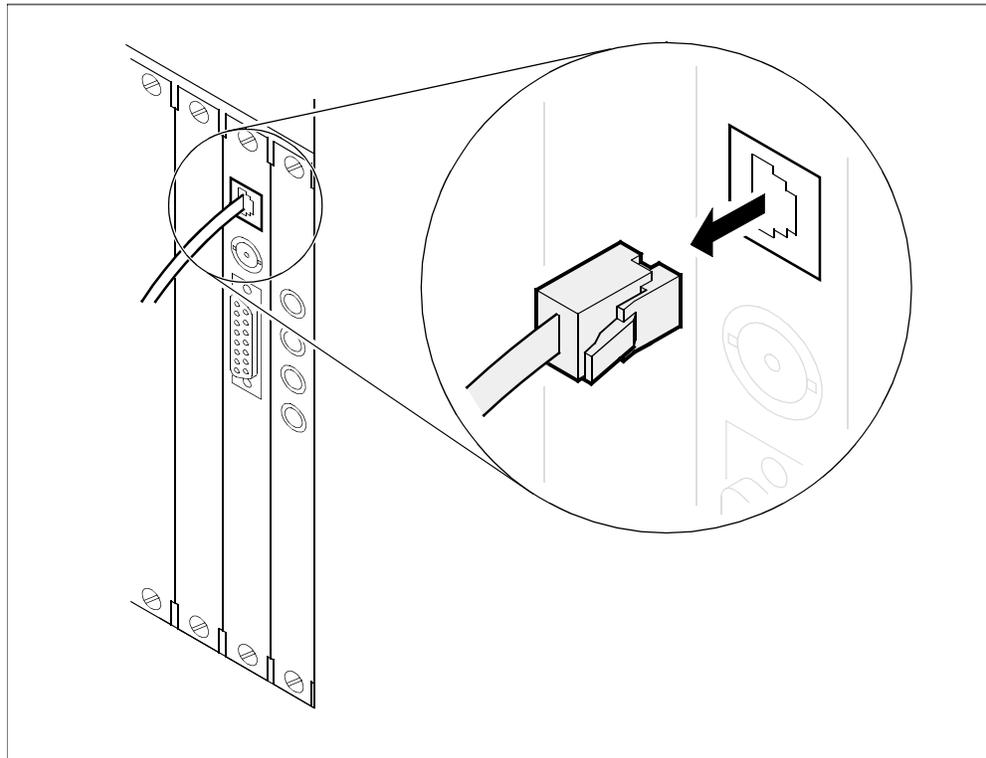
- 17** Place the module you have removed in an ESD protective container.

***At the back of the CS 2000 Core Manager***

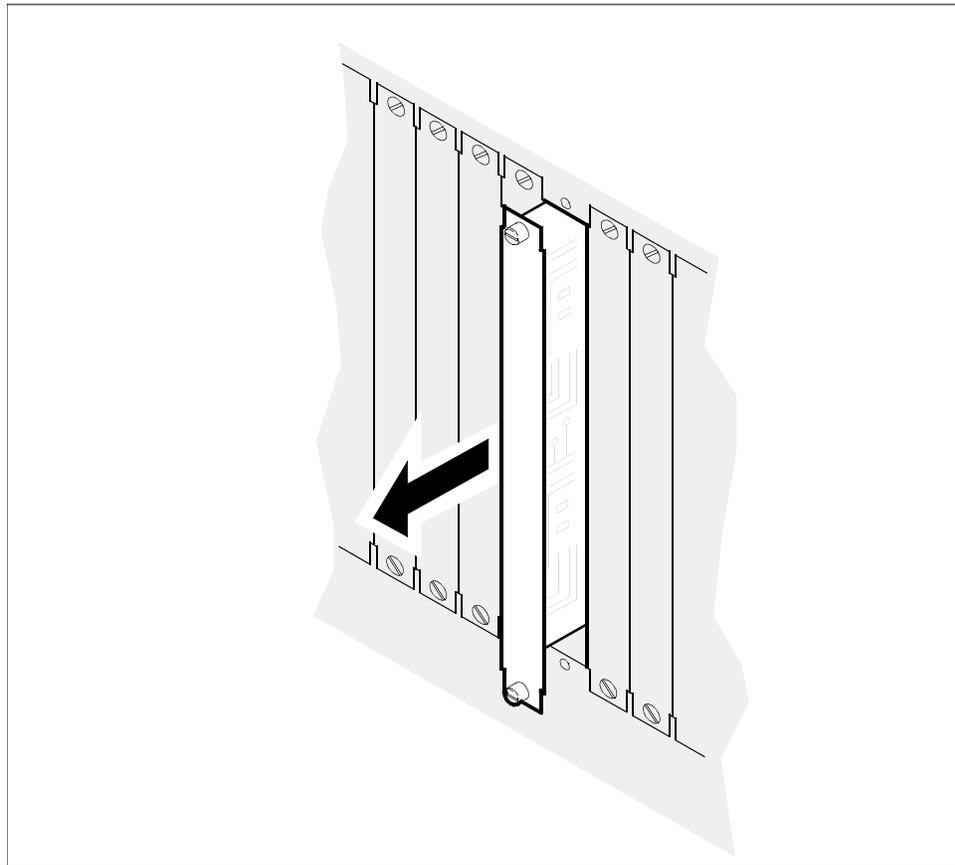
- 18** Determine what kind of hardware module your CS 2000 Core Manager has.

| If you have           | Do                      |
|-----------------------|-------------------------|
| NTRX50GN              | step <a href="#">19</a> |
| NTRX50FU and NTRX50GP | step <a href="#">20</a> |

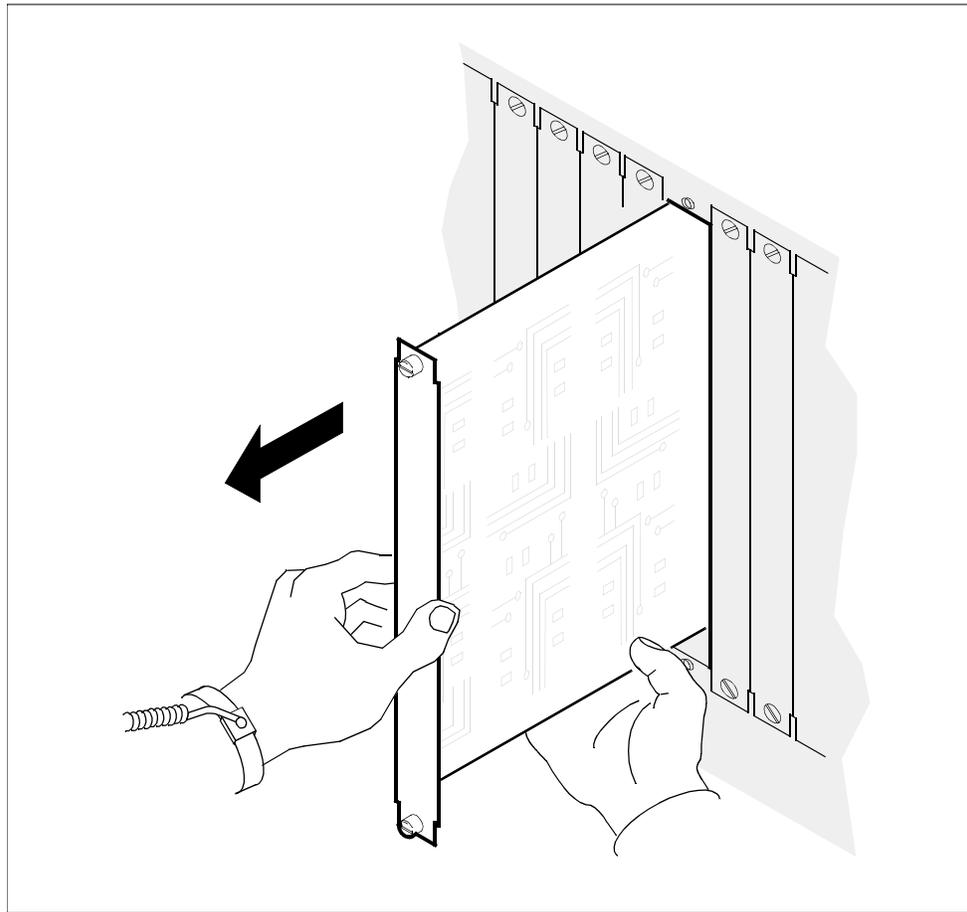
- 19** Disconnect the 10BASE-T cable from the corresponding LAN personality module, as shown in the following diagram.



- 20** Loosen the two thumbscrews located at the top and the bottom of the LAN personality module. The thumbscrews are the captive type, and cannot be removed from the module.
- 21** While grasping the thumbscrews, gently pull the LAN personality module towards you until it protrudes about 2 inches (5 cm) from the CS 2000 Core Manager shelf.



- 22** Hold the LAN personality module by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



- 23** Place the LAN personality module you have removed in an ESD protective container.
- 24** Reinstall the filler plates covering the slots from which you removed the modules.
- 25** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

If necessary to change or correct the physical location of the modules, this procedure can be followed by the procedure [Adding I/O controller modules on page 250](#)

---

## Removing an I/O expansion chassis (NTRX50EC)

---

### Purpose

**ATTENTION**

Do not perform this procedure if there are any hardware faults on the CS 2000 Core Manager.

Use this procedure to remove an I/O expansion chassis (NTRX50EC) from an existing system.

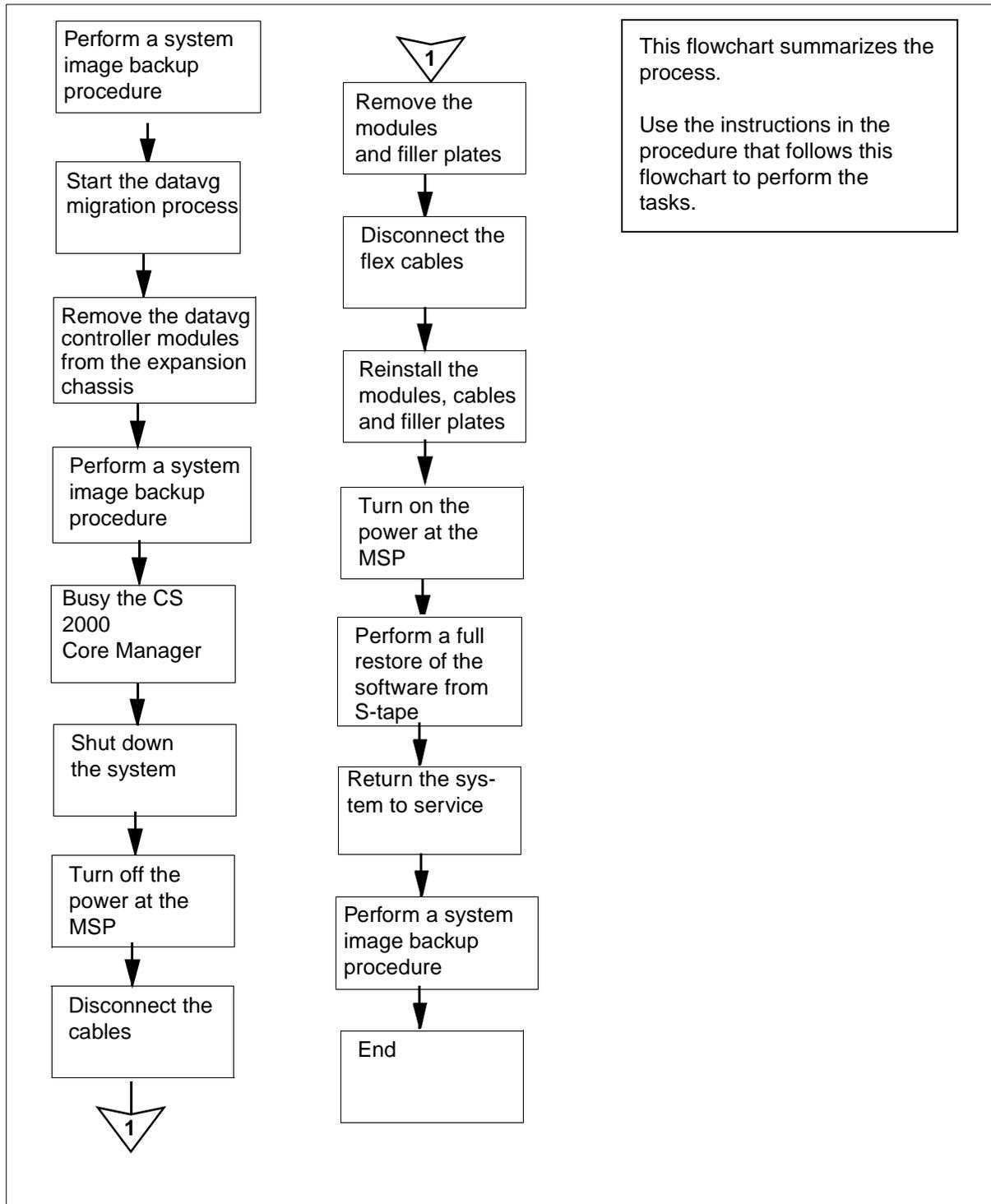
### Prerequisites

Make sure that your main chassis has been upgraded to the 36-Gbyte + 36-Gbyte Ultra-Multifunction Input/Output (UMFIO), before you start this procedure. Use the procedure [Upgrading a datavg MFIO to MFIO or UMFIO on page 318](#), if required.

### Task flow diagram

The following flowchart provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the task.

**Task flow for removing an I/O expansion chassis (NTR50EC)**



## Procedure

### Removing an I/O expansion chassis (NTRX50EC)

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### *At the local or remote VT100 console*

- 1 Perform a system image backup. Use the procedure “Creating system image backup tapes (S-tapes)” in the Security and Administration document.
- 2 Exit the maintenance interface and return to the AIX command line:

```
quit all
```

- 3 Check that no faults exist on the CS 2000 Core Manager:

```
querysdm flt
```

| If                    | Do  |
|-----------------------|---|
| faults are present    | correct the faults using the procedures in the <i>CS 2000 Core Manager Fault Management</i> , NN10082-911, and return to this procedure |
| no faults are present | step <a href="#">4</a>  |

- 4 Start the process of migrating datavg from the expansion chassis to the main chassis:

```
ftmigratepv
```

*The system performs several checks, listing them on the screen.*

- 5 Use the following table to determine your next step.

| If  | Do                                 |
|---|------------------------------------|
| If no error is displayed  | step <a href="#">6</a>             |
| the error message indicates you don't have physical volumes for datavg in expansion chassis         | go to step <a href="#">18</a>      |
| the error message indicates you there is insufficient free disk space on main chassis for migration | contact your next level of support |

- 6 When prompted, confirm that you want to continue the data migration:

**y**

- 7 Confirm again that you want to continue the data migration:

**y**

*The system continues the data migration process, listing all completed sub-processes, and then prompts you to remove the datavg modules on the expansion chassis. The migration process takes approximately 30 minutes.*

*Example response:*

*Please take out the datavg module in slot 1 on the expansion chassis from the SDM. Please take out the datavg module in slot 9 on the expansion chassis from the SDM.*

### **At the front panel**

- 8 Remove the datavg controller modules from the expansion chassis slots indicated by the system.

9



#### **WARNING**

**Static electricity damage**

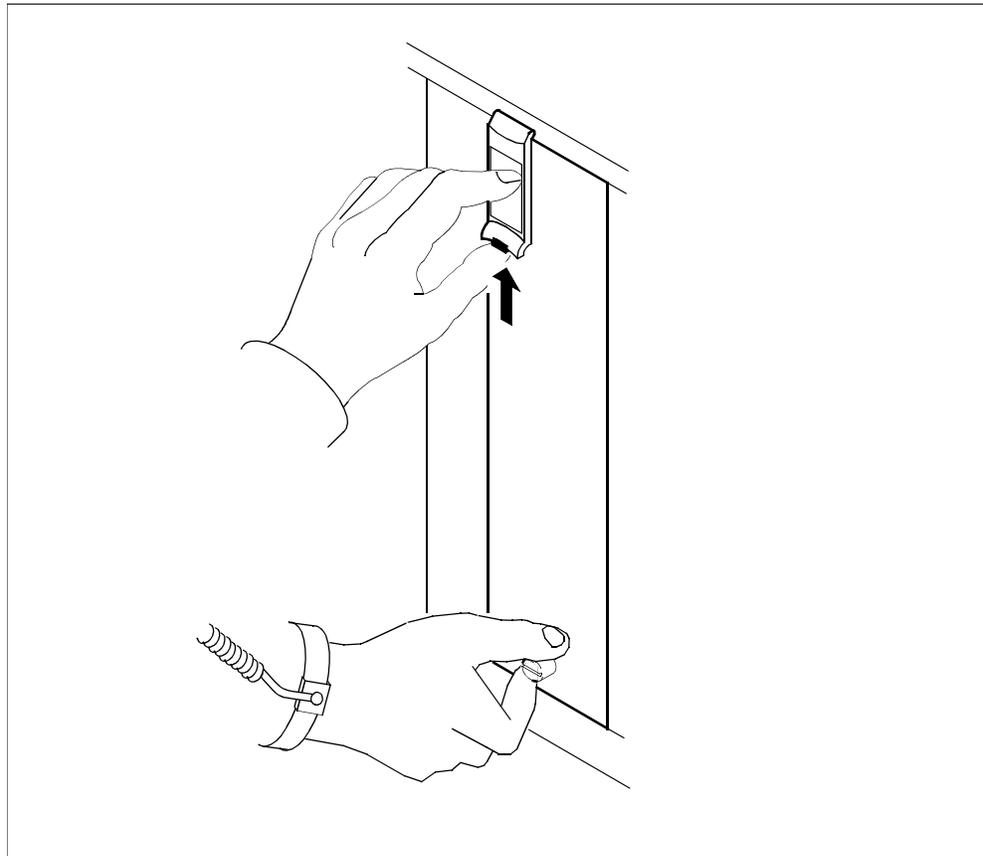
Wear an electrostatic discharge (ESD) grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

Put on an electrostatic discharge (ESD) grounding wrist strap connected to the C28B.

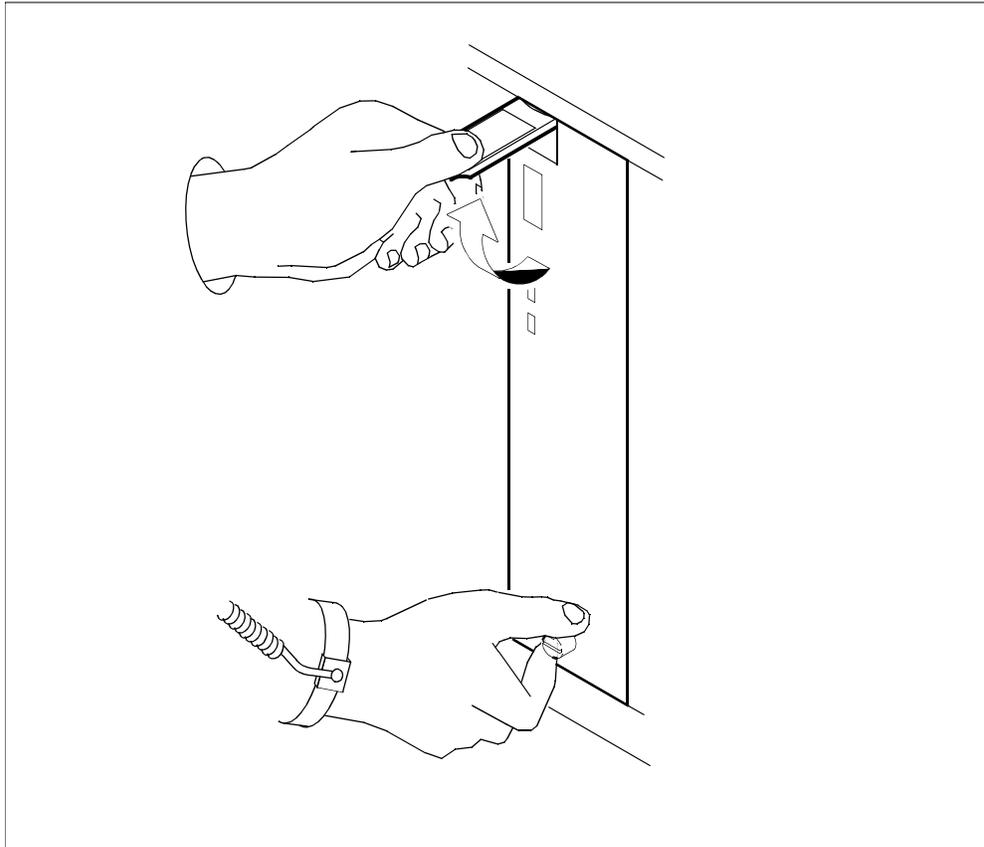
- 10 Undo the captive type thumbscrews located on the top and the bottom of the datavg controller module in domain 0.

**Note:** The thumbscrews cannot be removed from the module.

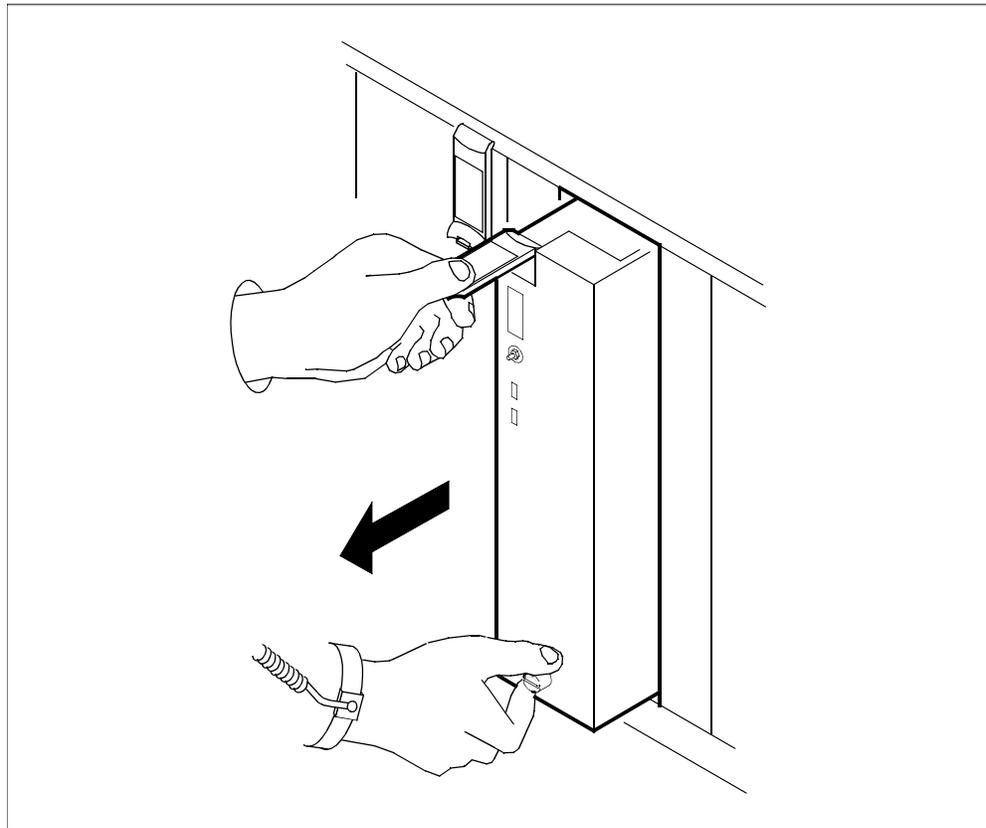
- 11 Depress the tip of the locking lever on the face of the I/O controller module.



