



Upgrading the Call Agent

What's new in Call Agent upgrades for SN08

June 2005, Standard 05.02

There are no changes to this document in this release.

March 2005, Preliminary 05.01

The following changes are made to this document in SN08:

- A new sub-panel is added to the Call Agent Card View Provisioning panel (tab) that allows the user to enable or disable Geographic Survivability feature.

For more information about Geographic Survivability, refer to the following documents:

- *Call Agent Basics*, NN10023-111
- *Carrier VoIP Disaster Recovery Procedures*, NN10450-900

For offices configured with Message Controllers, refer to *Geographic Survivability Planning Guide*, 555-4031-901. Configurations with MCs are supported only in Enterprise (CS2100) solutions.

For more information about alarm and log changes and system behavior during fault scenarios for Geographic Survivability, refer to *Call Agent Fault Management*, NN10087-911.

- Supported paths are from SN06 or SN06.2 to SN08, and SN07 to SN08.
- For solutions upgrades, refer to *Upgrading a Carrier Voice over IP Network*, NN10440-450. This document replaces *ATM Solutions Upgrades*, NN10261-450 and *IP Solutions Upgrades*, NN10344-450.

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Upgrade strategy

Upgrade of the Call Agent is available as an upgrade of platform software, or platform and application software. Patches are available for both software packages. If the CS 2000 - Compact is configured with Message Controller (MC) cards, the software on these cards is upgraded during this procedure.

If a new firmware release is available for the Call Agent or Message Controller cards, the firmware is upgraded during the locking and unlocking of those cards at the CS 2000 SAM21 Manager client. Refer to the *SAM21 Platform Base Release Notes* to determine if firmware software is delivered with the release. To enable the firmware upgrade, the FW Flash Enable checkbox must be checked at provisioning tab of the CS 2000 SAM21 Manager client. For the automatic software upgrade (SWUPGRADE), this is during steps [LOAD_NEW_SIDE_BLADE](#) and [LOAD_MATE](#), [LOAD_MC0_BLADE](#), [LOAD_MC1_BLADE](#), and [LOAD_OLD_SIDE_BLADE](#). For the manual upgrade procedure, the steps are [Load Message Controller 0](#), [Load Message Controller 1](#), [Reprovision Call Agent platform load](#), and [Provision new software load](#).

Contact Nortel Global Software Services or your account manager for assistance with a Call Agent upgrade and preparation for the upgrade.

Software upgrade

Several upgrade scenarios are possible:

- upgrade Message Controller software only, Call Agent platform and call processing software remain the same
- upgrade Call Agent platform software, Message Controller and call processing software remains the same. This is the Call Agent Maintenance Release upgrade process that requires use of the Platform only software upgrade procedure.
- upgrade Message Controller, Call Agent platform, and call processing application software. This is the complete upgrade (ONP) from release to release.

Component software upgrade order

The component upgrade order is listed in *Upgrading a Carrier Voice over IP Network*, NN10440-450.

Patching software

Patching is available during software upgrade and as a maintenance activity for the Call Agent platform and call processing application software. Message Controller software is not patchable. Maintenance releases for the Message Controller are applied by following the Message Controller upgrade procedure in this document.

Tools and utilities

Preparation activities are performed by operating company personnel. The SWUPGRADE process is typically performed by a Nortel Software Delivery Engineer (SDE). The SDE requires remote connectivity access to the office to perform the SWUPGRADE process and an instance of the CS 2000 SAM21 Manager client. If remote access for the display of the CS 2000 SAM21 Manager client is unavailable, operating company personnel must negotiate an alternative method.