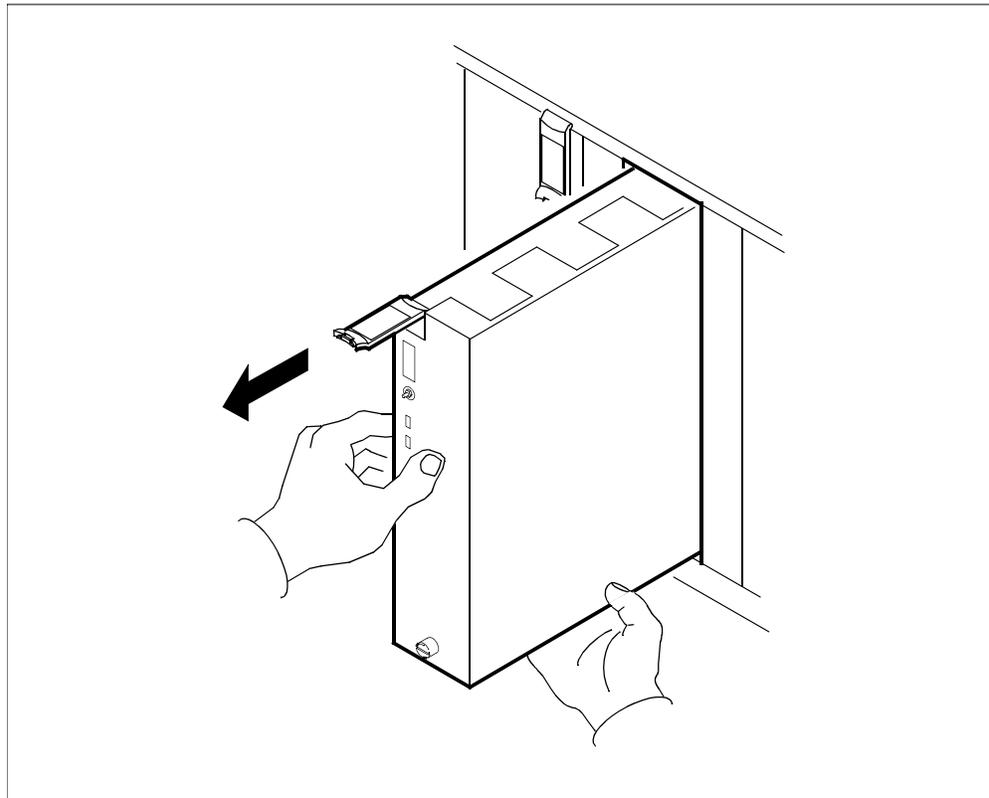
- 12 Open the locking lever on the face of the module by moving the lever outwards.



- 13** While grasping the locking lever, gently pull the module towards you until it protrudes about 2 in (5 cm) from the CS 2000 Core Manager shelf.



- 14** Hold the module by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



- 15 Place the module you have removed in an ESD protective container.
- 16 Repeat steps [10](#) through [15](#) for the datavg controller module in domain 1.

**At the VT100 console**

- 17 Wait until data migration is completed.

*The system responds:*

Data on expansion chassis has been migrated to main chassis with no error.

- 18 Perform a system image backup. Use the procedure “Creating system image backup tapes (S-tapes)” in *CS 2000 Core Manager Security and Administration*, NN10170-611.

While executing the backup procedure, you are asked if you want to eject the S-tape from the drive. Enter n (no). Then, go back to the previous menu by typing y, and return to the admin level by typing 0 (zero). Exit the maintenance interface by typing quit all and pressing the Enter key.

***At the MAP terminal***

- 19 Access the SDM level of the MAP display:  
**mapci;mtc;appl;sdm**
- 20 Busy the CS 2000 Core Manager:  
**bsy**
- 21 Confirm the busy request:  
**y**
- 22 Verify that each billing stream has entered the active backup mode by posting and querying each of your billing streams.  
**sdbil;post<stream>;query**

***At the VT100 console***

- 23 Disable the autoboot attribute for CPU 0:  
**autoboot -c 0 -o vb=n**
- 24 Disable the autoboot attribute for CPU 1:  
**autoboot -c 2 -o vb=n**
- 25 Shut down the CS 2000 Core Manager:  
**shutdown now**

***At the modular supervisory panel (MSP)***

- 26 Interrupt power to the CS 2000 Core Manager by turning off all four MSP breakers located at the front of the MSP.

***At the back of the CS 2000 Core Manager***

27

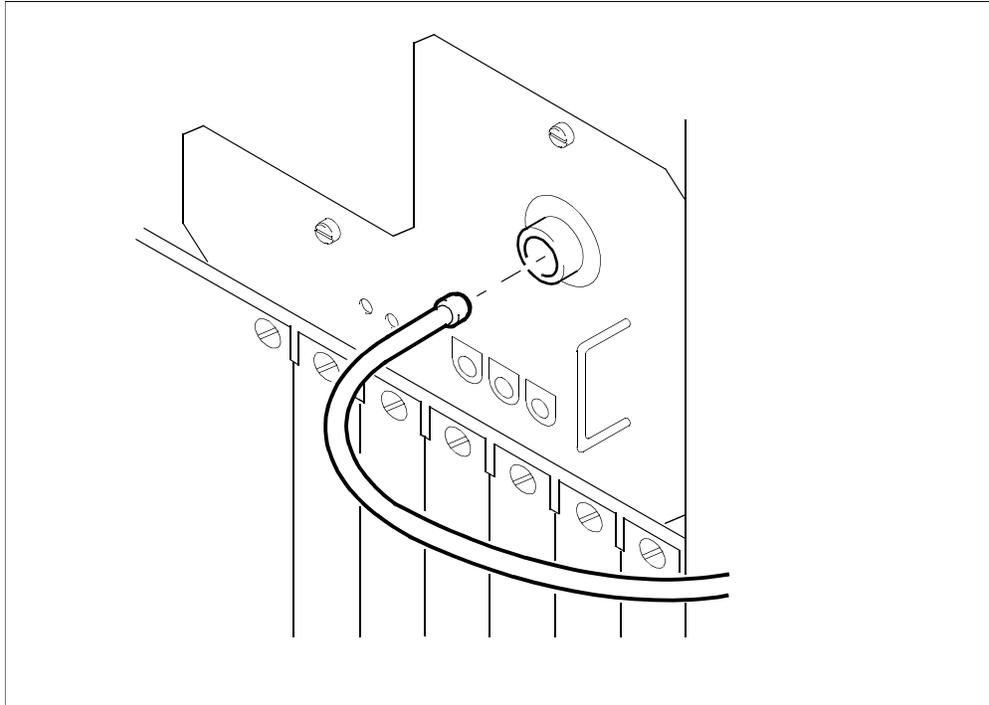
**WARNING**

Static electricity damage

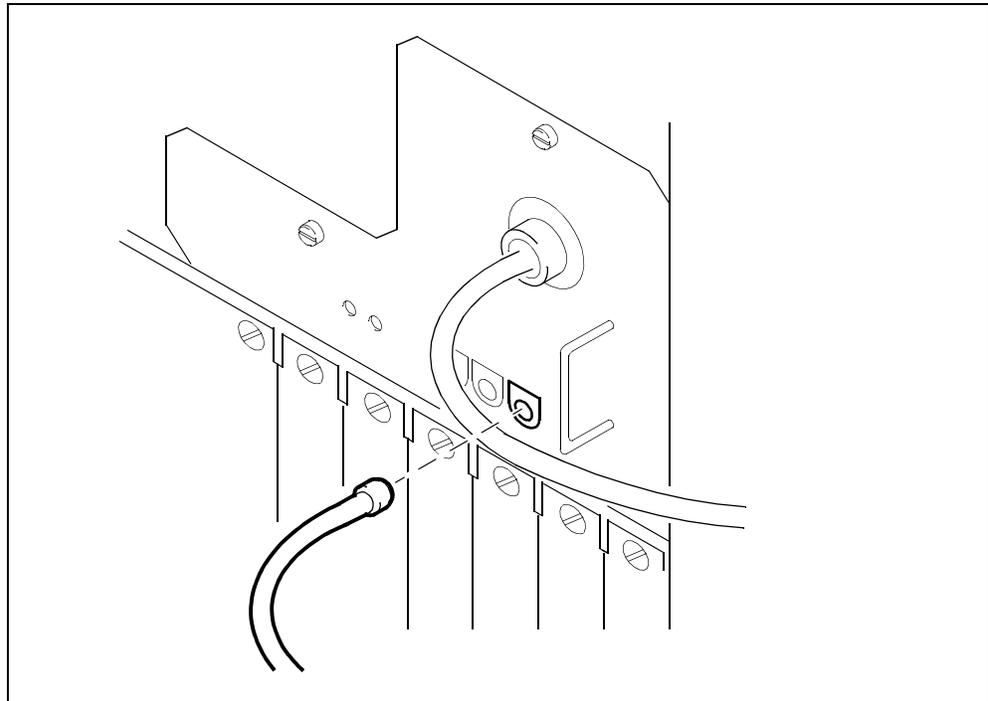
Wear an electrostatic discharge (ESD) grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

Put on an electrostatic discharge (ESD) grounding wrist strap connected to the C28B.

- 28** Disconnect the power cables from the interconnect module ICM 0 and ICM 1 on both chassis, then remove and store them.



- 29** If there are any alarm cables connected to the I/O expansion chassis, disconnect them.



- 30** Label the cables.



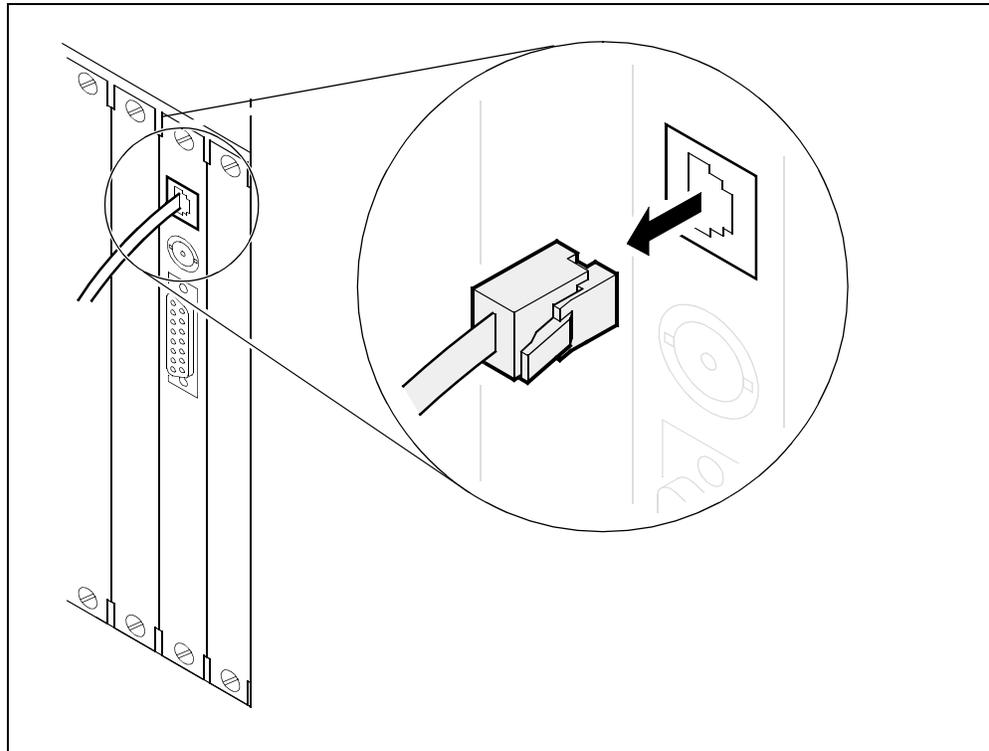
### **CAUTION**

#### **Disconnecting transmit and receive cables**

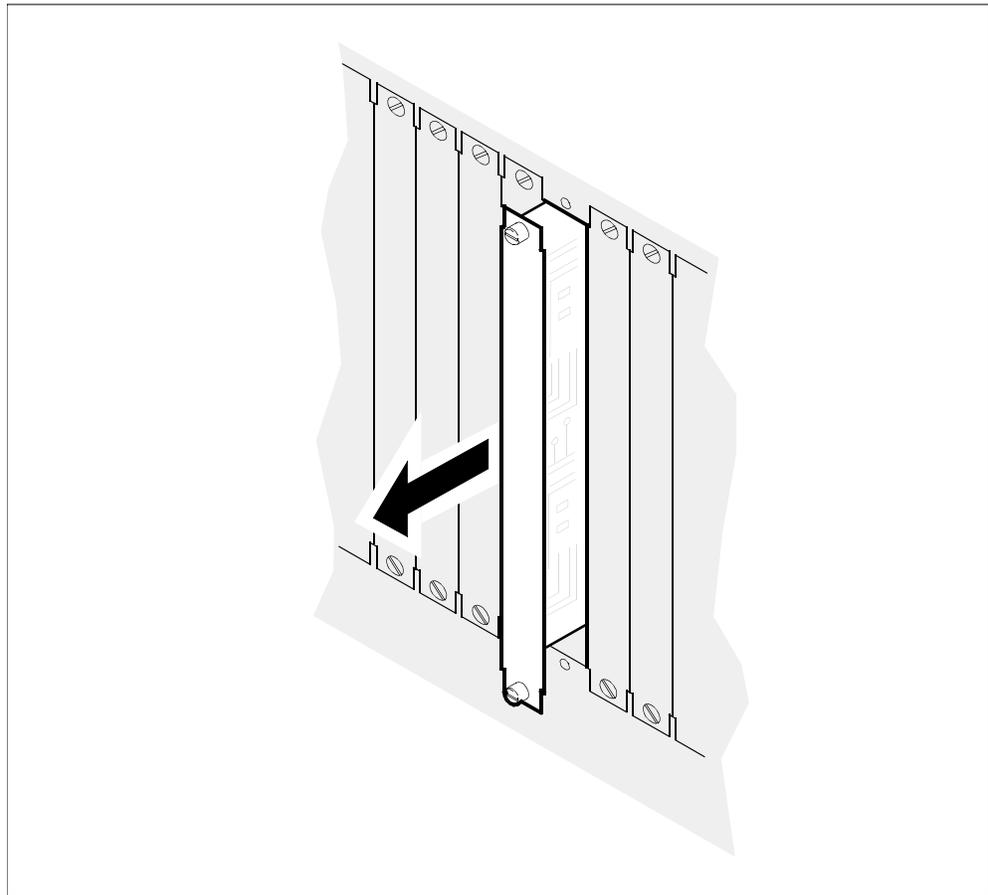
Do not mix the transmit and receive cables for each domain. If you have not already done so, label these cables to ensure that you reconnect the cables to the correct slots. Link 0 transmit and link 0 receive connect to MS0. Link 1 transmit and link 1 receive connect to MS1.

- 31** Disconnect the four DS512 fiber cables from both DS512 personality modules (on the main shelf) by pressing the fiber cable in, and turning it a quarter-turn to the left.

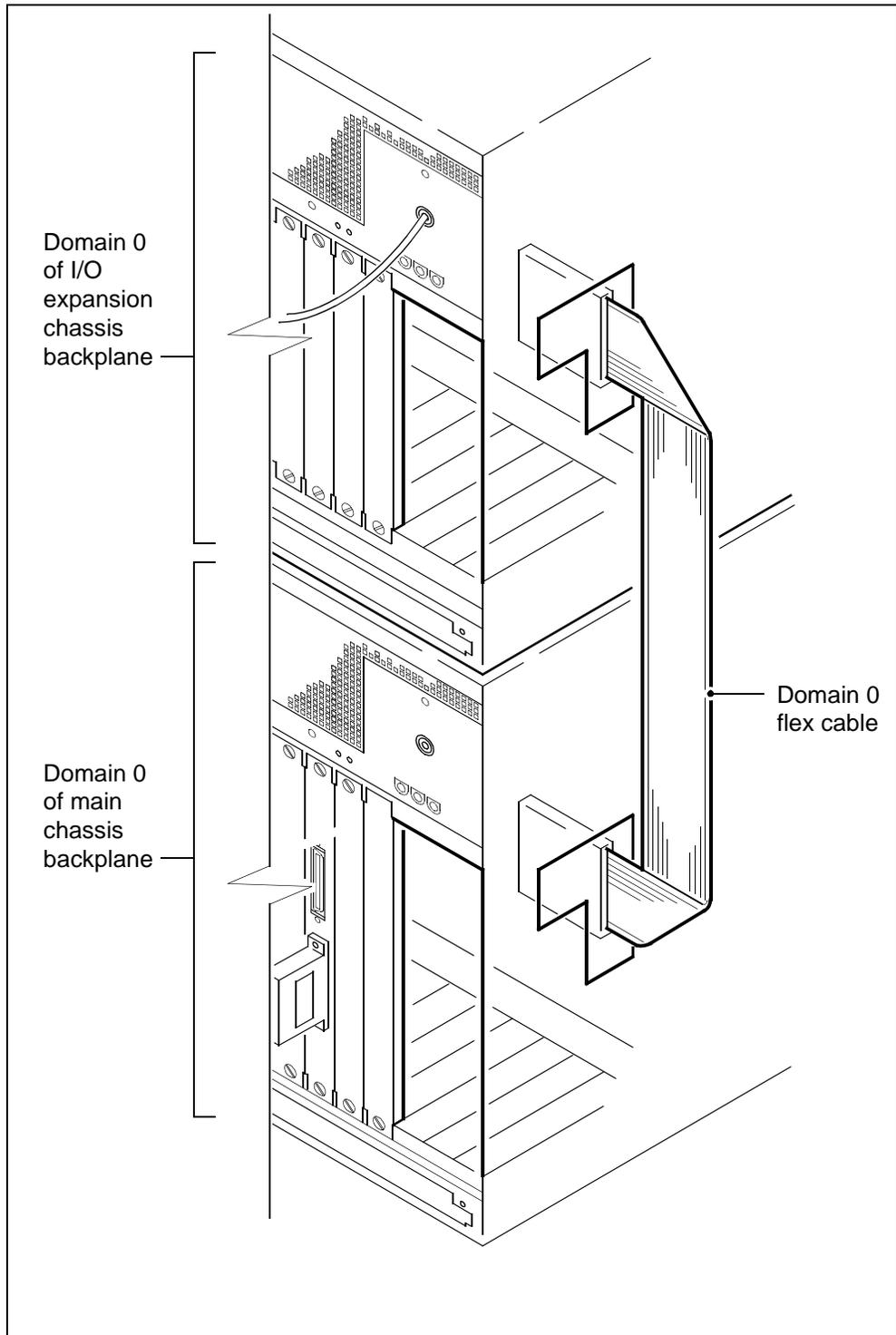
- 32** Disconnect the 10BASE-T cables from both LAN personality modules on the main shelf.



- 33** To gain access to the flex cable, remove all personality modules and filler plates located in slots 1, 2, 3, 14, 15, and 16 on both chassis.
- 34** Record the slot number of each personality module and each filler plate that you are removing from the main shelf.
- 35** Loosen the thumbscrews located at the top and bottom of the personality module.
- Note:** The thumbscrews are the captive type, and cannot be removed from the module.
- 36** While grasping the thumbscrews, carefully pull the personality module out of the SDMCS 2000 Core Manager shelf.

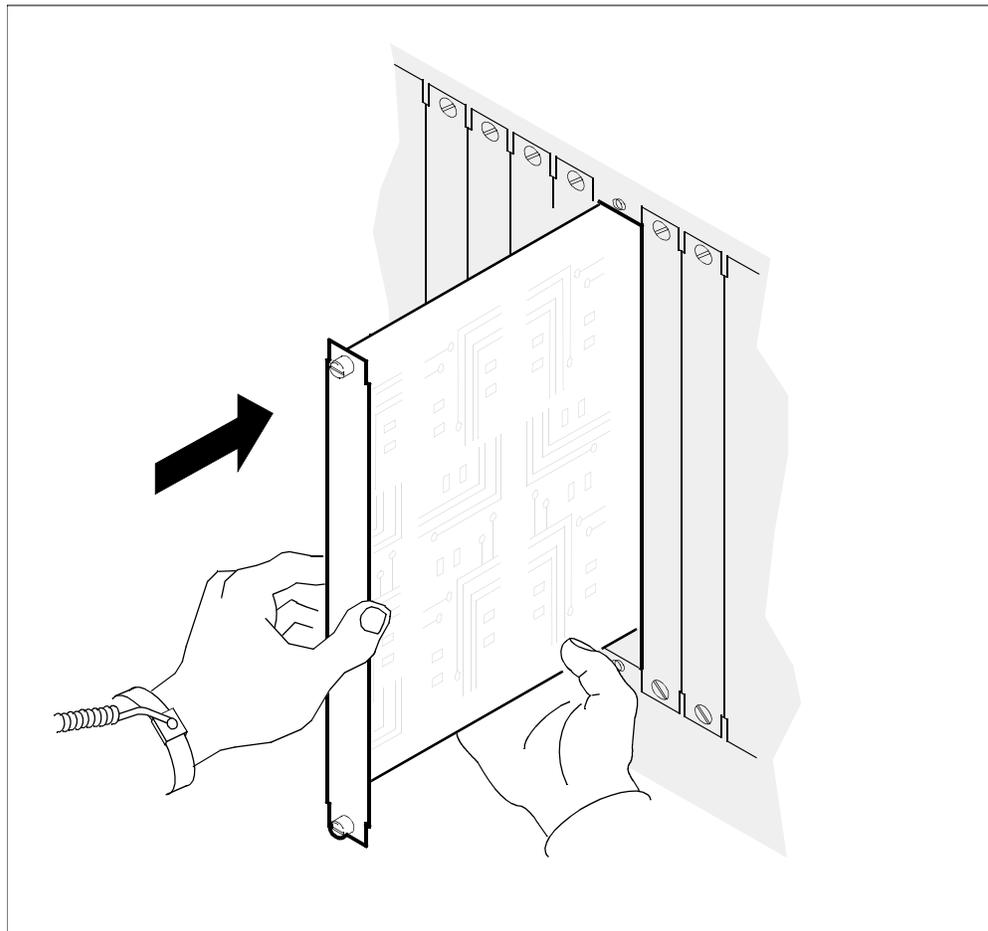


- 37** Place the personality module you have removed in an ESD protective container.
- 38** Remove the domain 0 and domain 1 flex covers that run from the outside of the main and I/O expansion chassis.
- 39** Disconnect and remove the domain 0 flex cable (NTRX5088) from the I/O expansion chassis backplane side 0 and from the main chassis backplane side 0. Through the empty slots, reach the ends of the flex cable and pull them towards you. Once disconnected from both chassis, remove the cable through the side opening.



**40** Return to step [33](#) and repeat the same operation on domain 1.

- 41** Reinstall all personality modules and filler plates (on the main chassis only) that you removed in step [33](#).  
Use your records from step [33](#) to make sure that you are placing each module in the same slot from which it was removed.
- 42** Reinstall all modules and filler plates in domain 0 first. Start from slot 2, and continue to the right. Repeat the same process on domain 1, starting from slot 16, and continuing to the left.
- 43** Carefully slide the personality module into the appropriate slot until it is fully inserted.



- 44** Tighten the thumbscrews at the top and bottom of the personality module.
- 45** Repeat steps [43](#) and [44](#) for each personality module that you need to reinstall, then continue.

46

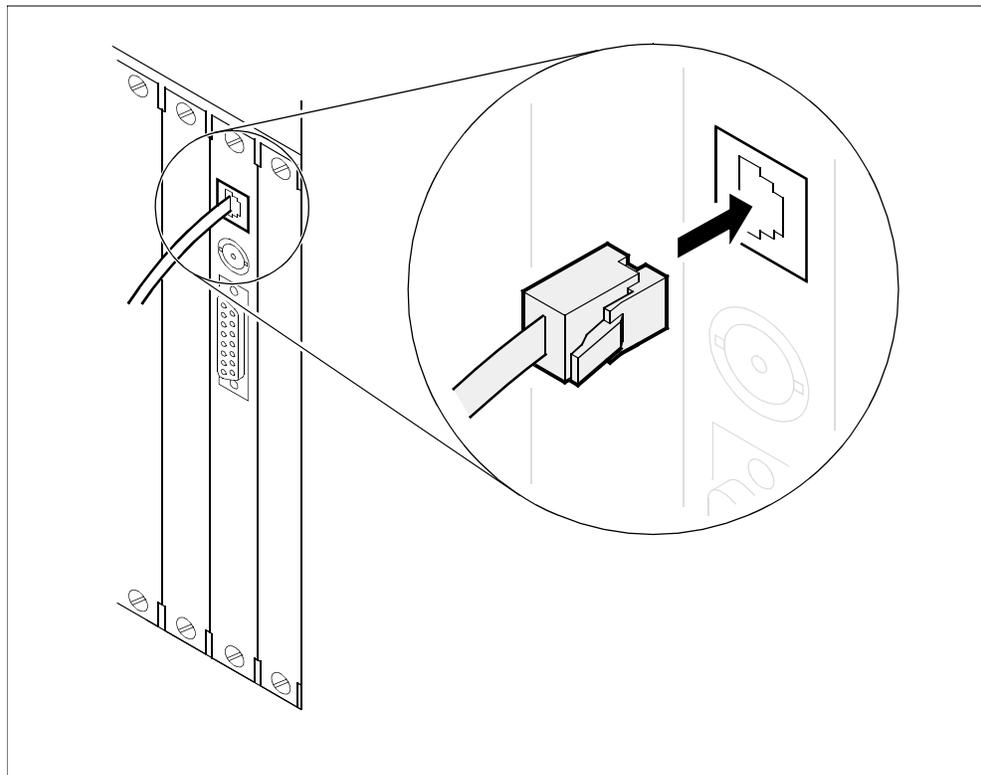
**CAUTION****Reconnecting transmit and receive cables**

Do not mix the transmit and receive cables for each domain. Ensure that you reconnect the cables to the correct slots.

Reconnect the four DS512 fiber cables on the DS512 personality module (on both domains) by pressing the fiber cable in, and turning it a quarter-turn to the right.

- Link 0 transmit and link 0 receive connect to MS0
- Link 1 transmit and link 1 receive connect to MS1

**47** Reconnect the 10BASE-T cable to the LAN personality module (on both domains).



**48** Reconnect the power cables to ICM 0 and ICM 1 in the main chassis.

**At the modular supervisory panel (MSP)**

- 49 Restore power to the CS 2000 Core Manager by turning on the top two MSP breakers.

**At the VT100 console**

- 50 Perform a full restore of the CS 2000 Core Manager software load from the system image backup tape (S-tape) that you created in step 18. Use the procedure “Performing a full restore of the software from S-tape” in *CS 2000 Core Manager Fault Management*, NN10082-911, starting with step 13.

**At the MAP terminal**

- 51 Access the SDM level of the MAP display:

```
mapci;mtc;app1;sdm
```

- 52 Return the CS 2000 Core Manager to service:

```
rts
```

**Note:** It will take at least 5 minutes for the CS 2000 Core Manager to return to service on the core side.

- 53 Verify that the CS 2000 Core Manager status is InSv (in-service) or ISTb (in-service trouble).
- 54 Verify that all billing streams are either in-service or in recovery by posting and querying each of your billing streams:

```
sdmbil;post<stream>;query
```

**At the VT100 terminal**

- 55 Enable the autoboot attribute for CPU 0:

```
autoboot -c 0 -o vb=y
```

- 56 Enable the autoboot attribute for CPU 1:

```
autoboot -c 2 -o vb=y
```

- 57 Perform a system image backup. Use the procedure “Creating system image backup tapes (S-tapes)” in *CS 2000 Core Manager Security and Administration*, NN10170-611.

- 58 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

---

## Migrating from a rootvg system to a rootvg/datavg system

---

### Purpose

Use this procedure to move from a rootvg system to a system with both rootvg and datavg.

This procedure creates datavg, and moves logical volumes from rootvg to datavg.

Logical volume data can be stored in the root volume group (rootvg) or the data volume group (datavg). Create datavg for logical volumes with large amounts of data. If you do not create datavg, the system stores logical volume data in rootvg.

**ATTENTION**

This procedure must be performed by a trained AIX system administrator who is authorized to perform config-admin actions to access the CS 2000 Core Manager.

**ATTENTION**

Perform this procedure after you have installed the required I/O controller modules (in pairs) in the appropriate slots in the main or I/O expansion chassis. If you have not installed the required modules, refer to the procedure “Adding I/O controller modules” in *Upgrading the CS 2000 Core Manager*, NN10060-461.

**ATTENTION**

This procedure requires that your system is MANB. Nortel recommends that you add a datavg when you upgrade the CS 2000 Core Manager.

**ATTENTION**

A maximum of 16-Gbyte storage capacity is supported for datavg.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

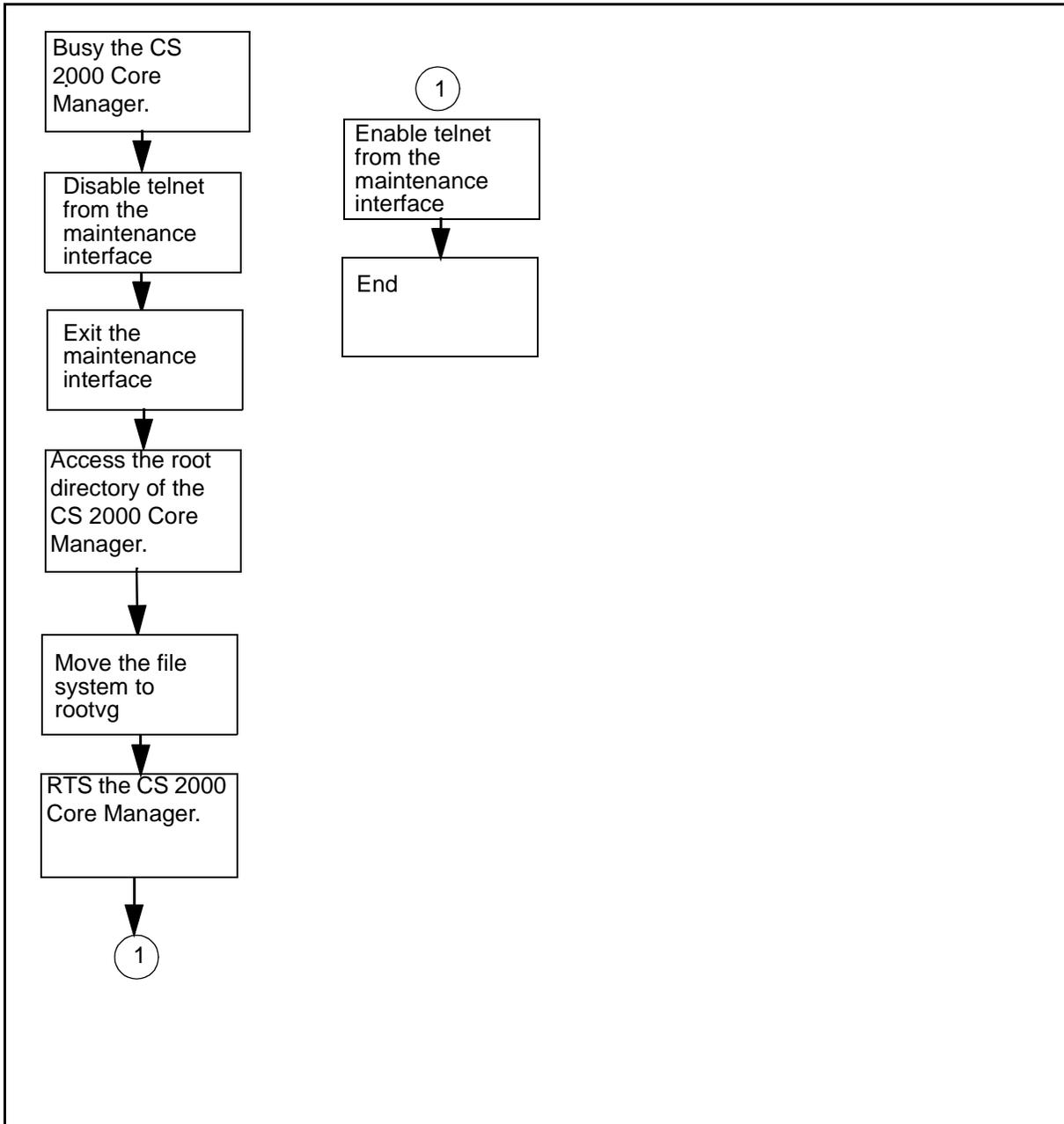
### Other activities related to using this procedure

| Procedure  | Document  |
|--|---|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

### Task flow diagram

The following task flow diagram provides an overview of the process. Use the instructions in the procedure that follows the flowchart to perform the task.

### Task flow for migrating from a rootvg system to a rootvg/datavg system



## Procedure

### Creating a data volume group

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### *At the SDM level of the MAP display*

- 1 Busy the CS 2000 Core Manager:

**bsy**

#### *At the local or remote VT100 console*

- 2 Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.

- 3 Access the administration (Admin) level:

**admin**

- 4 Access the Access level:

**access**

The CS 2000 Core Manager displays the state of the telnet service. Use the following table to determine your next step.

| If telnet is | Do                     |
|--------------|------------------------|
| disabled     | step <a href="#">8</a> |
| enabled      | step <a href="#">5</a> |

- 5 Disable telnet to ensure that no other user has access to CS 2000 Core Manager during the volume group migration:

**change**

- 6 Confirm the command:

**y**

- 7 Exit the maintenance interface:

**quit all**

- 8 Access the root directory:

**cd /**

- 9 Move the file system from rootvg to datavg:

**movevg**

The movevg process takes some time to complete. When the process is complete, the system returns to the # prompt. It can be several minutes after the movevg command is completed before datavg is displayed as Mirrored under the storage level.

***At the SDM level of the MAP display***

- 10 Return the CS 2000 Core Manager to service:

**rts**

***At the local or remote VT100 console***

- 11 Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.

- 12 Access the administration (Admin) level:

**admin**

- 13 Access the Access level:

**access**

- 14 Enable telnet:

**change**

- 15 Confirm the command:

**y**

- 16 Exit the maintenance interface:

**quit all**

- 17 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure, or refer to procedure "Adding disks and creating a logical volume in datavg" in *CS 2000 Core Manager Security and Administration*, NN10170-611.

---

## Upgrading from an X.25 SYNC card to a UMFIO X.25 card

---

### Purpose

Use this procedure to upgrade a system from a rootvg-only system with SYNC X25 to a rootvg/datavg system with UMFIO/X25PM.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

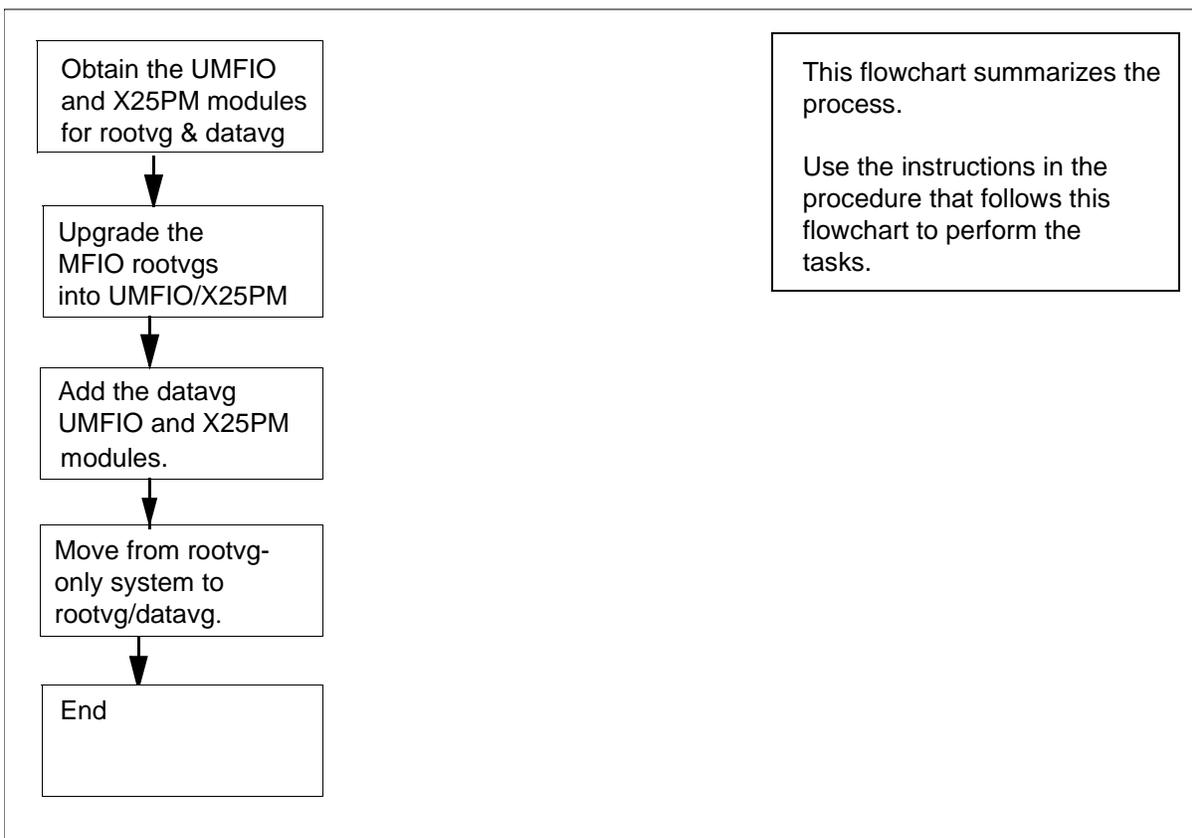
#### Other activities related to using this procedure

| Procedure  | Document  |
|--|---|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

### Procedure

The following task flow diagram provides a summary of the process. To move from a rootvg-only system to a rootvg/datavg with X.25, use the instructions in the procedure that follows the flowchart.

## Task flow for upgrading from an X.25 SYNC card to a UMFIO X.25 card



### Upgrading from an X.25 SYNC card to a UMFIO X.25 card

#### At the CS 2000 Core Manager

- 1 Obtain the UMFIO controller modules for rootvg and the X25PM modules. Ensure that the upgraded modules have the correct product engineering code (NTRX50NM for rootvg UMFIO and NTRX50NN for X25PM). The PEC is printed on the top locking lever.
- 2 Perform the procedure [Upgrading the rootvg MFIO to MFIO or UMFIO on page 297](#), to upgrade from rootvg MFIO with SYNC X25 into rootvg UMFIO/X25PM for both domains.
- 3 Obtain the UMFIO controller modules for datavg and the X25PM modules. Ensure that the upgraded modules have the correct product engineering code (NTRX50NL for datavg UMFIO and NTRX50NN for X25PM). The PEC is printed on the top locking lever.

- 4 Perform the procedure [Adding I/O controller modules on page 250](#), to add the datavg UMFIO and X25PM modules for both domains to the system.
- 5 Perform the procedure [Migrating from a rootvg system to a rootvg/datavg system on page 289](#), to migrate from a rootvg-only system to a rootvg datavg system.
- 6 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Upgrading the rootvg MFIO to MFIO or UMFIO

### Purpose

Use this procedure to upgrade from a 4GB + DAT Multifunction Input/Output (MFIO) module to a 9GB + DAT MFIO module.

You can also use this procedure to perform the following tasks:

- upgrade from a 4GB + DAT MFIO module or a 9GB + DAT MFIO module to a 36GB + DAT Ultra-Multifunction Input/Output (UMFIO) module
- upgrade to any other supported combinations. For the list of supported combinations, refer to the table “Supported MFIO and UMFIO, datavg and rootvg configurations” in *Upgrading the CS 2000 Core Manager*, NN10060-461.
- revert a rootvg I/O module to the original hardware configuration, if the rootvg I/O module in a single domain was upgraded. Before reverting back, confirm that the storage system has regained full mirroring.

#### ATTENTION

Do not use this procedure to revert to the original rootvg I/O module if you have successfully upgraded the rootvg I/O module in both domains, or if you have upgraded from an MFIO with SYNC X.25 to a UMFIO with X.25 PMs

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

| Procedure  | Document  |
|--|---|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

## UMFIO pre-upgrade requirements

If you are upgrading to a UMFIO, you must check your system for UMFIO readiness prior to the upgrade. To check for UMFIO readiness, type the following:

```
# umfiocheck
```

The following example shows the output for a system that is UMFIO ready.

```
1+0 records in.
```

```
1+0 records out.
```

```
1+0 records in.
```

```
1+0 records out.
```

```
This system is UMFIO ready.
```

If the UMFIO is not ready, you must perform a backup and restore procedure. Perform the backup using the procedure “Creating system image backup tapes (S-tapes) manually” in the *CS 2000 Core Manager Security and Administration*, NN10170-611, Perform the restore using the procedure “Performing a full restore of the software from S-tape” in the *CS 2000 Core Manager Fault Management*, NN10082-911.

Once you have completed the backup and restore, rerun the `umfiocheck` command. If your system is still not UMFIO ready, contact your next level of support.

### ATTENTION

Have the correct UMFIO LAN personality module available. In order to upgrade to the UMFIO, you must have either the UMFIO LAN personality module (NTRX50NK) or the X25 personality module (NTRX50NN) available.



### CAUTION

Back up the system before you begin this procedure. If SBA is installed, make sure you back up the billing data. Also, make sure there is no tape in the MFIO DAT drive.

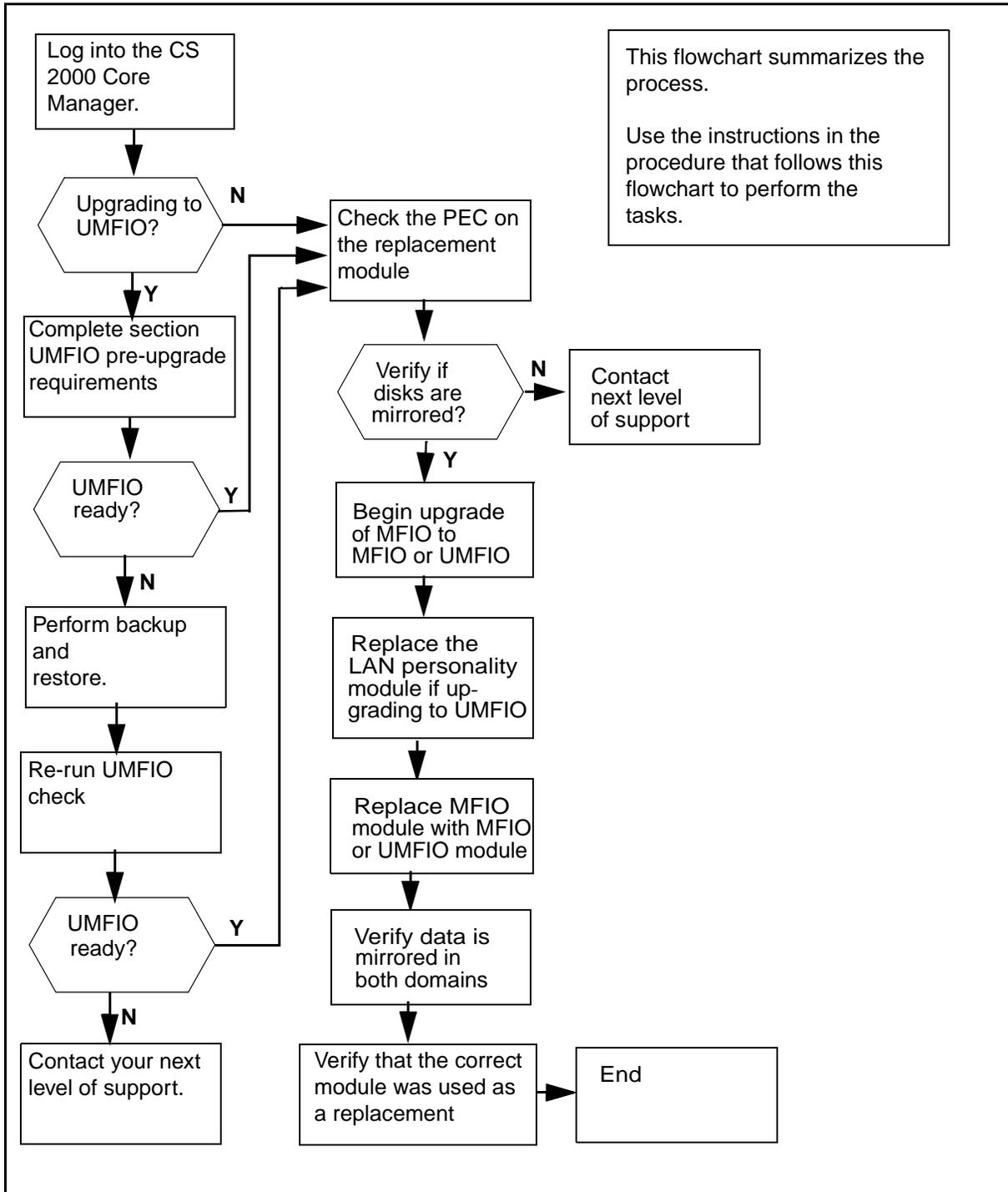
The following table lists the product engineering codes (PEC) for various modules used in this procedure.

| Nortel PEC  | Name                             |
|---|----------------------------------|
| NTRX50FS  | LAN personality module for MFIO  |
| NTRX50GN  | 4GB + DAT rootvg MFI             |
| NTRX50ND  | 9GB + DAT rootvg MFIO            |
| <b>Note:</b> Replacements for the NTRX50ND are filled on a best-effort basis before and after the manufacturers discontinue (MD) date of 31 December 2004. After 31 December 2004, the NTRX50NM is the replacement for the NTRX50ND |                                  |
| NTRX50NK  | LAN personality module for UMFIO |
| NTRX50NN  | X25 personality module for UMFIO |
| NTRX50NM  | 36GB + DAT rootvg UMFIO          |

### Task flow diagram

The following task flow diagram provides a summary of this process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

### Task flow for Upgrading the rootvg MFIO to MFIO or UMFI



## Procedure

### Upgrading the rootvg MFIO to MFIO or UMFIO

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### At the VT100 console

- 1 Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Check the label on the module that you want to use as a replacement. Make sure that label shows the product engineering code (PEC) that you want to use for your upgrade.
- 3 Access the storage level:

```
sdmmtc storage
```

| If the State of both volumes is | Do                                 |
|---------------------------------|------------------------------------|
| Mirrored                        | step <a href="#">4</a>             |
| not Mirrored                    | contact your next level of support |

- 4 Access the hardware level under the maintenance interface:
- 5 Upgrade the MFIO:

```
upgrade <chassis> <slot> <pec>
```

where

**<chassis>**

is sdmm since both rootvg MFIOs are located in the main chassis

**<slot>**

is slot 2 if you are upgrading domain 0 or slot 13 if you are upgrading domain 1

**<pec>**

is the product engineering code of the MFIO or UMFIO controller module you want to add

The following example command shows an upgrade to the 36GB + DAT UMPIO in slot 2 of the main chassis:

```
upgrade sdmm 2 NTRX50NM
```

- 6 Use the following table to determine your next step.

| If you are   | Do                     |
|--|------------------------|
| prompted to delete the X25 sync module configuration     | step <a href="#">7</a> |
| not prompted to delete the X25 sync module configuration | step <a href="#">8</a> |

- 7 Confirm the deletion of the X25 SYNC module configuration:

**y**

*The system responds:*

```
Transitioning forward from START to INFO_RETRIEVED

Volume group = rootvg on hdisk0
Physical partition size 16 with max partitions 3048

Transitioning forward from INFO_RETRIEVED to OFFLINED
Transitioning forward from OFFLINED to DEPENDENCIES_REMOVED
Transitioning forward from DEPENDENCIES_REMOVED to REPLACED

Replace ORIGINAL MFIO I/O-2 (c1-f2) with UPGRADED MFIO

Enter 1 to continue, 99 to exit:
```

- 8 Use the following table to determine your next step.

| If  | Do   |
|---|--|
| you want to replace the MFIO  | Do not type 1 at the console until the MFIO is replaced. Go to step <a href="#">9</a> to replace the MFIO. |
| you want to gracefully exit this procedure and back out of the upgrade without replacing any hardware | type 99, press Enter and go to step <a href="#">47</a>   |

**9** Begin the MFIO replacement.**ATTENTION**

Do not press 1 (1 to continue) at the console until you have replaced the MFIO module.