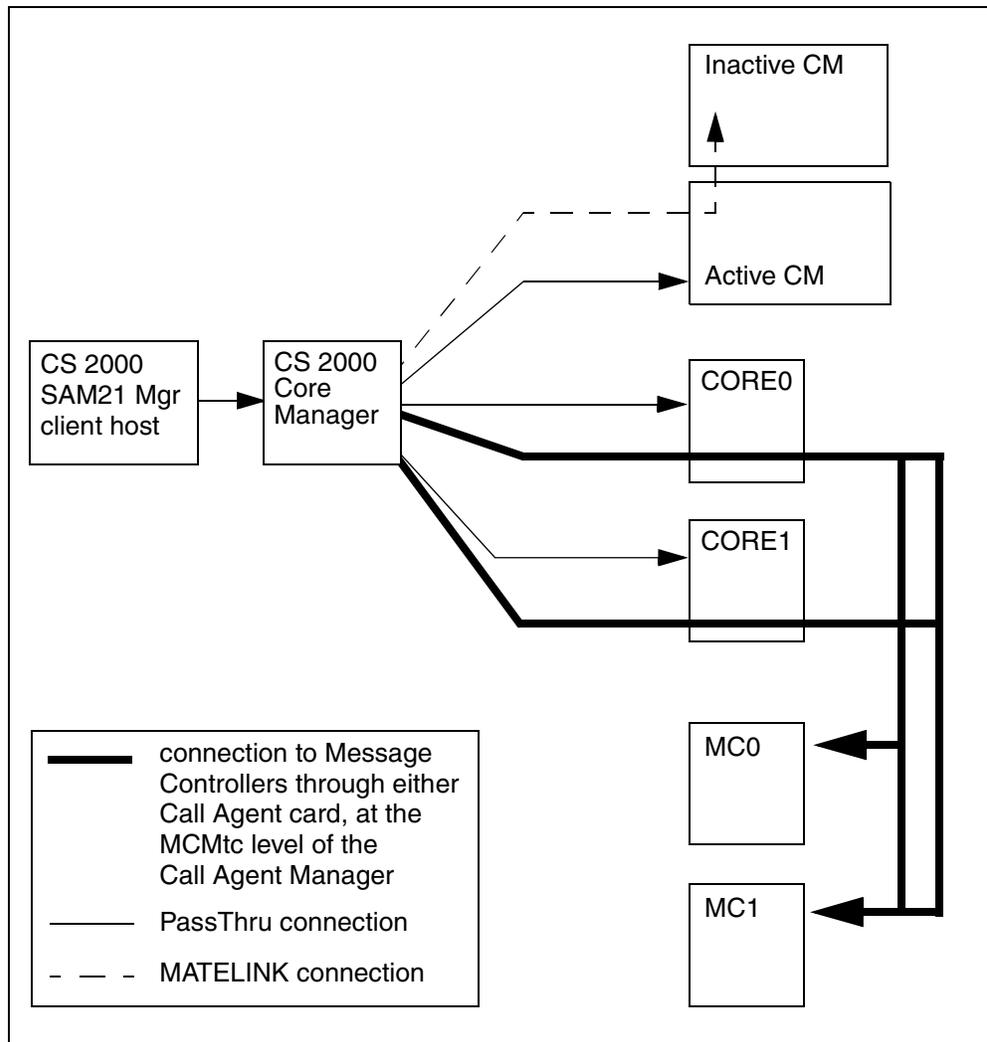
The workstation used for the CS 2000 SAM21 Manager client is the recommended platform from which to perform the software upgrade preparation procedures.

Upgrades require the CS 2000 SAM21 Manager client, the Call Agent Manager, and the MAP. The Call Agent Manager interface is used to maintain the Call Agent cards and the Message Controllers. The MAP is used to control and monitor the SWUPGRADE process and the Switch of Activity (SWACT) for the Call Agent cards.

Patching the application software requires the MAP interface. The Post-Release Software Manager (PRSM) tool is used for patching the call processing application.

For the call processing application upgrade, two MAP connections are required. One connection is to the active call processing application and the other connection is to the inactive call processing application. The connection to the inactive call processing application is made through the active call processing application by using the **MATELINK** command.

The dashed line in the following figure indicates the relationship between the connections to the active and inactive applications.



Note: If the CS 2000 - Compact is equipped with Message Controllers and legacy connectivity equipment exists on the Time Division Multiplex (TDM) network, connectivity may be available from those devices to ACTIVECM. Contact your Nortel account representative for assistance with determining connectivity needs.

Software

Different software products are delivered according to the following table.