**10** If applicable, the following warning may be displayed as the MFIO upgrade progresses.

```
0516-1193 chvg: WARNING, once this operation is
completed, volume group rootvg cannot be
imported into AIX 430 or lower versions.
Continue (y/n)?
```

| If this response is | Do                      |
|---------------------|-------------------------|
| displayed           | step <a href="#">11</a> |
| not displayed       | step <a href="#">12</a> |

**11** Confirm the operation:**y**

Response

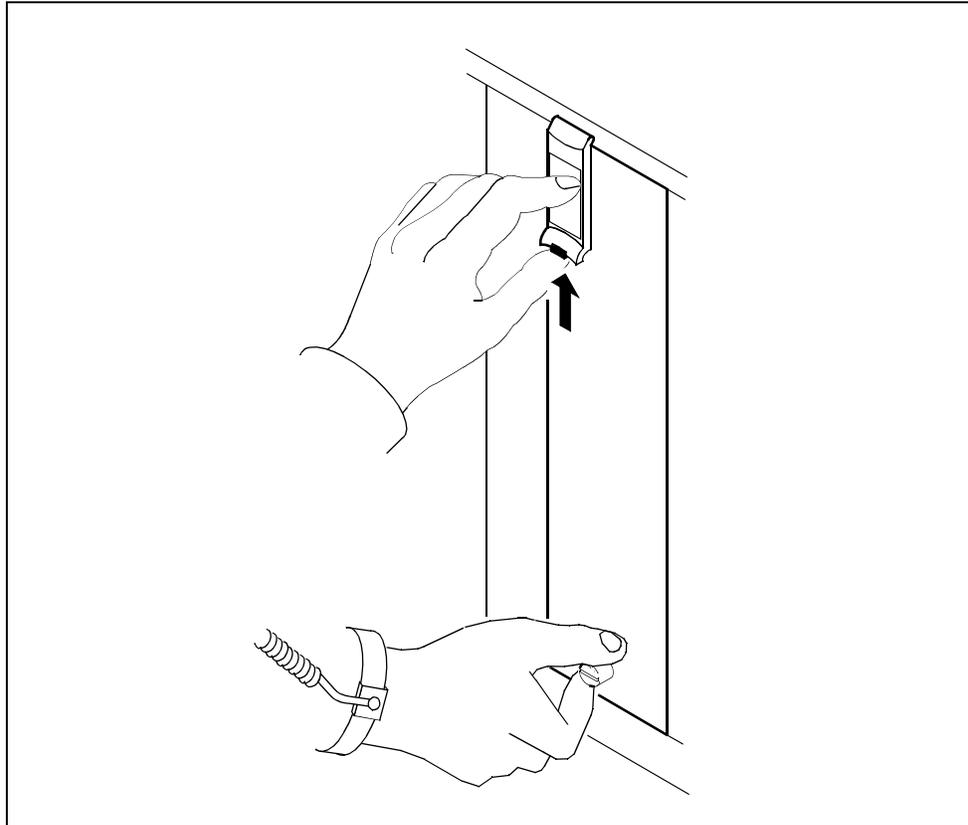
```
0516-1164 chvg: Volume group rootvg changed.
With given characteristics rootvg can include up
to 10 physical volumes with 3048 physical
partitions each.
```

***At the front of the CS 2000 Core Manager*****12** Wear an electrostatic discharge grounding wrist strap.**WARNING****Static electricity damage**

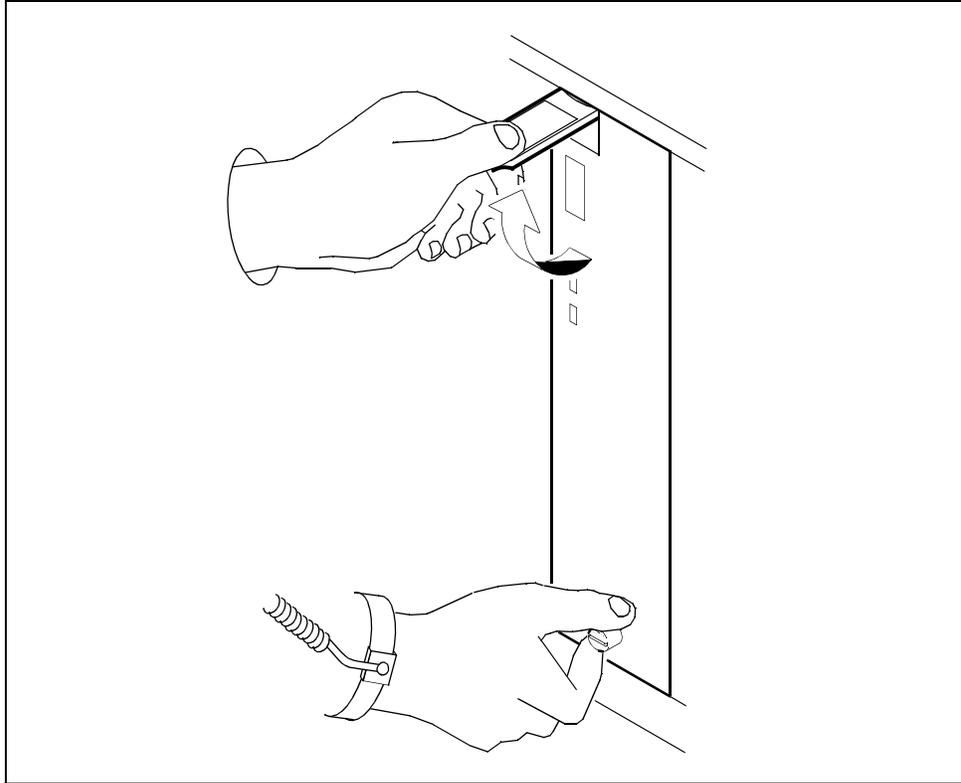
Wear an electrostatic discharge (ESD) grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

**13** Make sure the LED of the module you want to upgrade is either red or off before you remove it.

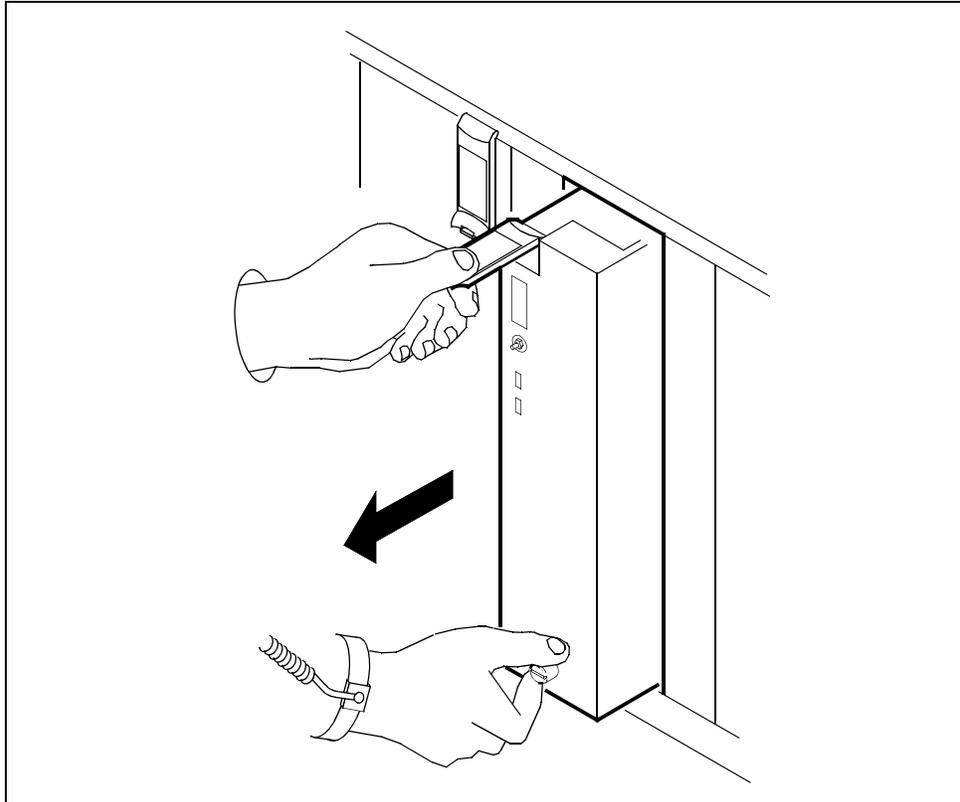
- 14 Undo the thumbscrews located on the top and the bottom of the MFIO controller module to be upgraded. The thumbscrews are the captive type, and cannot be removed from the module.
- 15 Depress the tip of the locking lever on the face of the MFIO controller module.



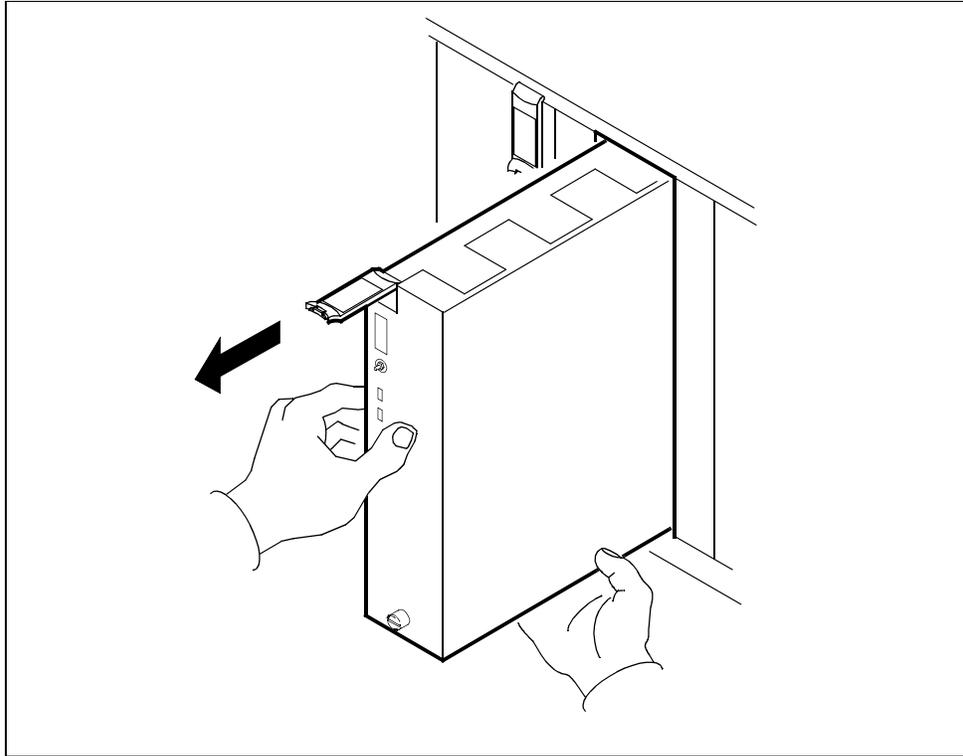
- 16 Open the locking lever on the face of the module by moving the lever outwards.



- 17** While grasping the locking lever, gently pull the module towards you until it protrudes about 2 in. (5 cm) from the CS 2000 Core Manager shelf.



- 18** Hold the card by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



- 19** Place the module you have removed in an ESD protective container.

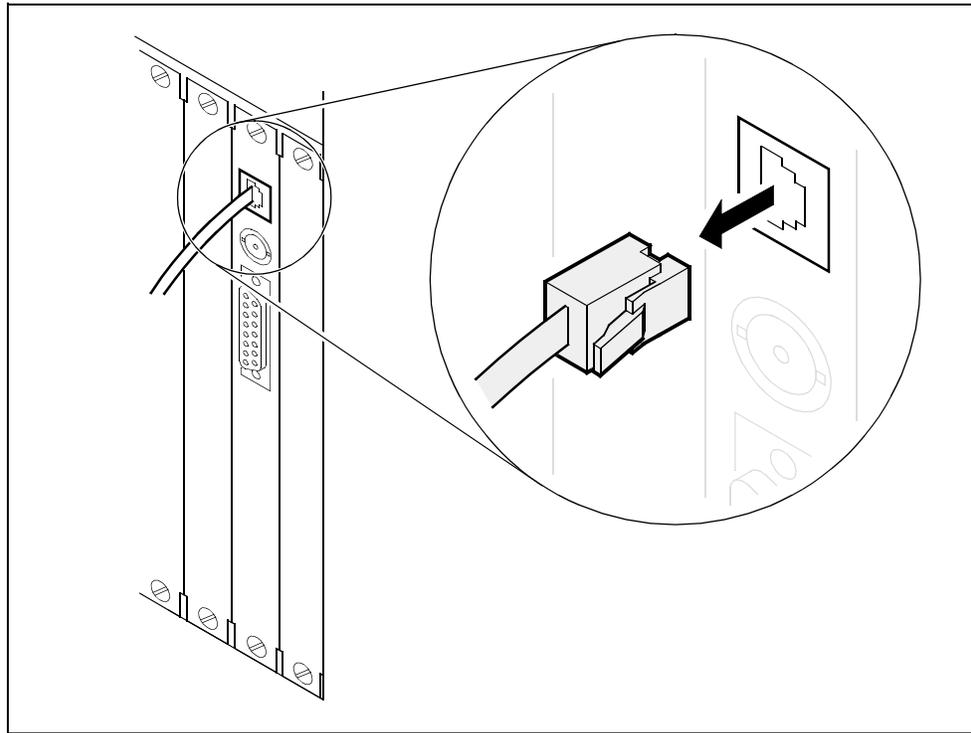
***At the back of the CS 2000 Core Manager***

- 20** Determine if you are upgrading to the UMFIO.

| If you are                 | Do                      |
|----------------------------|-------------------------|
| upgrading to the UMFIO     | step <a href="#">21</a> |
| not upgrading to the UMFIO | step <a href="#">32</a> |

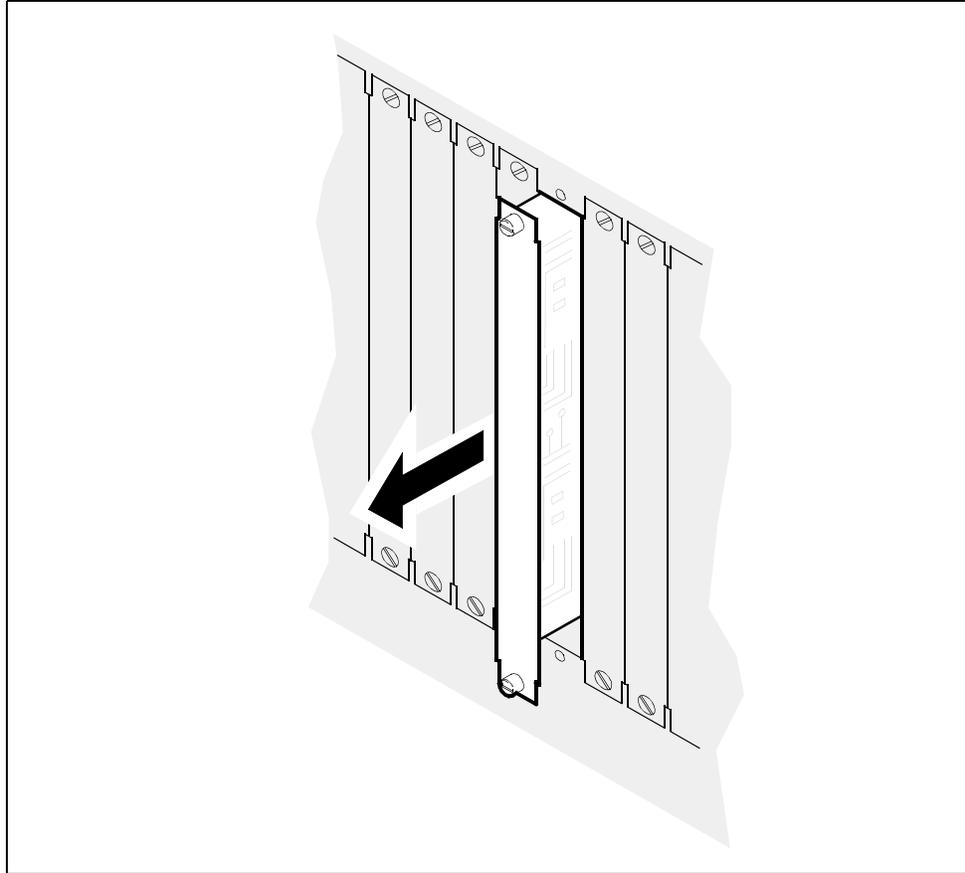
- 21** Remove the existing LAN personality module and replace it with the new personality module (NTRX50NK or NTRX50NN) that came with the new UMFIO module. This must be done before inserting the new UMFIO module. It is located at the rear of the I/O controller module to be upgraded.

- 22 Label the Ethernet cable connected to the LAN personality module you wish to replace.
- 23 Disconnect the Ethernet cable, as shown in the following diagram.

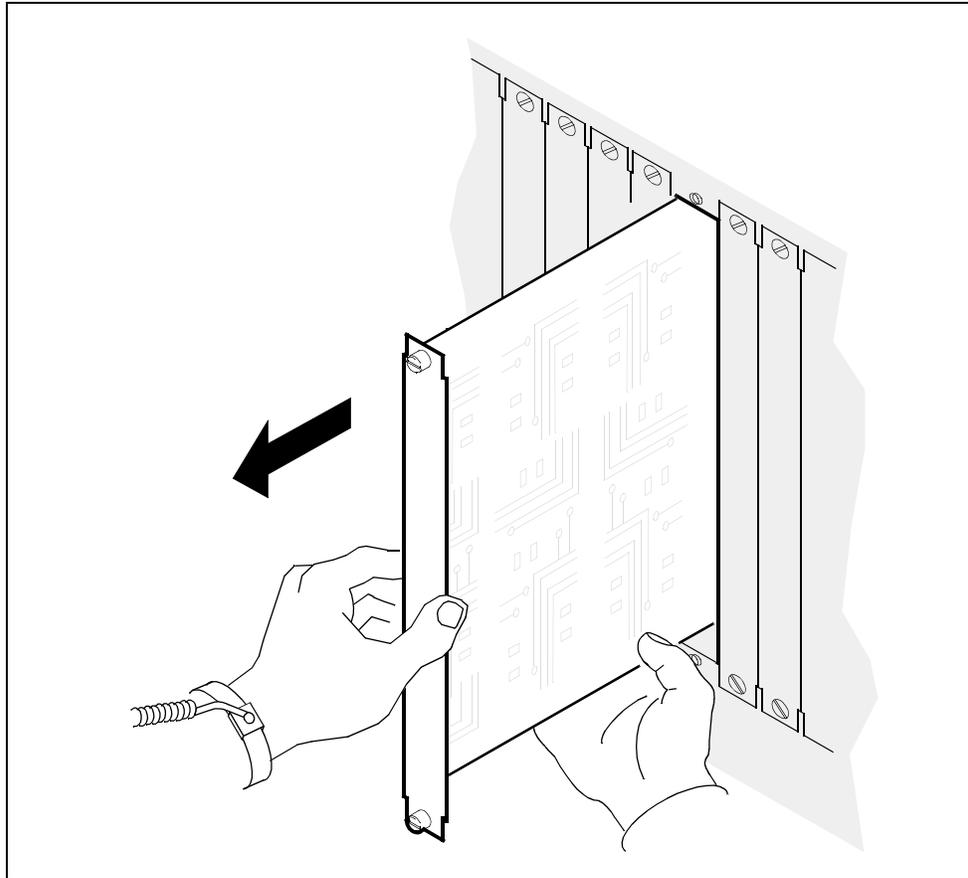


- 24 Loosen the two thumbscrews located at the top and the bottom of the LAN personality module. The thumbscrews are the captive type, and cannot be removed from the module.

- 25** While grasping the thumbscrews, gently pull the LAN personality module towards you until it protrudes about 2 in. (5 cm) from the CS 2000 Core Manager shelf.

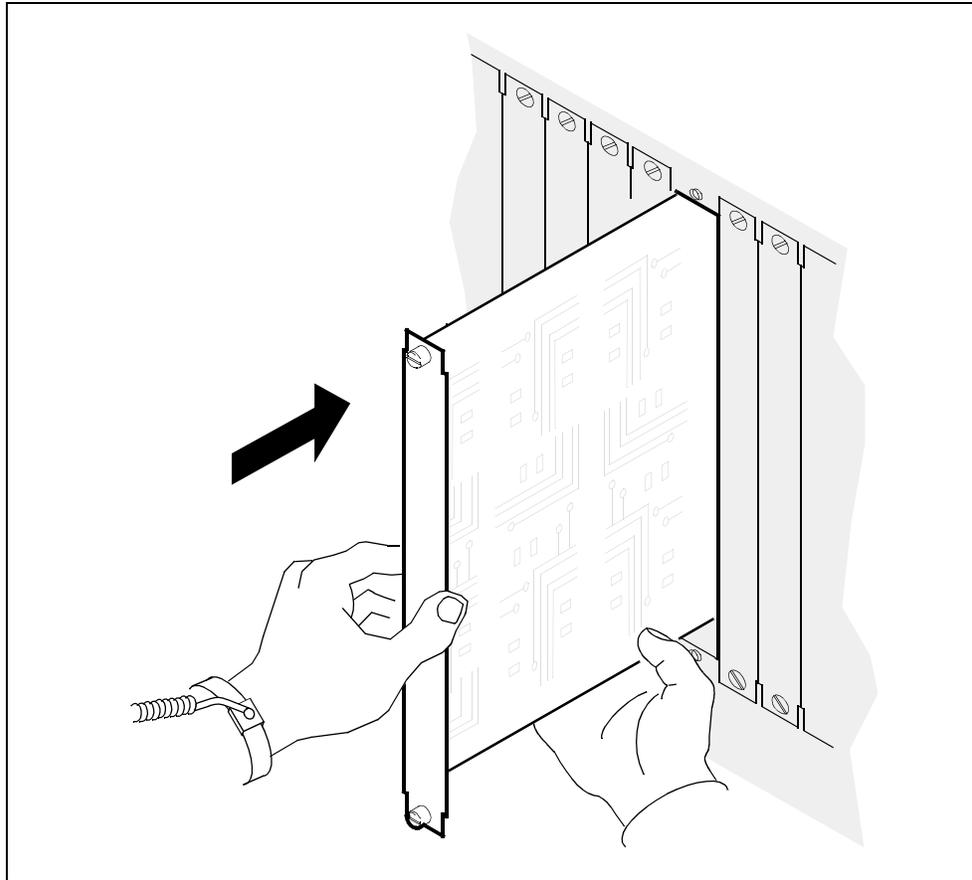


- 26** Hold the LAN personality module by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



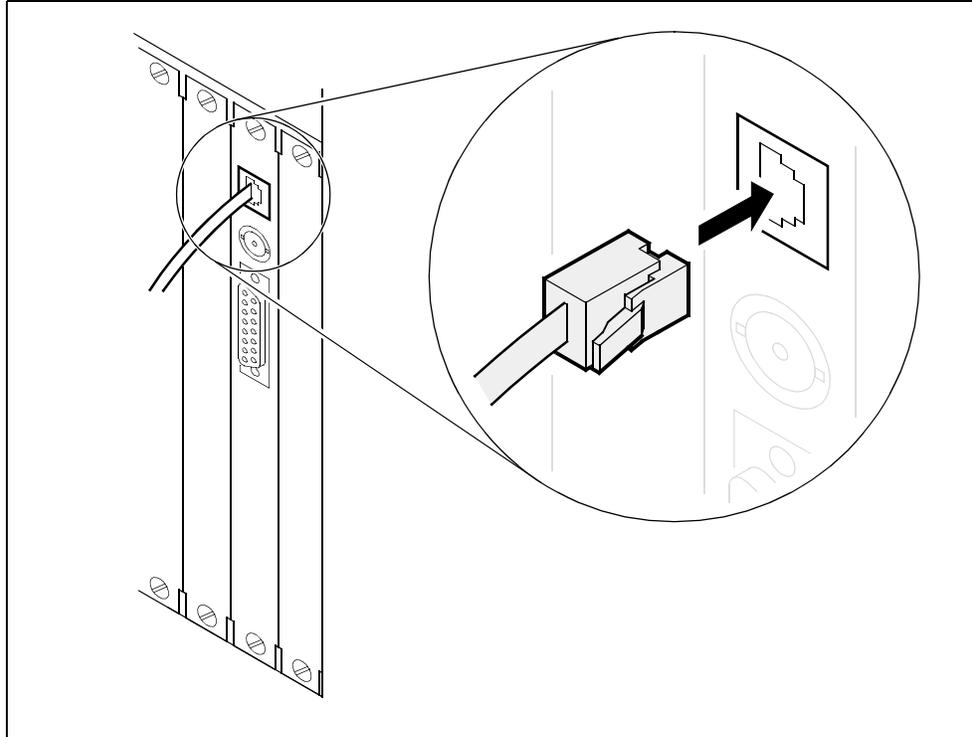
- 27** Place the LAN personality module you have removed in an ESD protective container.
- 28** Insert the new personality module (either NTRX50NK or NTRX50NN) into the CS 2000 Core Manager shelf.

- 29** Gently slide the LAN personality module into the shelf until it is fully inserted.



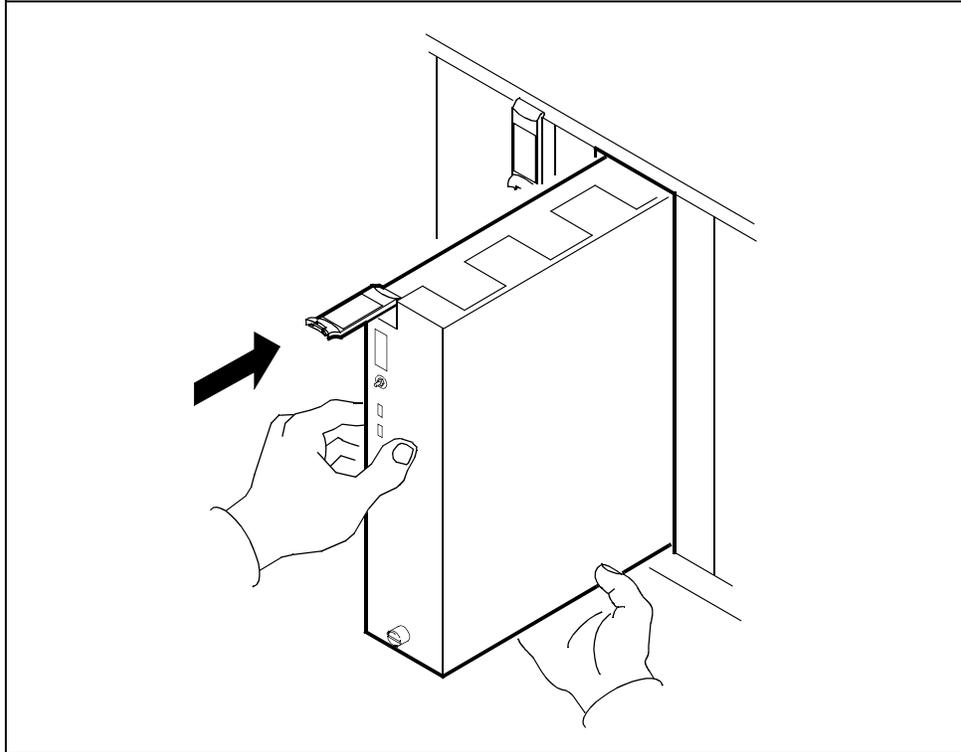
- 30** Tighten the thumbscrews at the top and the bottom of the LAN personality module.

- 31** Reconnect the Ethernet cable to the LAN personality module. You can remove the label that you put on the cable in step [22](#).

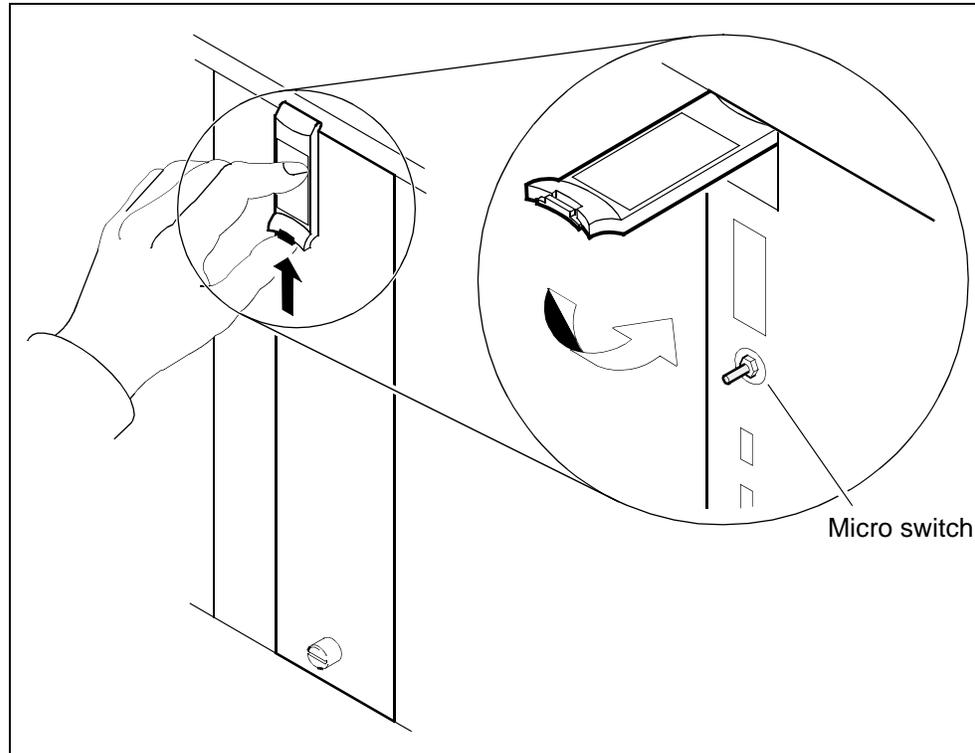


***At the front of the CS 2000 Core Manager***

- 32** Insert the PEC MFIO or PEC UMFI0 module into the CS 2000 Core Manager shelf.
- 33** Gently slide the module into the shelf until it is fully inserted.



- 34** Close the locking lever to secure the module. Ensure that the top micro switch is lined up with the locking lever to properly seat the module.



- 35** Tighten the thumbscrews on the module.

**At the VT100 console**

- 36** Return to the console.

```
Replace ORIGINAL MFIO I/O-2 (c1-f2) with UPGRADED MFIO
Enter 1 to continue, 99 to exit:
```

- 37** Continue the upgrade. Type **1** and press Enter.

*The system responds:*

```
Transitioning forward from REPLACED to ONLINED
Transitioning forward from ONLINED to DEPENDENCIES_ADDED
Transitioning forward from DEPENDENCIES_ADDED to OFFLINED_AFTER_UPGRADE
Transitioning forward from OFFLINED_AFTER_UPGRADE to ONLINED2
Transitioning forward from ONLINED2 to COMPLETE
>
```

**38** Use the following table to determine your next step.

| If the system   | Do                      |
|---|-------------------------|
| prompts you to remove the X25 SYNC module from slot <n> | step <a href="#">39</a> |
| does not prompt you to remove the X25 SYNC module       | step <a href="#">41</a> |

**39** Remove the X25 SYNC module from the slot indicated in the display.

*Example response:*

```
Please remove the X.25 SYNC module from the main chassis
slot 4.

Enter 1 to continue when ready: ("1"):
```

**40** Once you have removed the X25 SYNC module, continue the upgrade. Type:

**1**

*The system begins reintegration and are automatically returned to the sdmmtc hardware level as shown in the following figure.*

**Hardware menu level**

```
SDM  CON  LAN  APPL  SYS  HW  CLLI: FCC1
ISTb  .    .    .    ISTb ISTb Host: SDM1
                                           Fault Tolerant

Hw
0 Quit
2          I I F F C E E D D D D D D 5
3          C C A A P T T S S S S S A 1
4 Logs    M M N N U H H K K K K K T 2
5          1 2 1 2 1 2 1 2 3 4 5
6          Domain 0 . . . . . I . I I . . . .
7 Bsy     Domain 1 . . . . . I . I I . . . .
8 RTS
9
10
11
12
13
14 QuerySDM
15 Locate
```

41 Use the following table to determine your next step.

| If your system   | Do  |
|--|---|
| uses X.25 and you are upgrading to a UMFIO with X25PM, you must reconfigure the X.25 ports as part of the UMFIO upgrade. Reconfiguring the X.25 ports can be done during system reintegration. | Complete procedure <a href="#">Commissioning X.25 connectivity on page 190</a> , then return to this procedure and continue with the next step. |
| does not use X.25  | step <a href="#">42</a>   |

42 Monitor the system reintegration at the storage level, shown in the following figure.

**Storage menu level**

```

SDM  CON  LAN  APPL  SYS  HW  CLLI : FCC1
ISTb  .   .   .   ISTb ISTb Host : SDM1
                                           Fault Tolerant

Storage
0 Quit
2
3   Volume Group      Status              Free (MB)
   rootvg             Integrating (28%)  31856
4
5
6   Logical Volume    Location            Size(MB) % full/ threshold
7   1 /                rootvg              88      11/ 80
8   2 /usr             rootvg              600     29/ 90
9   3 /var             rootvg              200     5/ 70
10  4 /tmp             rootvg              24      5/ 90
11  5 /home            rootvg              304     4/ 70
12 Up  6 /sdm            rootvg              504     24/ 90
13 Down 7 /data           rootvg              208     5/ 80
14
15                                     Logical volumes showing: 1 to 7 of 7
16
17 Help
18 Refresh

root
Time 19:48 >
    
```

- 43** Once reintegration is complete the status of the volume group changes to Mirrored as shown in the following figure.

### Storage menu level

```

SDM  CON  LAN  APPL  SYS  HW      CLI : FCC1
      .    .    .    .    .    .      Host : SDM1
      .    .    .    .    .    .      Fault Tolerant

Storage
0 Quit
2
3   Volume Group      Status      Free (MB)
   rootvg             Mirrored    31856
4
5
6   Logical Volume    Location    Size(MB) % full/ threshold
7   1 /                rootvg      88        11/ 80
8   2 /usr             rootvg      600       29/ 90
9   3 /var             rootvg      200       5/ 70
10  4 /tmp             rootvg      24        5/ 90
11  5 /home            rootvg      304       4/ 70
12 Up  6 /sdm            rootvg      504       24/ 90
13 Down 7 /data          rootvg      208       5/ 80
14
15
16
17 Help
18 Refresh

Logical volumes showing: 1 to 7 of 7

root
Time 19:48 >

```

- 44** Verify that the correct module was used as a replacement:  
**locate**  
*The system displays a list of hardware.*
- 45** Confirm that the correct PEC is listed for the newly upgraded module.
- 46** Upgrade the MFIO /UMFIO module in the other domain by repeating steps [4](#) through [45](#), then continue to the next step.
- 47** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Upgrading a datavg MFIO to MFIO or UMFIO

### Purpose

Use this procedure to perform the following Multifunction Input/Output (MFIO) to MFIO or Ultra-Multifunction Input/Output (UMFIO) upgrades:

- 4GB + 4GB MFIO to 9GB + 9GB MFIO
- 4GB + 4GB MFIO to 36GB + 36GB UMFIO
- 9GB + 9GB MFIO to 36GB + 36GB UMFIO

### Application

You can also use this procedure to upgrade to other supported combinations. For the list of supported combinations, refer to the table “Supported MFIO and UMFIO, datavg and rootvg configurations” in *Upgrading the CS 2000 Core Manager*, NN10060-461.

**Note:** As of the 15.2 release, the system allows you to gracefully back out of an MFIO upgrade.

You can use this procedure to revert to the original MFIO in a single domain, but only when the procedure is complete and you have confirmed that the storage system has regained full disk mirroring. Do not use this procedure to revert to the original MFIO if you have successfully upgraded the MFIO in both domains.



#### CAUTION

##### Possible loss of intercept service

If the MFIO to be upgraded supports lawful intercept through an X.25 interface, this procedure removes lawful intercept from service for a short period of time. After you complete the upgrade procedure, you must restart the lawful intercept application.

Refer to the following table for the product engineering codes.

| Nortel PEC       | Name                            |
|------------------|---------------------------------|
| NTRX50FS (back)  | LAN personality module for MFIO |
| NTRX50GP (front) | 4GB + 4GB datavg MFIO           |

| Nortel PEC   | Name  |
|--|---|
| NTRX50NC (front)   | 9GB + 9GB datavg MFIO   |
| <p><b>Note:</b> Replacements for the NTRX50NC are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004 the NTRX50NL is the replacement for the NTRX50NC.</p> |   |
| NTRX50NK (back)  | LAN personality module for UMFIO<br>The NTRX50NK is required if you want to use the datavg UMFIO (NTRX50NL) for LAN access. If you intend to use the datavg UMFIO for storage only, or if you do not currently have LAN cards, you do not need to install the NTRX50NK. |
| NTRX50NN (back)  | X25 personality module for UMFIO  |
| NTRX50NL (front)   | 36GB + 36GB datavg UMFIO  |

## Prerequisites and guidelines

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

### Other activities related to using this procedure

| Procedure  | Document  |
|--|---|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

**ATTENTION**

Perform a backup of your billing files before starting this procedure. Also, ensure that an S-tape (System Image Tape) of your CS 2000 Core Manager is made prior to starting the upgrade procedures.

**ATTENTION**

Upgrading a mirrored pair of MFIOs can require a full maintenance window to complete. If an expansion chassis is provisioned, the upgrade of additional mirrored pairs of MFIOs can require multiple maintenance windows.

**ATTENTION**

You must be a user authorized to perform config-admin actions to perform this procedure.

**ATTENTION**

A UMFIO upgrade requires the UMFIO LAN personality module (NTRX50NK) or the X25 personality module (NTRX50NN).

No CS 2000 Core Manager should be populated with more than 2 MFIOs per I/O domain (for any combination) as part of datavg.

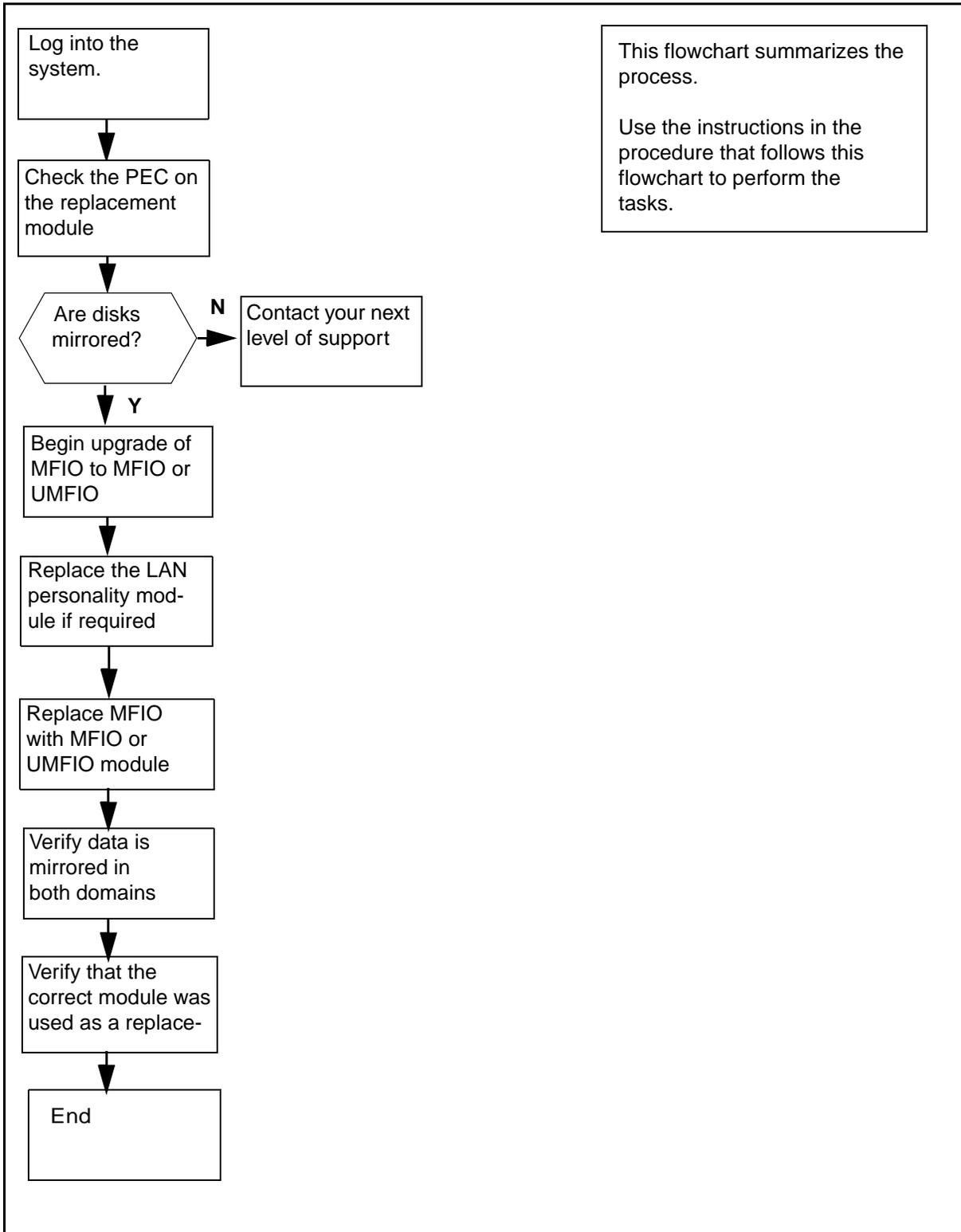
Nortel recommends that the MFIOs in the main chassis be upgraded first, starting with domain 1 and ending with domain 0. After upgrading the main chassis, proceed to upgrade the expansion chassis, if there is one. Datavg modules must be upgraded in pairs. For example, if you upgrade the MFIO in slot 4 of the main chassis, you must also upgrade the MFIO module in slot 15 of the main chassis. Refer to the following table for more information about upgrading MFIO pairs.

| Upgrade Sequence | Domain 0 | Domain 1 | MFIO davavg pairing location |
|------------------|----------|----------|------------------------------|
| 1                | slot 4   | slot 15  | main chassis                 |
| 2                | slot 1   | slot 9   | expansion chassis            |

| <b>Upgrade Sequence</b> | <b>Domain 0</b> | <b>Domain 1</b> | <b>MFIO davavg pairing location</b> |
|-------------------------|-----------------|-----------------|-------------------------------------|
| 3                       | slot 3          | slot 11         | expansion chassis                   |
| 4                       | slot 5          | slot 13         | expansion chassis                   |
| 5                       | slot 7          | slot 15         | expansion chassis                   |

## Procedure

The task flow diagram that follows provides a summary of this process. Use the instructions in the procedure that follows the flowchart to perform the tasks.

**Task flow for Upgrading a datavg MFIO to MFIO or UMFIO (datavg)**

## Procedure

### Upgrading a datavg MFIO to MFIO or UMFIO

#### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

#### At the VT100 console

- 1 Log into the CS 2000 Core Manager as a user authorized to perform config-admin actions.
- 2 Check the label on the module that you want to use as a replacement. Make sure that label shows the product engineering code (PEC) that you want to use for your upgrade.
- 3 Determine the physical location of the hard disk drives:

#### locate

*Example response:*

| Site | Flr | RPos | Bay_id | Shf  | Description           | Slot | EqPEC         |
|------|-----|------|--------|------|-----------------------|------|---------------|
| HOST | 01  | A02  | CSDM   | SDMM | 512(0)                | 01   | NTRX50GA FRNT |
| HOST | 01  | A02  | CSDM   | SDMM |                       | 01   | NTRX50FS BACK |
| HOST | 01  | A02  | CSDM   | SDMM | ETH(0),DSK1(0),DAT(0) | 02   | NTRX50GN FRNT |
| HOST | 01  | A02  | CSDM   | SDMM |                       | 02   | NTRX50FS BACK |
| HOST | 01  | A02  | CSDM   | SDMM | DSK2(0),DSK3(0)       | 04   | NTRX50GP FRNT |
| HOST | 01  | A02  | CSDM   | SDMM | CPU(0)                | 06   | NTRX50FK FRNT |
| HOST | 01  | A02  | CSDM   | SDMM |                       | 06   | NTRX50FD BACK |
| HOST | 01  | A02  | CSDM   | SDMM | CPU(1)                | 10   | NTRX50FK FRNT |
| HOST | 01  | A02  | CSDM   | SDMM | 512(1)                | 12   | NTRX50GA FRNT |
| HOST | 01  | A02  | CSDM   | SDMM |                       | 12   | NTRX50GH BACK |
| HOST | 01  | A02  | CSDM   | SDMM | ETH(1),DSK1(1),DAT(1) | 13   | NTRX50GN FRNT |
| HOST | 01  | A02  | CSDM   | SDMM |                       | 13   | NTRX50FS BACK |
| HOST | 01  | A02  | CSDM   | SDMM | DSK2(1),DSK3(1)       | 15   | NTRX50GP FRNT |
| HOST | 01  | A02  | CSDM   | SDMM | FAN1(0)               | --   | NTRX50FE FRNT |
| HOST | 00  | A02  | CSDM   | SDMM | FAN1(1)               | --   | NTRX50FF FRNT |
| HOST | 01  | A02  | CSDM   | SDME | ICM1(0)               | --   | NTRX50FG BACK |
| HOST | 01  | A02  | CSDM   | SDME | ICM1(1)               | --   | NTRX50FH BACK |
| HOST | 01  | A02  | CSDM   | SDME | DSK4(0), DSK5(0)      | 01   | NTRX50FU FRNT |

- 4 Using the information displayed, record the physical location of all hard disk drives in order to avoid removing the wrong drive. It is necessary to also record the chassis, slot, and PEC of the IO module you want to upgrade:

#### chassis (Shf)

is the chassis where the IO module you want to upgrade is located. The main chassis is identified as sdmm. The expansion chassis is identified as sdme. The chassis identifier is displayed under the Shf heading.

**Slot**

is the slot number (1-16) in the chassis where the IO module to be upgraded is located. The slot number is displayed under the Slot heading.

**pec (EqPEC)**

is the product engineering code for the IO controller module you want to add (either NTRX50NC or NTRX50NL).

**ATTENTION**

Replacements for the NTRX50NC are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004, the NTRX50NL is the replacement for the NTRX50NC.

- 5 Ensure that the datavg logical volumes are in sync:

**lsvg -l datavg**

From the output, confirm that all logical volumes have a status of open/syncd under column LV State, and that each logical volume has 2 physical volumes under column PVs.

| If  | Do                                 |
|---|------------------------------------|
| all logical volumes show LV State as open/syncd and PVs as 2    | step <a href="#">6</a>             |
| not all logical volumes show LV State as open/syncd or PVs as 2 | contact your next level of support |

- 6 Access the storage level:

**sdmmtc storage**

| If the status of the datavg disks is | Do                                 |
|--------------------------------------|------------------------------------|
| mirrored                             | step <a href="#">7</a>             |
| not mirrored                         | contact your next level of support |

- 7 Access the hardware level:

**hw**

**8** Upgrade the MFIO:

**upgrade** <chassis> <slot> <PEC>

where

**<chassis>**

is the chassis where the MFIO module to be upgraded is located. The main chassis is identified as 'sdmm'. The expansion chassis is identified as 'sdme'.

**<slot>**

is the slot number (1-16) in the chassis where the MFIO module to be upgraded is located

**Note:** For slots 1-9 you are not required to enter a 0 (zero) before the slot number. For instance, to specify slot 5, enter 5 not 05.

**<PEC>**

is the product engineering code for the MFIO or the UMFI controller module you want to add (either NTRX50NC or NTRX50NL)

**Note:** Replacements for the NTRX50NC are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004, the NTRX50NL is the replacement for the NTRX50NC.

**Example**

upgrade sdmm 4 NTRX50NL

This example indicates an upgrade to the 36GB + 36GB UMFI in slot 4 of the main chassis.

| If you are                                | Do                      |
|---|-------------------------|
| prompted to delete an X.25 interface      | step <a href="#">9</a>  |
| not prompted to deleted an X.25 interface | step <a href="#">14</a> |

**9** Confirm the deletion of the X.25 interface:**y***The system responds:*

```

Transitioning forward from START to INFO_RETRIEVED

Volume group = datavg on hdisk4
Physical partition size 16 with max partitions 3048

Volume group = datavg on hdisk5
Physical partition size 16 with max partitions 3048

Transitioning forward from INFO_RETRIEVED to OFFLINED
Transitioning forward from OFFLINED to DEPENDENCIES_REMOVED
Transitioning forward from DEPENDENCIES_REMOVED to REPLACED

Replace ORIGINAL MFIO I/O-1 (c1-f15) with UPGRADED MFIO

Enter 1 to continue, 99 to exit:

```

**10** Use the following table to determine your next step.

| If  | Do  |
|---|---|
| you want to replace the MFIO  | Do not type 1 at the console until the MFIO is replaced. Go to step <a href="#">11</a> to replace the MFIO. |
| you want to gracefully exit this procedure and back out of the upgrade without replacing any hardware | Type 99, press Enter and go to step <a href="#">45</a>  |

**11** Begin the replacement of the MFIO.**ATTENTION**

Do not press 1 (1 to continue) at the console until you have replaced the MFIO module.

**12** If applicable, the following warning may be displayed as the MFIO upgrade progresses.

```

0516-1193 chvg: WARNING, once this operation is
completed, volume group rootvg cannot be

```

imported into AIX 430 or lower versions.  
Continue (y/n)?

| If this response is | Do                      |
|---------------------|-------------------------|
| displayed           | step <a href="#">13</a> |
| not displayed       | step <a href="#">14</a> |

- 13** Confirm the operation:

**y**

Response

0516-1164 chvg: Volume group rootvg changed.  
With given characteristics rootvg can include up  
to 10 physical volumes with 3048 physical  
partitions each.

***At the front of the CS 2000 Core Manager***

- 14** Wear an electrostatic discharge grounding wrist strap.