Software product and delivery

Software product	Delivery method
Call processing application	<p>This software is delivered on CDROM or DVDROM.</p> <p>The CDROM or DVDROM is placed in the CDROM tray on the server that provides the CS 2000 Management Tools. Volume management software on that machine mounts the CDROM as <code>/cdrom/cdrom0</code>.</p> <p>From the Call Agent, an FTP session is opened to the CS 2000 Management Tools machine, and the software is pulled from the <code>/cdrom/cdrom0</code> directory with the GET command.</p> <p>The IMPORT command from the DISKUT level of the MAP makes the loads available to the call processing application for booting.</p>
Call processing application patches	<p>These patches are delivered through Regional Patch Selector (RPS).</p>
Call Agent platform software and Message Controller software	<p>This software is also delivered on CDROM. Use the platform_load_install.sh tool on the CS 2000 Management Tools machine to extract the <code>ncgl_cca_image.x.y.z.zz</code> and <code>ncgl_mc_image_x.y.z.zz</code> files from CDROM and transfers them to the CS 2000 Core Manager. If the office has a Core and Billing Manager (CBM) instead of a CS 2000 Core Manager, the files are transferred to the CBM instead. For offices without a CS 2000 Core Manager or a CBM, the loads are installed on the CS 2000 Management Tools server.</p>
Call Agent platform patches	<p>These patches are delivered through RPS. These files are placed in <code>/swd/3pc/patch</code> on the CS 2000 Core Manager or the CBM.</p>

Software version

Software version information for the Call Agent and Message Controller is similar, except that Message Controller software is not patchable.

Software loadnames changed for the SN07 and newer releases. The changes are shown in the following table.

Software loadname changes for SN07

	previous to SN07	SN07
Call Agent platform	3pclinuximage_6.20.3.1	ncgl_cca_image_5.15.1.0
Message Controller platform	mclinuximage_6.20.3.1	ncgl_mc_image_5.15.1.0
Call Agent patches	3pclinuxpatch_6.20.3.2	ncgl_cca_patch_5.15.1.2

Call Agent

Call processing software and patch versions are described in the *Post-Release Software Manager Reference Manual*, 297-8991-540.

Call Agent platform software is managed through the **platform_load_install.sh** tool available on the host that provides the CS 2000 Management Tools.

Call Agent platform software uses the following identification scheme:

- Non-Computing Load (NCL) — ncgl_cca_image_r.w.fc.0
 - **r** indicates the release. For example, 5 for SN07, 6 for SN07+ and 7 for SN08.
 - **w** indicates the calendar week number of the load build. For example, 15.
 - **fc** indicates the final compile version. For example, 1 indicates the first compile of week “w”.

Example

ncgl_cca_image_7.15.1.0

- Maintenance NCL (MNCL) — ncgl_cca_image_r.w.fc+i.1
 - **fc+i** indicates that this is the *i*th MNCL for the NCL
 - **r**, **w**, and **fc** values for an MNCL are the same values as for the NCL. This indicates that the MNCL applies to the NCL.

Note: Only the latest version of the platform load is supported. If an MNCL exists, only the latest MNCL is supported and is

patched. Early MNCL versions and the NCL are not patched to the current release.

- Call Agent platform software patches — `ncgl_cca_patch_r.w.c.v`
 - **r** indicates the release. For example, 5 for SN07, 6 for SN07+ and 7 for SN08.
 - **w** indicates the calendar week number of the load build. For example, 15.
 - **c** indicates the compile. This value is equal to the `fc` value for an NCL or equal to `(fc+i)` for an MNCL. The patch is only applicable to a load that matches this number.
 - **v** indicates the patch version. Patch versions begin at 2.

NCL or MNCL	RPM filename on CDROM	Load to datafill at Provisioning panel of CS 2000 SAM21 Manager	Patch files for the load would be named as follows. Patch file names are applied from Call Agent Manager.
NCL	ncgl_cca_mc_image-7.32-1.0.noarch.rpm	ncgl_cca_image_7.32.1.0 ncgl_mc_image_7.32.1.0	ncgl_cca_patch_7.32.1.1 ncgl_cca_patch_7.32.1.2
MNCL MR1			
MNCL MR2			

Message Controller

Message Controller software is delivered via RPM, and is installed with the CCA load.