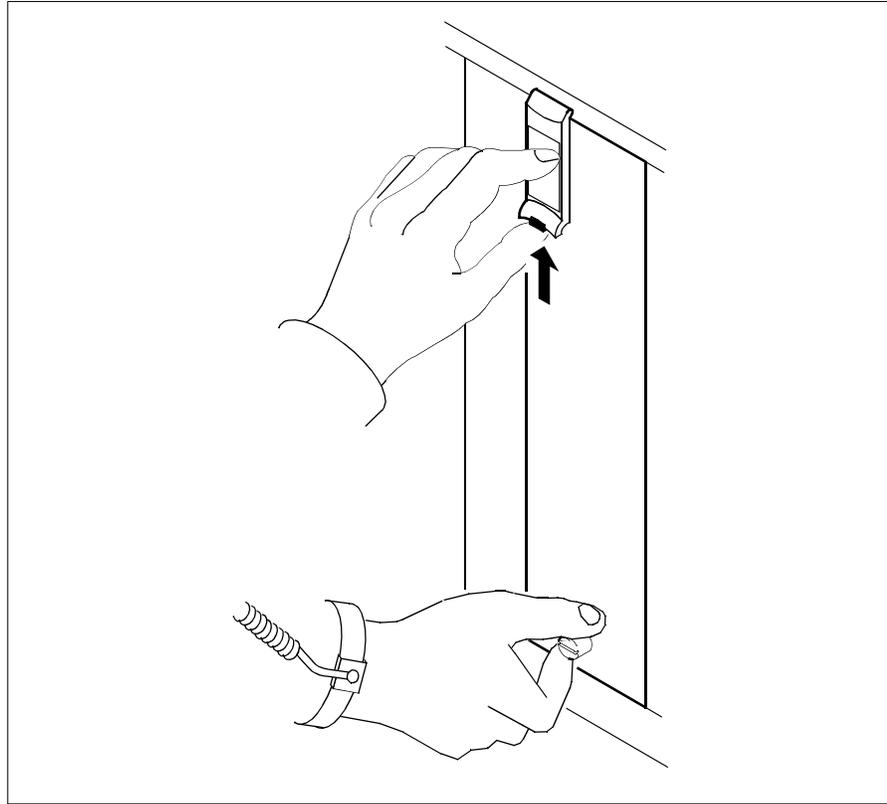
**WARNING**

Static electricity damage

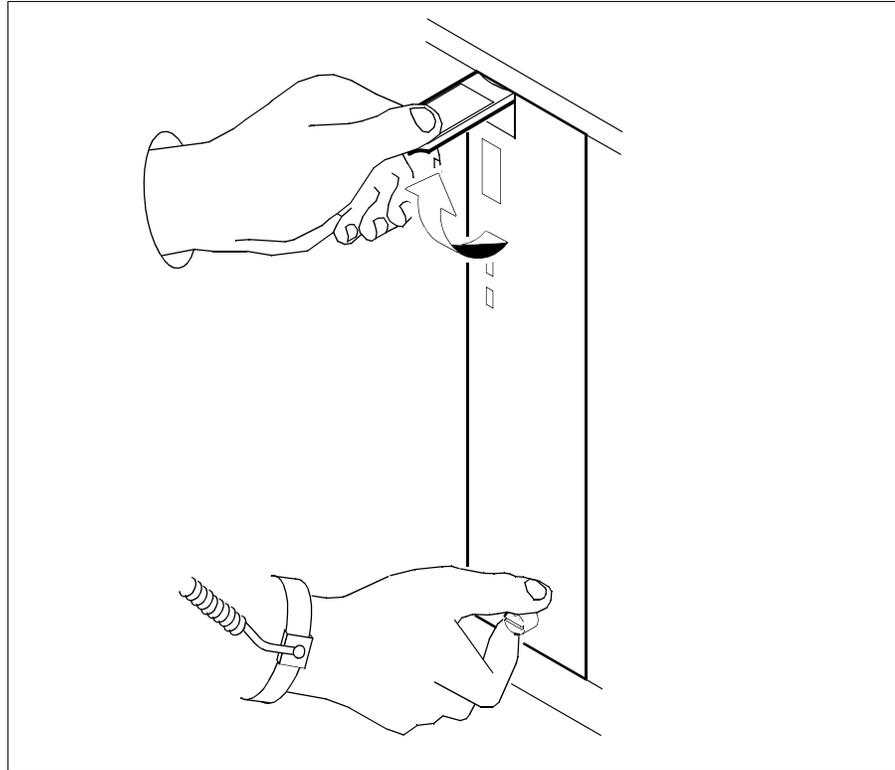
Wear an electrostatic discharge (ESD) grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

- 15** Make sure the LED of the module you want to upgrade is either red or off before you remove it.
- 16** Undo the thumbscrews located on the top and the bottom of the MFIO controller module to be upgraded. The thumbscrews are the captive type, and cannot be removed from the module.

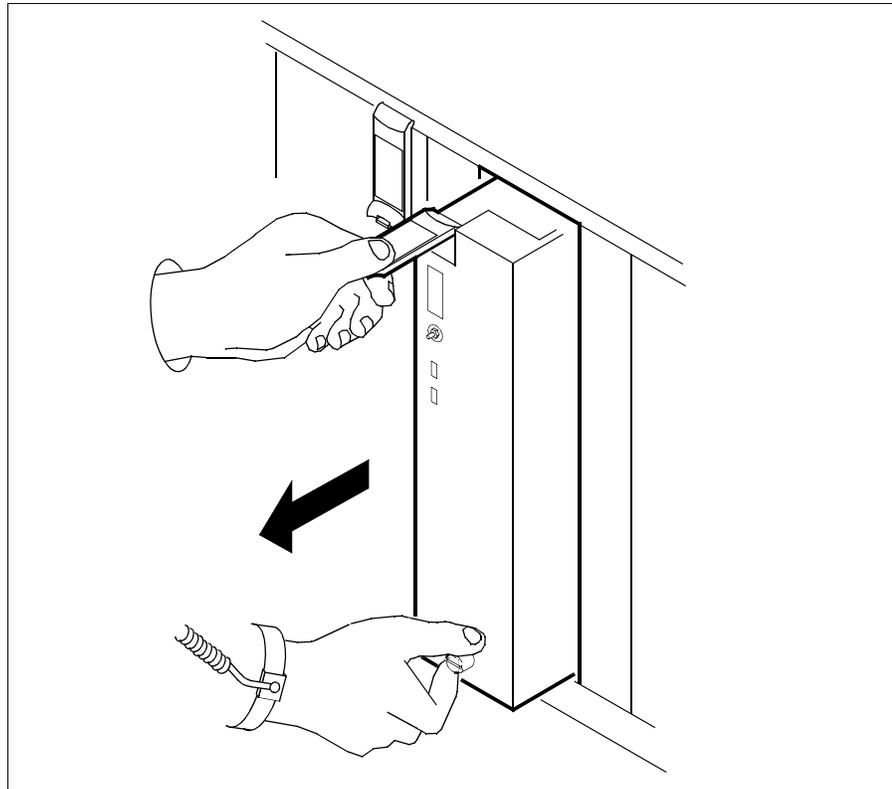
- 17 Depress the tip of the locking lever on the face of the MFIO controller module.



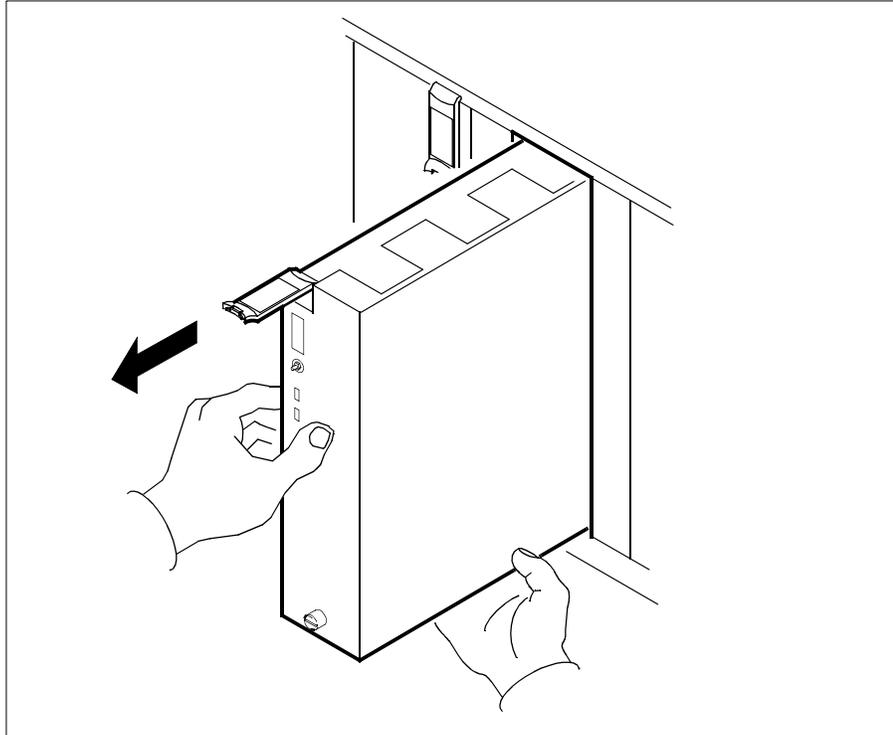
- 18** Open the locking lever on the face of the module by moving the lever outwards.



- 19** While grasping the locking lever, gently pull the module towards you until it protrudes about 2 in. (5 cm) from the shelf.



- 20** Hold the card by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



- 21** Place the module you have removed in an ESD protective container.

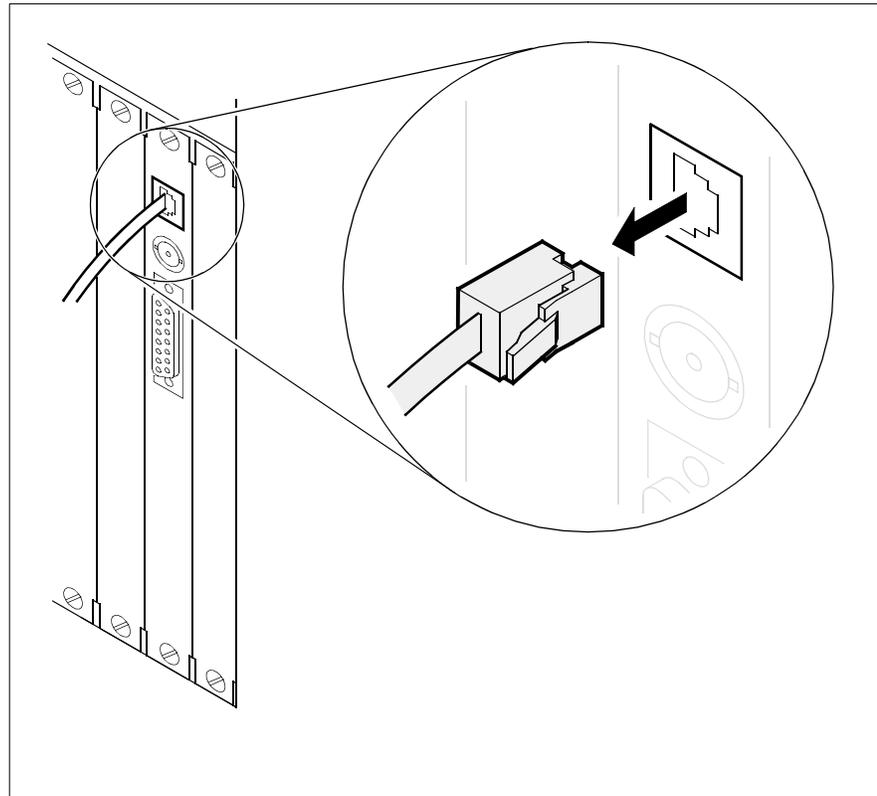
***At the back of the CS 2000 Core Manager***

- 22** Determine if you are upgrading to UMFIO.

| <b>If you are</b>      | <b>Do</b>               |
|------------------------|-------------------------|
| upgrading to UMFIO     | step <a href="#">23</a> |
| not upgrading to UMFIO | step <a href="#">34</a> |

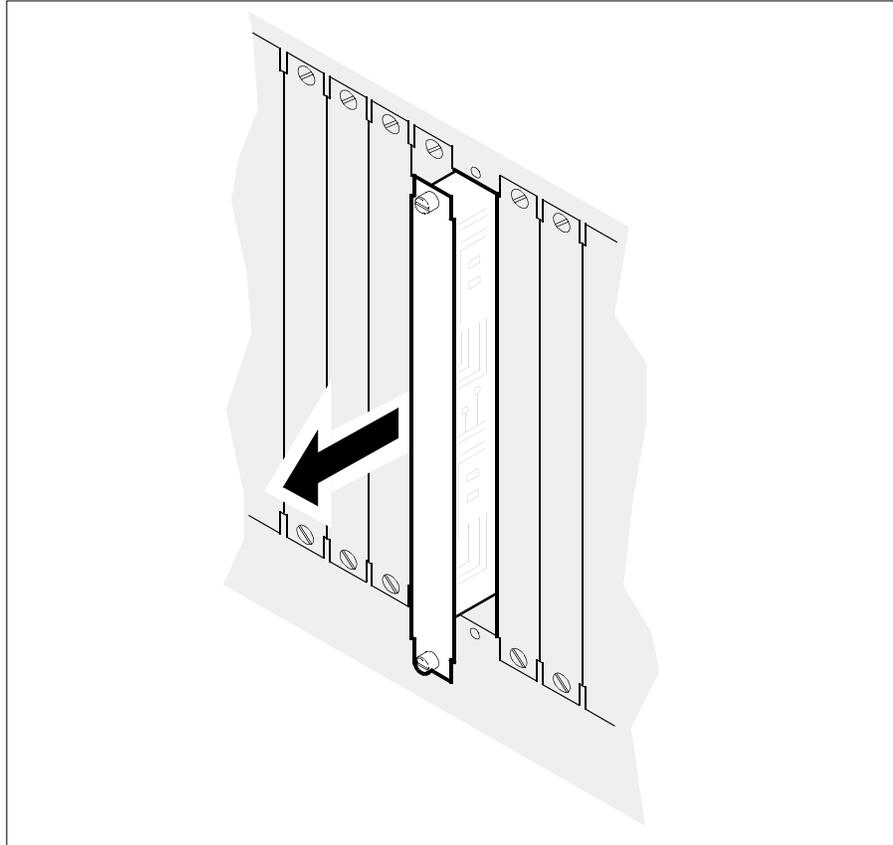
- 23** Removing the existing LAN personality module and replace it with the new personality module (NTRX50NK or NTRX50NN) that came with the new UMFIO module. This must be done before inserting the new UMFIO module. It is located at the rear of the I/O controller module to be upgraded.

- 24 Label the Ethernet cable connected to the LAN personality module you want to replace.
- 25 Identify the correct LAN module (slot and PEC code) you wish to remove and disconnect the Ethernet cable, as shown in the following diagram.

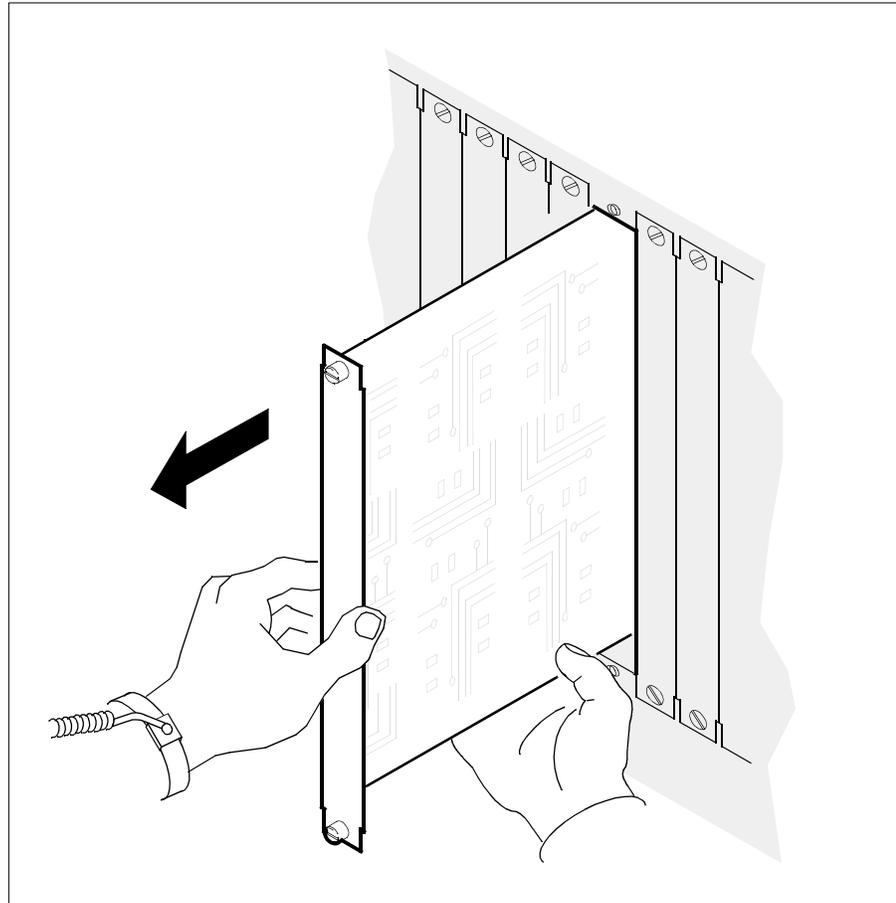


- 26 Loosen the two thumbscrews located at the top and the bottom of the LAN personality module. The thumbscrews are the captive type, and cannot be removed from the module.

- 27** While grasping the thumbscrews, gently pull the LAN personality module towards you until it protrudes about 2 in. (5 cm) from the shelf.

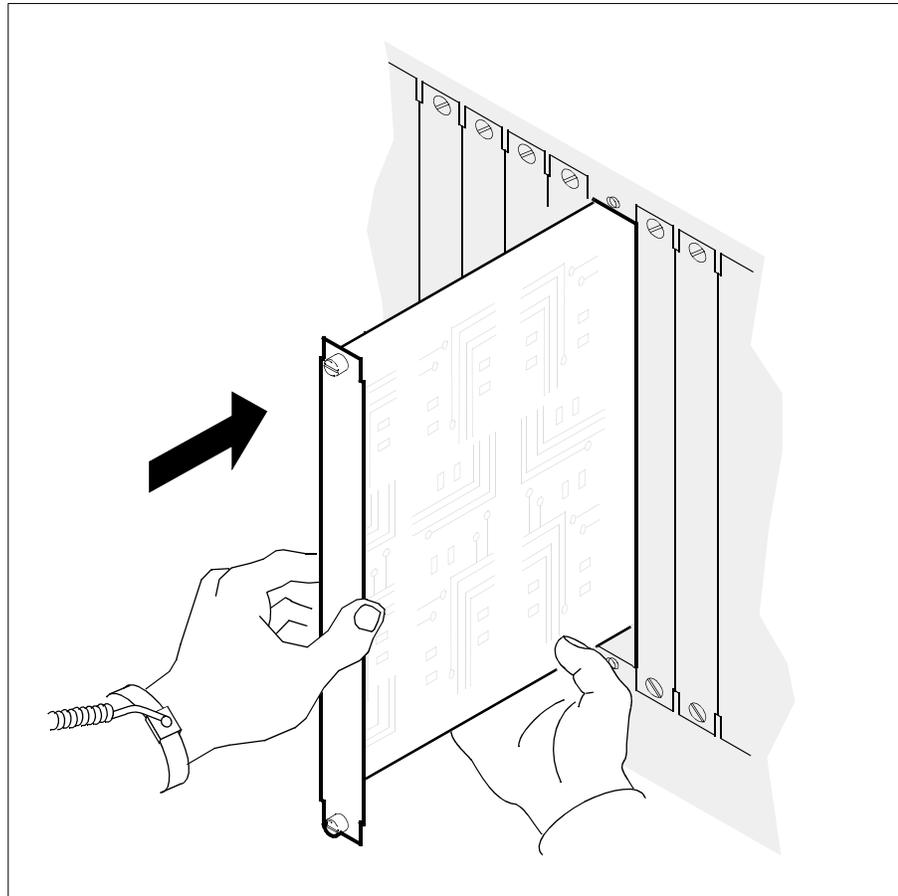


- 28** Hold the LAN personality module by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



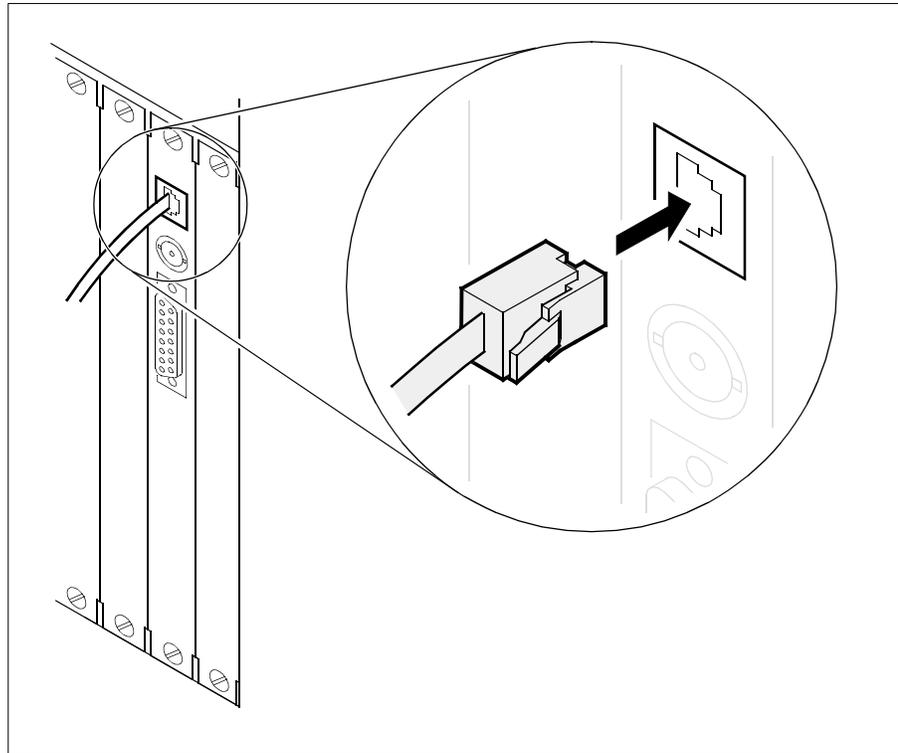
- 29** Place the LAN personality module you have removed in an ESD protective container.
- 30** Insert the new LAN personality module (either NTRX50NK or NTRX50NN) into the shelf.

- 31** Gently slide the LAN personality module into the shelf until it is fully inserted.



- 32** Tighten the thumbscrews at the top and the bottom of the LAN personality module.

- 33** Reconnect the Ethernet cable to the LAN personality module. You can remove the label you put on the cable in step 24.

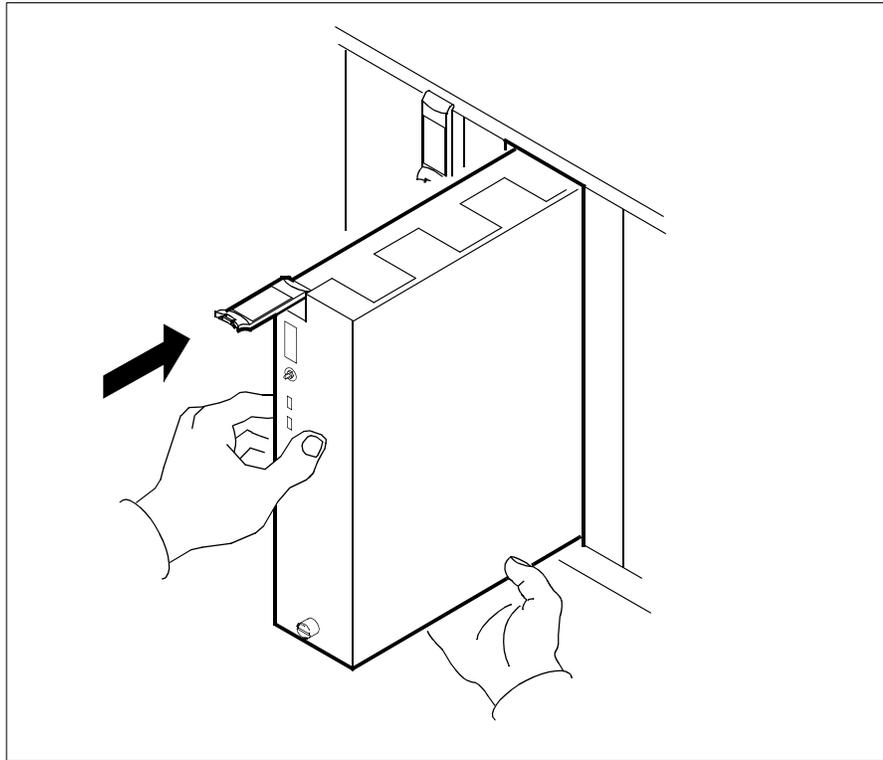


***At the front of the CS 2000 Core Manager***

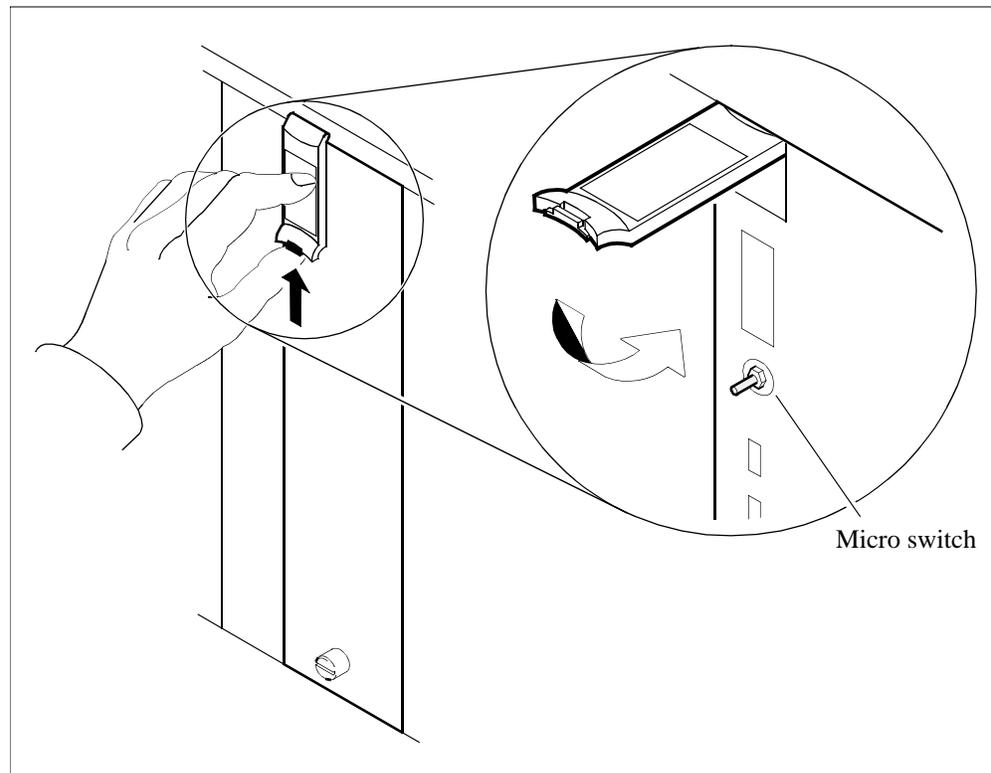
- 34** Insert the NTRX50NC MFIO / NTRX50NL UMFIO module into the shelf.

**Note:** Replacements for the NTRX50NC are filled on a best-effort basis before and after the MD date of 31 December 2004. After 31 December 2004, the NTRX50NL is the replacement for the NTRX50NC.

**35** Gently slide the module into the shelf until it is fully inserted.



- 36** Close the locking lever to secure the module. Ensure that the top micro switch is lined up with the locking lever to properly seat the module.



- 37** Tighten the thumbscrews on the module.

- 38** Return to the console.

```
Replace ORIGINAL MFIO I/O-2 (c1-f2) with UPGRADED MFIO
Enter 1 to continue, 99 to exit:
```

- 39** Continue the upgrade. Type **1** and press Enter.

*The system responds:*

```
Transitioning forward from REPLACED to ONLINED
Transitioning forward from ONLINED to DEPENDENCIES_ADDED
Transitioning forward from DEPENDENCIES_ADDED to OFFLINED_AFTER_UPGRADE
Transitioning forward from OFFLINED_AFTER_UPGRADE to ONLINED2
Transitioning forward from ONLINED2 to COMPLETE
>
```

*The system begins reintegration and you are automatically returned to the sdmmtc Hardware level.*

## Hardware menu level

```
SDM   CON  LAN  APPL  SYS  HW   CLLI : FCC1
ISTb  .    .    .    .    ISTb ISTb Host : SDM1
                                           Fault Tolerant

Hw
0 Quit
2          I I F F C E E D D D D D D 5
3          C C A A P T T S S S S S A 1
4 Logs    M M N N U H H K K K K K T 2
5          1 2 1 2 1 2 1 2 3 4 5
6          Domain 0 . . . . . I . I I . . . .
7 Bsy     Domain 1 . . . . . I . I I . . . .
8 RTS
9
10
11
12
13
14 QuerySDM
15 Locate
16
17 Help
18 Refresh

root
Time 19:48 >
```

## 40 Monitor the system reintegration at the storage level, shown in the following figure.

### Storage menu level

```

SDM   CON  LAN  APPL  SYS  HW   CLI : FCC1
ISTb  .    .    .    ISTb ISTb Host : SDM1
                                           Fault Tolerant

Storage
0 Quit
2
3     Volume Group      Status      Free (MB)
4     rootvg           Mirrored    31856
5     datavg           Integrating (28%) 43360 !
6
7     Logical Volume   Location    Size(MB) % full/ threshold
8     1 /              rootvg      88       11/ 80
9     2 /usr           rootvg      600      29/ 90
10    3 /var           rootvg      200      5/ 70
11    4 /tmp           rootvg      24       5/ 90
12    5 /home         rootvg      304      4/ 70
13    6 /sdm          rootvg      504      24/ 90
14    7 /data         datavg      208      5/ 80
15
16
17 Help
18 Refresh

Logical volumes showing: 1 to 7 of 7

root
Time 19:48 >

```

- 41** Once the system completes the reintegration, the status of the volume group changes to Mirrored.

### Storage menu level

```

SDM  CON  LAN  APPL  SYS  HW      CLI : FCC1
      .    .    .    .    .    .      Host : SDM1
      .    .    .    .    .    .      Fault Tolerant

Storage
0 Quit
2
3   Volume Group      Status      Free (MB)
4   rootvg            Mirrored    31856
5   datavg            Mirrored    43360
6
7   Logical Volume    Location    Size(MB) % full/ threshold
8   1 /                rootvg      88        11/ 80
9   2 /usr             rootvg      600       29/ 90
10  3 /var             rootvg      200       5/ 70
11  4 /tmp             rootvg      24        5/ 90
12  5 /home            rootvg      304       4/ 70
13  6 /sdm             rootvg      504       24/ 90
14  7 /data            datavg      208       5/ 80
15
16
17 Help
18 Refresh

Logical volumes showing: 1 to 7 of 7

root
Time 19:48 >

```

- 42** Verify that the correct module was used as a replacement:  
**locate**  
*The system displays a list of hardware.*
- 43** Confirm that the correct PEC is listed for the newly upgraded module.
- 44** Upgrade the MFIO / UMFIO module in the other domain by repeating steps [1](#) through [45](#) (if necessary, you can skip step [3](#)).
- 45** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Upgrading the DS512 controller module from NTRX50GA to GX

### Purpose

Use this procedure to perform a DS512 controller module upgrade from an NTRX50GA to an NTRX50GX module.

This procedure allows the CS 2000 Core Manager applications to continue without interruption. During this procedure, one of the two DS512 controller modules remains in service while the other is being replaced. The state of applications running on the CS 2000 Core Manager is not a factor in this procedure. However, Nortel recommends that you perform this procedure during a roughage period.

**Note:** The NTRX50GA and NTRX50GX DS512 controller modules function identically. However, the NTRX50GX DS512 controller module has increased buffer memory with 16 kilobytes per link.

### Prerequisites

You must be a user authorized to perform config-admin actions.

For information on how to log in to the CS 2000 Core Manager or how to display actions a user is authorized to perform, review the procedures in the following table.

#### Other activities related to using this procedure

| Procedure  | Document  |
|--|---|
| Logging in to the CS 2000 Core Manager             | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |
| Displaying actions a user is authorized to perform | <i>CS 2000 Core Manager Security and Administration</i> , NN10170-611 |

The NTRX50GX DS512 controller module requires software version SDMN0010 (or higher).

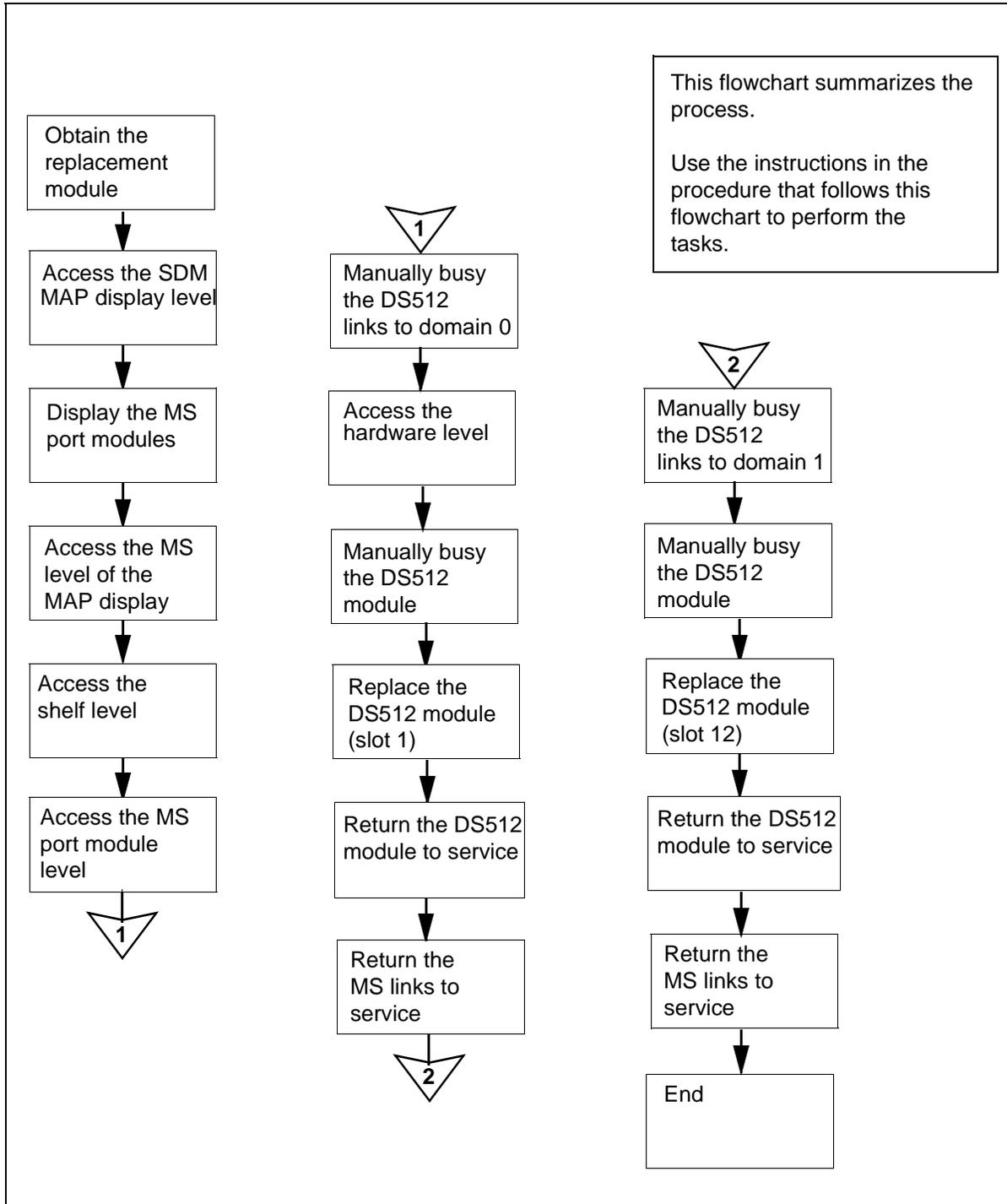
Before you begin this procedure, you must have available:

- two NTRX50GX controller modules
- packaging material in which to return the two NTRX50GA controller modules
- login capability for both the DMS MAP and CS 2000 Core Manager

## Task flow diagram

The following task flow diagram provides a summary of the process. To upgrade the DS512 controller module, use the instructions in the procedure that follows the flowchart.

### Task flow for Upgrading the DS512 controller module from NTRX50GA to NTRX50GX



## Upgrading the DS512 controller module

### ATTENTION

Instructions for entering commands in the following procedures do not show the prompting symbol, such as #, >, or \$, displayed by the system through a GUI or on a command line.

- 1 Obtain an NTRX50GX DS512 controller module. Make sure that the upgrade module has the correct product engineering code (PEC). The PEC is printed on the top locking lever of the module.

### *At the MAP display*

- 2 Access the SDM level:

```
mapci;mtc;appl;sdm
```

- 3 Display the card numbers that provide the DS512 links to the CS 2000 Core Manager:

```
trns1
```

#### *Example response*

```
SDM 0 DOMAIN 0 PORT 0 (MS 0:15:0) OK MsgCnd:Open
SDM 0 DOMAIN 0 PORT 1 (MS 1:15:0) OK MsgCnd:Open
SDM 0 DOMAIN 1 PORT 0 (MS 0:15:1) OK MsgCnd:Open
SDM 0 DOMAIN 1 PORT 1 (MS 1:15:1) OK MsgCnd:Open
```

- 4 Record the card number associated with the CS 2000 Core Manager DS512 links. The card number is the middle number shown in the parentheses.

**Note:** In the example response shown in step [3](#), the card number is 15.

- 5 Access the MS level of the MAP display:

```
ms
```

- 6 Access the shelf level:

```
shelf
```

- 7 Access the card number level that is associated with the CS 2000 Core Manager DS512 links:

```
chain <card_number>
```

*where*

**<card\_number>**

is the card number you recorded in step 4.

- 8** Manually busy the DS512 link between MS plane 0 and the CS 2000 Core Manager DS512 controller module or domain 0:

**bsy 0 link 0**

*Example response:*

Request to MAN BUSY MS:0 shelf:0 chain:15 link:0 submitted.

Request to MAN BUSY MS:0 shelf:0 chain:15 link:0 passed.

*The state for the DS512 link changes to M for MS plane 0.*

- 9** Manually busy the DS512 link between MS plane 1 and the CS 2000 Core Manager DS512 controller module on domain 0:

**bsy 1 link 0**

*Example response:*

Request to MAN BUSY MS: 1 shelf: 0 chain:15 link: 0 submitted.

Request to MAN BUSY MS: 1 shelf: 0 chain:15 link: 0 passed.

*The state for the DS512 link changes to M for MS plane 1.*

***At the local or remote VT100 console***

- 10** Log in to the CS 2000 Core Manager as a user authorized to perform config-admin actions.

- 11** Access the maintenance interface:

**sdmmtc**

- 12** Access the hardware (Hw) level:

**hw**

- 13** Busy the DS512 controller module:

**bsy 0 512**

| If you are                               | Do                      |
|--|-------------------------|
| prompted to confirm the busy command     | step <a href="#">14</a> |
| not prompted to confirm the busy command | step <a href="#">16</a> |

14 Confirm the busy command:

**y**

***At the front of the CS 2000 Core Manager***

15



**WARNING**

**Static electricity damage**

Wear an electrostatic discharge (ESD) grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

Wear an electrostatic discharge (ESD) grounding wrist strap.

16 Locate the NTGX50GA card in slot 1.

17



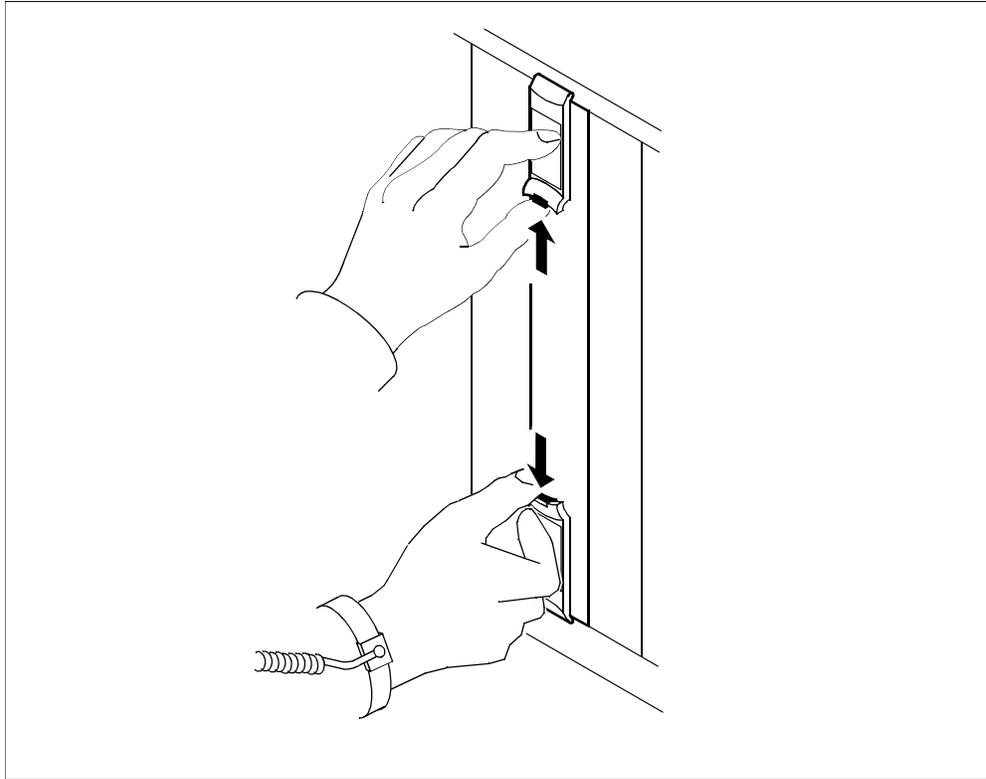
**CAUTION**

**Potential service interruption**

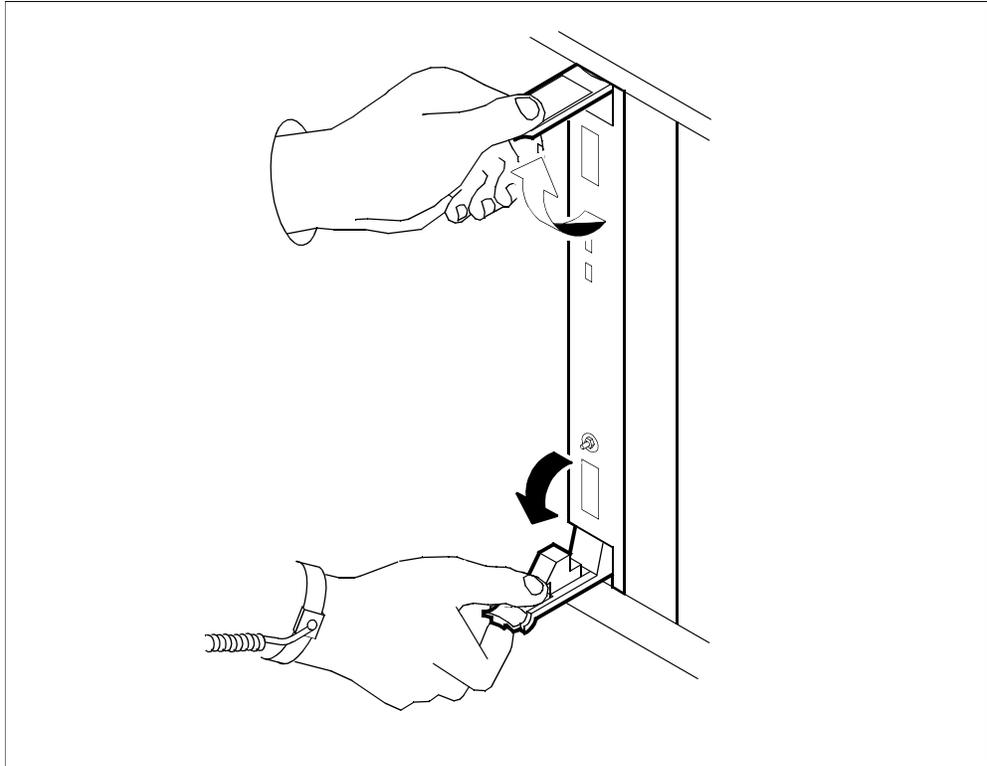
Unseat only the DS512 controller module that you busied, and not the corresponding DS512 controller module in the other I/O domain. The in-service LED on the busied module is off, and the out-of-service LED is on (red). If you remove the remaining in-service DS512 controller module, you will isolate the CS 2000 Core Manager from the computing module (CM).

Undo the thumbscrews located on the top and bottom of the DS512 controller module. The thumbscrews are the captive type, and cannot be removed from the module.

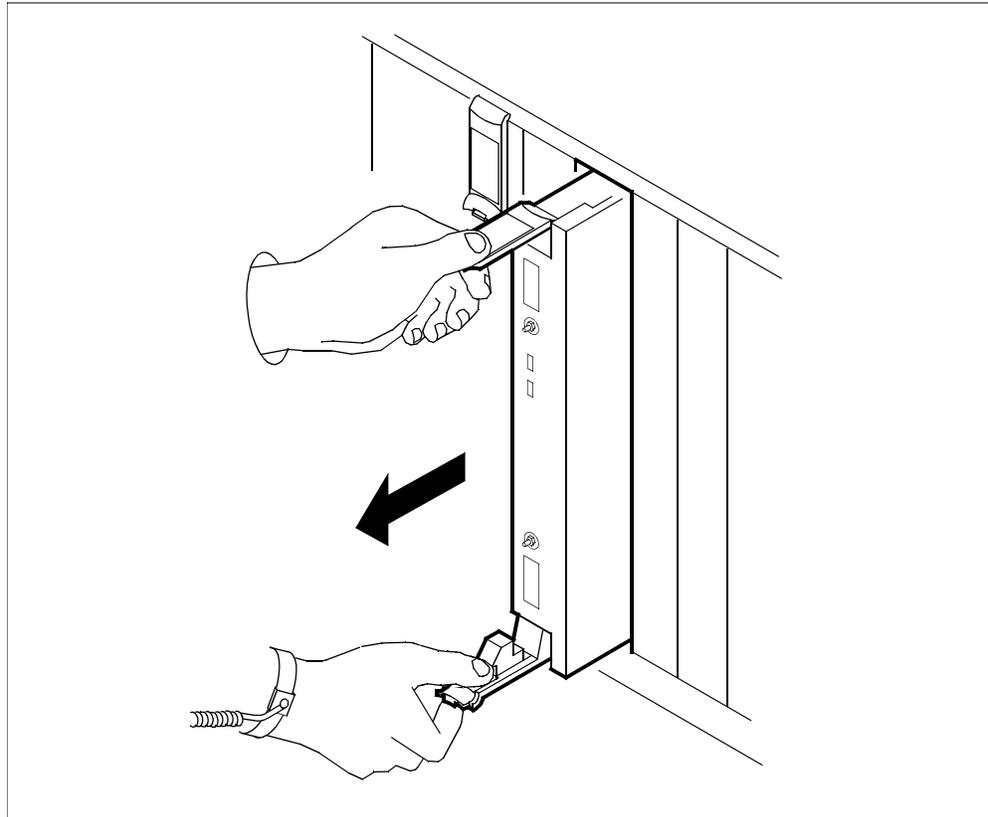
- 18** Depress the tips of the locking levers on the face of the DS512 controller module.



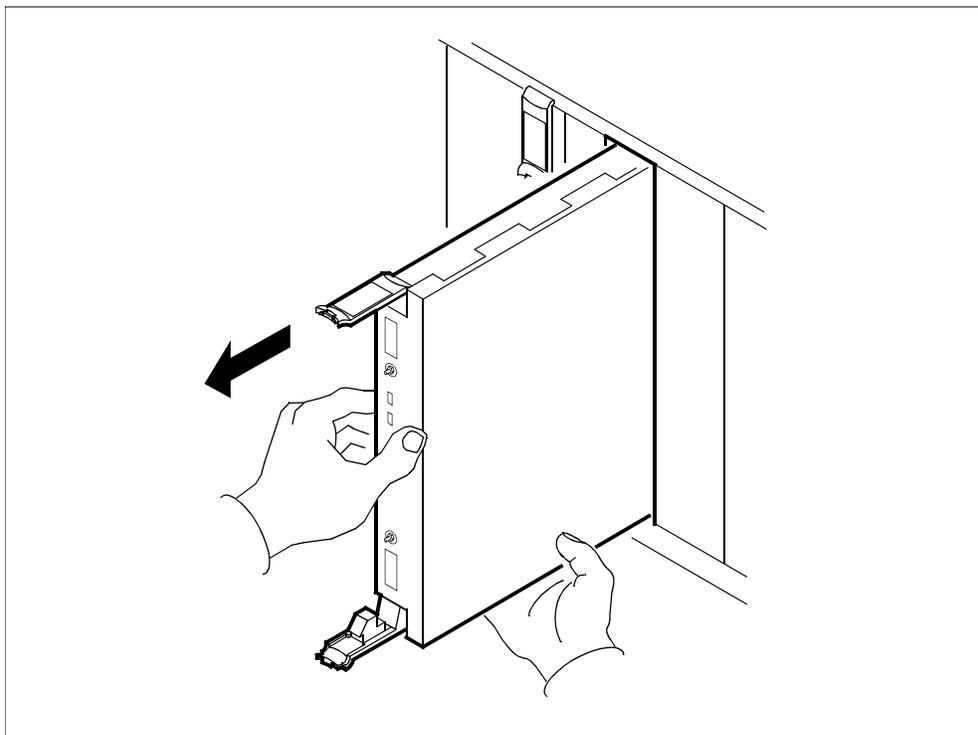
- 19** Open the locking levers on the face of the module by moving the levers outwards.



- 20** While grasping the locking levers, gently pull the module towards you until it protrudes about 2 in. (5 cm) from the CS 2000 Core Manager shelf.



- 21 Hold the module by the face plate with one hand while supporting the bottom edge with the other hand. Gently pull the module toward you until it clears the shelf.



- 22 Place the module you have removed in an ESD protective container.

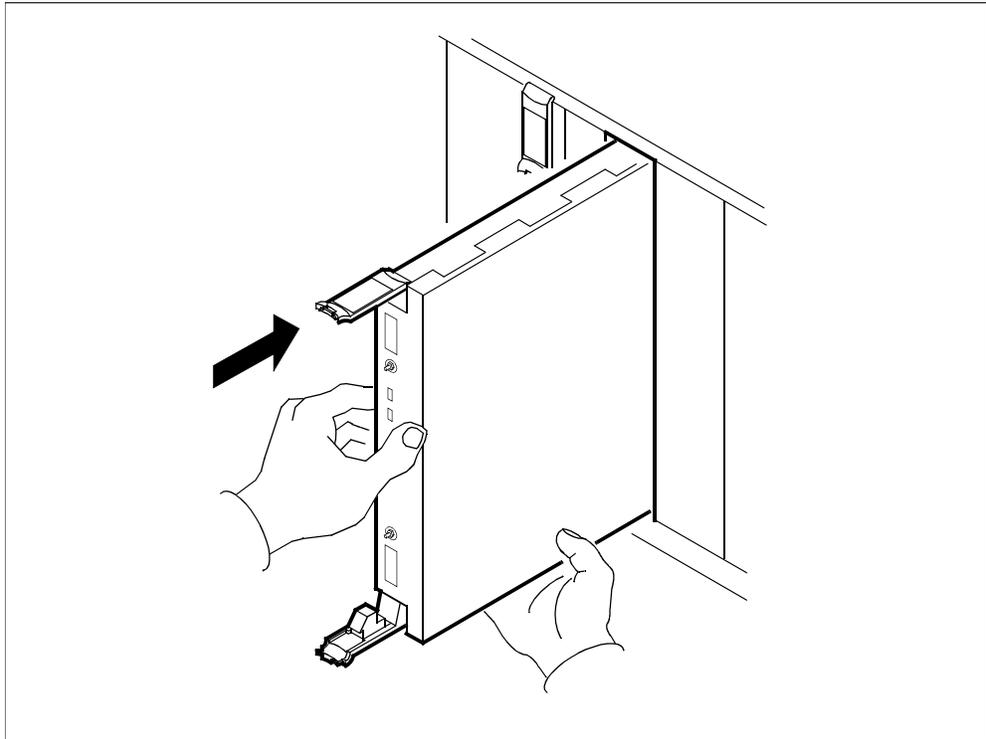
***At the local or remote VT100 console***

- 23 Exit the maintenance interface:  
**quit all**
- 24 For the DS512 module you have removed, delete the information from the CS 2000 Core Manager configuration database:  
**ftds512clean <n>**  
*where*  
**<n>**  
is 0 if the removed module was in domain 0, and 1 for a module that was in domain 1.

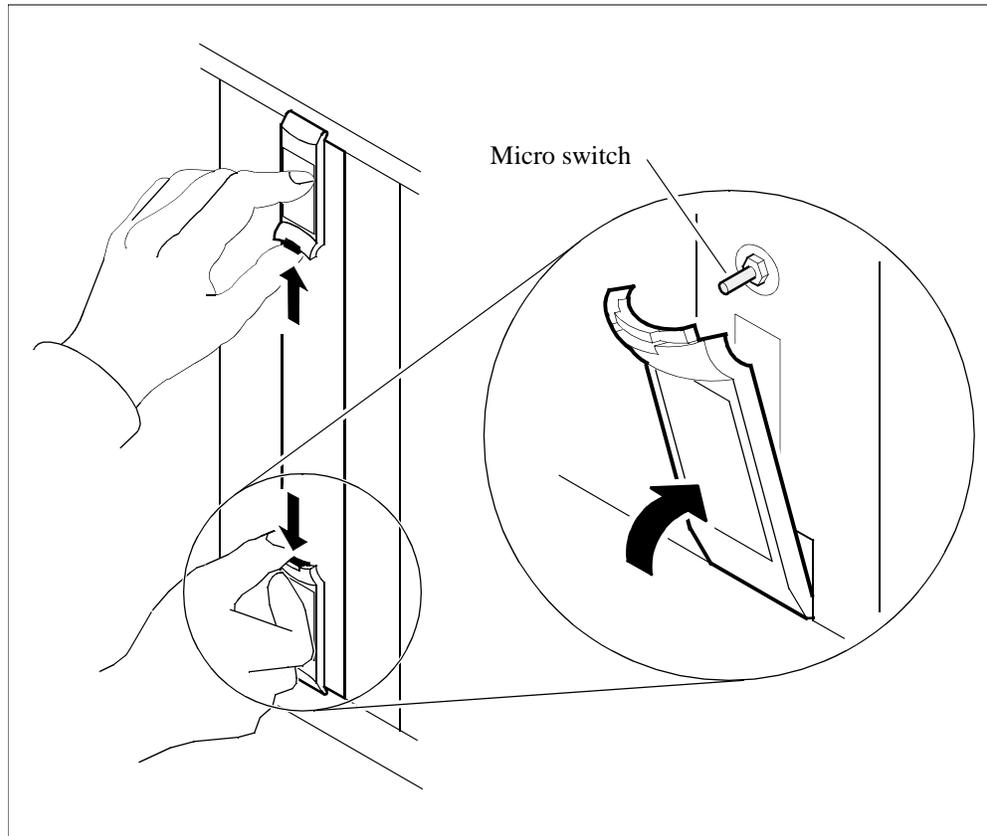
***At the front of the CS 2000 Core Manager***

- 25 Insert the replacement module into the CS 2000 Core Manager shelf.

**26** Gently slide the module into the shelf until it is fully inserted.



- 27** To seat the module properly, make sure that both the top and bottom micro switches are lined up with the levers. Close the locking levers to secure the module.



- 28** Tighten the thumbscrews (if present) on the module.
- 29** Use the following table to determine your next step.

| If                         | Do                      |
|----------------------------|-------------------------|
| you are replacing domain 0 | step <a href="#">30</a> |
| you are replacing domain 1 | step <a href="#">42</a> |

***At the local or remote VT100 console***

- 30** Access the maintenance interface:  
`sdmmtc`
- 31** Access the hardware (Hw) level:  
`hw`

- 32** Return the DS512 controller module to service:

**rts 0 512**

*Example response:*

Hardware RTS : Domain 0 Device 512 - Command initiated.

Please wait...

*When the RTS command is finished, the message: Please wait, and the command confirmation disappear. The word initiated also changes to submitted, then to complete.*

*Example response:*

Hardware RTS : Domain 0 Device 512 - Command complete.

*At the hardware menu level of the CS 2000 Core Manager maintenance interface, the state of the DS512 controller module changes to the in-service dot (.). The in-service LED on the DS512 controller module is on (green).*

#### **At the MAP display**

- 33** Access the MS port module level of the MAP display (accessed in step [7](#)). Return to service the DS512 link between MS plane 0 and the DS512 controller module you replaced:

**rts 0 link 0**

*Example response:*

Request to RTS MS: 0 shelf: 0 chain:15 link: 0 submitted.

Request to RTS MS: 0 shelf: 0 chain:15 link: 0 passed.

*The state for the DS512 link changes to the in-service dot (.) if the CS 2000 Core Manager DS512 link is in service. Otherwise, the state for the DS512 link changes to P.*

- 34** Return to service the DS512 link between MS plane 1 and the DS512 controller module you replaced:

**rts 1 link 0**

*Example response:*

Request to RTS MS: 1 shelf: 0 chain:15 link: 1 submitted.

Request to RTS MS: 1 shelf: 0 chain:15 link: 1 passed.

*The state for the DS512 link changes to the in-service dot (.) if the CS 2000 Core Manager DS512 link is in service. Otherwise, the state for the DS512 link changes to P.*

- 35** You can now replace the second NTRX50GA module with the second NTRX50GX module. Busy the DS512 link between MS plane 0 and the CS 2000 Core Manager DS512 controller module you wish to replace:

**bsy 0 link 1**

*Example response*

```
Request to MAN BUSY MS: 0 shelf: 0 chain:15
link: 0 submitted.
Request to MAN BUSY MS: 0 shelf: 0 chain:15
link: 0 passed.
```

*The state for the DS512 link changes to M for MS plane 0.*

- 36** Busy the DS512 link between MS plane 1 and the CS 2000 Core Manager DS512 controller module you wish to replace:

**bsy 1 link 1**

*Example response:*

```
Request to MAN BUSY MS: 1 shelf: 0 chain:15
link: 0 submitted.
Request to MAN BUSY MS: 1 shelf: 0 chain:15
link: 0 passed.
```

*The state for the DS512 link changes to M for MS plane 1.*

#### **At the local or remote VT100 console**

- 37** Busy the DS512 controller module:

**bsy 0 512**

| If you are                               | Do                      |
|--|-------------------------|
| prompted to confirm the busy command     | step <a href="#">38</a> |
| not prompted to confirm the busy command | step <a href="#">40</a> |

- 38** Confirm the busy command:

**y**

## At the front of the CS 2000 Core Manager

39



### WARNING

Static electricity damage

Wear an electrostatic discharge (ESD) grounding wrist strap connected to the C28B cabinet when handling a module. This protects the module against damage caused by static electricity.

Wear an electrostatic discharge (ESD) grounding wrist strap.

- 40 Locate the NTRX50GA card in slot 12.
- 41 Replace the NTRX50GA module in slot 12 with the NTRX50GX module. To replace the module in slot 12, use steps [17](#) to [28](#), then continue with step [42](#).

### At the local or remote VT100 console

- 42 At the hardware level, return the DS512 controller module to service:

**rts 1 512**

*Example response:*

```
Hardware RTS : Domain 1 Device 512 - Command
initiated.
Please wait...
```

*When the RTS command is finished, the message `Please wait`, and the command confirmation disappear. The word `initiated` also changes to `submitted`, then to `complete`.*

*Example response:*

```
Hardware RTS : Domain 1 Device 512 - Command
complete.
```

*At the hardware level, the state of the DS512 controller module changes to the in-service dot (.). The in-service LED on the DS512 controller module is on (green).*

### At the MAP display

- 43 Access the MS port module level of the MAP display (accessed in step [7](#)).

- 44** Return to service the DS512 link between MS plane 1 and the DS512 controller module you replaced:

```
rts 0 link 1
```

*Example response:*

```
Request to RTS MS: 0 shelf: 0 chain:15 link: 0
submitted.
```

```
Request to RTS MS: 0 shelf: 0 chain:15 link: 0
passed.
```

*The state for the DS512 link changes to a dot (.) if the CS 2000 Core Manager DS512 link is in service. Otherwise, the state for DS512 link changes to a P.*

- 45** Return to service the DS512 link between MS plane 1 and the DS512 controller module you replaced:

```
rts 1 link 1
```

*Example response:*

```
Request to RTS MS: 1 shelf: 0 chain:15 link: 1
submitted.
```

```
Request to RTS MS: 1 shelf: 0 chain:15 link: 1
passed.
```

*The state for the DS512 link changes to the in-service dot (.) if the CS 2000 Core Manager DS512 link is in service. Otherwise, the state for DS512 link changes to a P.*

#### **At the local or remote VT100 console**

- 46** Exit the maintenance interface:

```
quit all
```

- 47** Confirm that the new cards are properly installed:

```
locate
```

The system displays a list of CS 2000 Core Manager hardware. The NTRX50GX module is the hardware in slots 1 and 12.

If the system does not list the NTRX50GX modules, the card(s) may be faulty. Replace the NTRX50GX DS512 controller modules with the original NTRX50GA modules. To replace the modules, return to step [13](#) of this procedure and reinstall the NTRX50GA DS512 controller modules.

#### **At the MAP display**

- 48** Exit the MAP session:

```
quit all
```

- 49** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Stopping and starting the DDMS proxy

### Application

#### ATTENTION

Use this procedure only if you have been directed here from the [Optional post-upgrade tasks on page 132](#) in *Core Manager Upgrades*, NN10060-461, after a software upgrade.

Use this procedure to stop and start the DDMS proxy on the CS 2000 Management Tools server. The DDMS proxy enables communication between the CS 2000 Management Tools server and the core.

### Prerequisites

There are no prerequisites for this procedure.

### Action

Perform the following steps to complete this procedure.

#### *At your workstation*

- 1 Establish a login session to the inactive server, using one of the following methods:

| <b>If using</b>   | <b>Do</b>              |
|-------------------|------------------------|
| telnet (unsecure) | step <a href="#">2</a> |
| ssh (secure)      | step <a href="#">3</a> |

- 2 Log in to the server using telnet (unsecure) as follows:

- a Log in to the server by typing

```
> telnet <server>
```

and pressing the Enter key.

where

**server**

is the physical IP address of the inactive server



**8** Access the command line interface by typing

```
# cli
```

and pressing the Enter key.

*Example response*

```
Command Line Interface
```

```
1 - View
```

```
2 - Configuration
```

```
3 - Other
```

```
X - exit
```

```
select -
```

**9** Enter the number next to the “Configuration” option in the menu.*Example response*

```
Configuration
```

```
1 - NTP Configuration
```

```
2 - Apache Proxy Configuration
```

```
3 - DCE Configuration
```

```
4 - OAMP Application Configuration
```

```
5 - CORBA Configuration
```

```
6 - IP Configuration
```

```
7 - DNS Configuration
```

```
8 - Syslog Configuration
```

```
9 - Remote Backup Configuration
```

```
10 - Database Configuration
```

```
11 - NFS Configuration
```

```
12 - Bootp Configuration
```

```
13 - Restricted Shell Configuration
```

```
14 - Security Services Configuration
```

```
15 - Disk Drive Upgrade
```

```
16 - Login Session
```

```
17 - Location Configuration
```

```
18 - Cluster Configuration
```

```
19 - Succession Element Configuration
```

```
20 - snmp_poller (SNMP Poller Configuration)
```

```
21 - backup_config (Backup Configuration)
```

```
X - exit
```

```
Select -
```

- 10** Enter the number next to the “Succession Element Configuration” option in the menu.

*Example response:*

```
Succession Element Configuration
 1 - NPM Application Configuration
 2 - SESM Application Configuration
 3 - SAM21EM Application Configuration
 4 - PSE Application Configuration
 5 - RESMON Application Configuration
 6 - OMPUSH Application Configuration
 7 - DDMSProxy Application Configuration
```

```
X - exit
```

```
select -
```

- 11** Enter the number next to the “DDMSProxy Application Configuration” option in the menu.

*Example response*

```
DDMSProxy Application Configuration
 1 - ddmsproxy_query (query the status of
    ddmsproxy service)
 2 - ddmsproxy_stop (stop the ddmsproxy service)
 3 - ddmsproxy_start (start the ddmsproxy
    service)
```

```
X - exit
```

```
select -
```

- 12** Enter the number next to the “ddmsproxy\_stop” option in the menu.

*Example response*

```
===Executing "ddmsproxy_stop"
```

```
ddmsproxy service stopping
```

```
=== "ddmsproxy_stop" completed successfully
```

- 13** Enter the number next to the “ddmsproxy\_start” option in the menu.

*Example response*

```
===Executing "ddmsproxy_start"
```

```
ddmsproxy service starting
```

```
===“ddmsproxy_start” completed successfully
```

- 14** You have completed this procedure. If applicable, return to the high level task or procedure that directed you to this procedure.

## Stopping and starting the Apache Web Server and Tomcat Servlet Container

---

### Application

#### ATTENTION

Use this procedure only if you have been directed here from the [Optional post-upgrade tasks on page 132](#) in *CS 2000 Core Manager Upgrades*, NN10060-461, after a software upgrade.

Use this procedure to stop and start the Apache Web Server and Tomcat Servlet Container components on the CS 2000 Management Tools server.

### Prerequisites

There are no prerequisites for this procedure.

### Action

Perform the following steps to complete this procedure.

#### *At your workstation*

- 1 Telnet to the CS 2000 Management Tools server by typing  
`> telnet <IP address>`  
and pressing the Enter key.  
where  
**IP address**  
is the IP address of the CS 2000 Management Tools server
- 2 When prompted, enter your user ID and password.
- 3 Change to the root user by typing  
`$ su - root`  
and pressing the Enter key.
- 4 When prompted, enter the root password.

- 5 Use the following table to determine your next step.

| If you want to   | Do                     |
|--|------------------------|
| stop the Apache web server and Tomcat servlet container  | step <a href="#">6</a> |
| start the Apache web server and Tomcat servlet container | step <a href="#">8</a> |

- 6 Stop the Apache Tomcat component by typing  
**# /etc/init.d/apache stop**  
and pressing the Enter key.
- 7 Skip to step [9](#).
- 8 Start the Apache Tomcat component by typing  
**# /etc/init.d/apache start**  
and pressing the Enter key.
- 9 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

---

## Editing and viewing object properties using Java Web Client

---

### Application

Use this procedure to edit or view the properties of objects that are displayed in the IEMS topology using Java Web Client.

### Prerequisites

There are no prerequisites for this procedure.

### Action

#### *At the IEMS workstation*

- 1 Launch the IEMS Java Web Start Client. Refer to procedure Launching IEMS Java Web Start Client in.
- 2 Select the required object in the IEMS Topologies tree under Applications.  
  
The properties of an object from the Inventory panel of IEMS tree can also be viewed. To view the Inventory object properties, select the object in the Integrated Topologies tree, under Applications to open the Inventory view. Double-click the required row in the Inventory view.
- 3 Right-click the map symbol and select the Managed Object Properties menu item or double-click the map symbol to open the Object Properties window.

A window similar to the following figure opens. The object properties displayed can differ for each component.

- 4 If required, modify the object properties. Use the following table to assist you in understanding the fields.

#### Managed object properties in Java Web Client

| Field        | Description  |
|--------------|--|
| Name         | Displays a unique name for the object                                  |
| Display Name | Edit the name displayed in the topology for the object                 |
| Type         | Displays the type of object (element manager, EMS, EMS platform or NE) |

## Managed object properties in Java Web Client

| Field   | Description  |
|---|--|
| Status  | Displays the status of the object  |
| IP-Address  | Edit the IP address of the object  |
| Platform  | Select the platform where the object resides from the drop-down list   |
| Managed   | Indicates whether the object is managed or unmanaged   |
| Time Zone   | Select the time zone of the geographical location where the object exists from the drop-down list  |
| Device Version  | Select the device version of the managed object from the drop-down list  |
| Enable System Unmanage  | Enable or disable the System_Unmanaged state. Refer to section "System_Unmanaged state" in "Configuring the Message Overload Controller parameters" in <i>IEMS Fault Management</i> , NN10334-911. |
| Poll Interval   | Edit the Poll Interval for status updates  |
| Status Change Time  | Displays the last status change time of the object   |
| <p><b>Note:</b> For the following element objects, only the Display Name and the Managed field can be modified: SDM platform, APS Manager, CS 2000 Core, Call Agent Core, IMX/CSE MX, Media Portal, SSLines, MG 7480/15000/20000, MSS 15000</p> |  |

### 5 Select your next step.

| If   | Do                           |
|--|------------------------------|
| you do not want to modify any other properties                                     | go to <a href="#">step 6</a> |
| you want to view or modify the fault interface or performance interface properties | go to <a href="#">step 8</a> |

### 6 Click the Modify button to update the changes.

### 7 Go to [step 16](#).

### 8 Click the Next button to proceed to the Fault Interface window.

A window similar to the following figure opens.

The screenshot shows a dialog box titled "Object Properties ----Nortel". It is divided into two main sections: "SNMP Details" and "V3 Security Details".

- SNMP Details:**
  - Port: 161
  - Community: (empty)
  - Version: v3
- V3 Security Details:**
  - Security Level: NoAuthNoPriv
  - User name: v3admin
  - Context name: saul
  - Auth Protocol: MD5
  - Privacy Protocol: CBC-DES
  - Auth Password: (empty)
  - Privacy Password: (empty)

At the bottom of the dialog, there are buttons for "Back", "Next", "Modify", "Help", "Close", and a green "Done" button.

- 9 Edit or view the fault interface properties of the object as required.

**Note 1:** The Details panel dynamically changes according to the fault interface of the EMS/NE.

**Note 2:** For MS 2000, do the following. Enter v2c as the SNMP version for (I)SN09. The SNMP read Community and write Community strings by default are public and private. If these values were changed in (I)SN07, enter the correct values here.

**10** Select your next step.**If**

you do not want to modify any other properties

**Do**

[step 11](#)

you want to view or modify the performance interface properties

[step 13](#)

**11** Click the Modify button to update the changes.**12** Go to [step 16](#).**13** Click the Next button to proceed to the Performance Interface window.

*A window similar to the following figure opens.*

**Object Properties ----Nortel**

Performance Interface

SNMP Details

Port: 161

Community:

Version: v3

V3 Security Details

Security Level: NoAuthNoPriv

User name: v3admin Context name: saul

Auth Protocol: MD5 Auth Password:

Privacy Protocol: CBC-DES Privacy Password:

Back Next

Modify Help Close

Done

- 14 Edit or view the performance interface properties of the object as required.  
**Note:** For MS 2000, do the following. Enter v2c as the SNMP version for (I)SN09. The SNMP read Community and write Community strings by default are public and private. If these values were changed in (I)SN07, enter the correct values here.
- 15 Click the Modify button to update the changes.
- 16 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

---

## Editing and viewing object properties using Web Client

---

### Application

Use this procedure to modify or view the properties of an object in the IEMS topology using Web Client.

### Prerequisites

There are no prerequisites for this procedure.

### Action

#### *At the IEMS workstation*

- 1 Launch the IEMS Web Client. Refer to procedure “Launching the IEMS Web Client”.
- 2 Select the Integrated EMS Topologies tab.
- 3 Navigate to the required topology node in the IEMS Topologies tree.
- 4 Click the map symbol label to open the General Information window.

A window similar to the following figure opens. The object properties displayed can differ for each component.

Integrated EMS Topologies → Network Elements

←EAMS2 rajagopal-MS2000

**General Information**

|                |   |
|----------------|---|
| Name           | rajagopal-MS2000  |
| Device Type    | NE-MS2000   |
| Status         | <input checked="" type="radio"/> Clear                        |
| Is Managed ?   | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Display Name   | raj   |
| Device Version | 8.0   |
| IP Address     | 192.168.113.201   |
| Web User Name  | rajagopal   |
| Web Password   | ****  |

Update Object Reset

- 5 If necessary, select each vertical tab and modify the object properties listed in the following table.

#### Managed object properties in Web Client

| Field          | Description  |
|----------------|--|
| <b>General</b> |  |
| Name           | Displays the unique object name of the managed object                  |
| Device Type    | Displays the type of object (element manager, EMS, EMS platform or NE) |
| Status         | Displays the status of the object                                      |
| Is Managed?    | Indicates whether the object is managed or unmanaged                   |
| Display Name   | Displays the name or label displayed in map symbol                     |

**Managed object properties in Web Client**

| <b>Field</b>                   | <b>Description</b>   |
|--------------------------------|--|
| Device Version                 | Select the version of the device from the drop-down list             |
| IP Address                     | Modify the IP address of the object                                  |
| Web User name                  | Enter your web user name   |
| Web Password                   | Enter your web password  |
| <b>Monitoring</b>              |  |
| Last Status Update Time        | Displays the time when the status of the managed object last changed |
| Last Status Change Time        | Displays the time when the status of the managed object last changed |
| Status Polling Interval (secs) | Modify the Poll Interval for status updates                          |

**Managed object properties in Web Client**

| <b>Field</b>                 | <b>Description</b>   |
|------------------------------|--|
| <b>Fault Interface</b>       | If the details are present for the selected object, the details can be modified. |
| <b>Performance Interface</b> | If the details are present for the selected object, the details can be modified. |

- 6** Click the Update Object button to update the changes.
- 7** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.