Message Controller software uses the following identification scheme:

- Non-Computing Load (NCL) — `ncgl_mc_image_r.w.fc.0`
 - **r** indicates the release. For example, 5 for the SN07 release and 6 for SN07+ and 7 for SN08
 - **w** indicates the calendar week number of the load build. For example, 32.
 - **fc** indicates the final compile version. For example, 1 indicates the first compile of week “w.”

Example

`ncgl_mc_image_7.32.1.0`

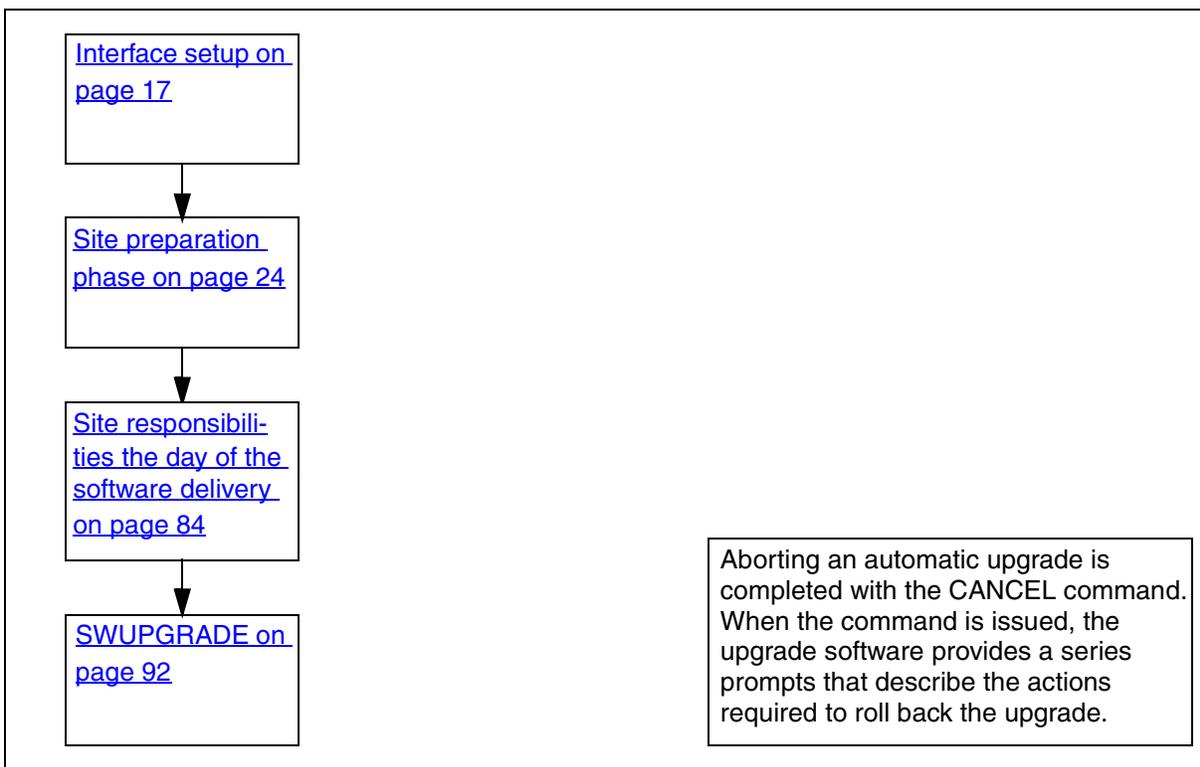
- Maintenance NCL (MNCL) - `ncgl_mc_image_r.w.fc+i.1`
 - **fc+i** indicates that this is the *i*th MNCL for the NCL
 - **r**, **w**, and **fc** values for an MNCL are the same values as for the NCL. This indicates that the MNCL applies to the NCL.

Note: Message Controller software is not patchable.

Upgrade overview

The following flowcharts provide an overview of upgrading platform and application software.

Upgrade overview (SWUPGRADE)



Aborting a SWUPGRADE

Aborting an automated upgrade is completed with the **CANCEL** command. The SWUPGRADE process recognizes the command and provides instruction in the form of prompts to roll back the upgrade procedures that were completed. Refer to [Appendix A, Revert and Abort, on page 155](#).

Platform only upgrade procedure

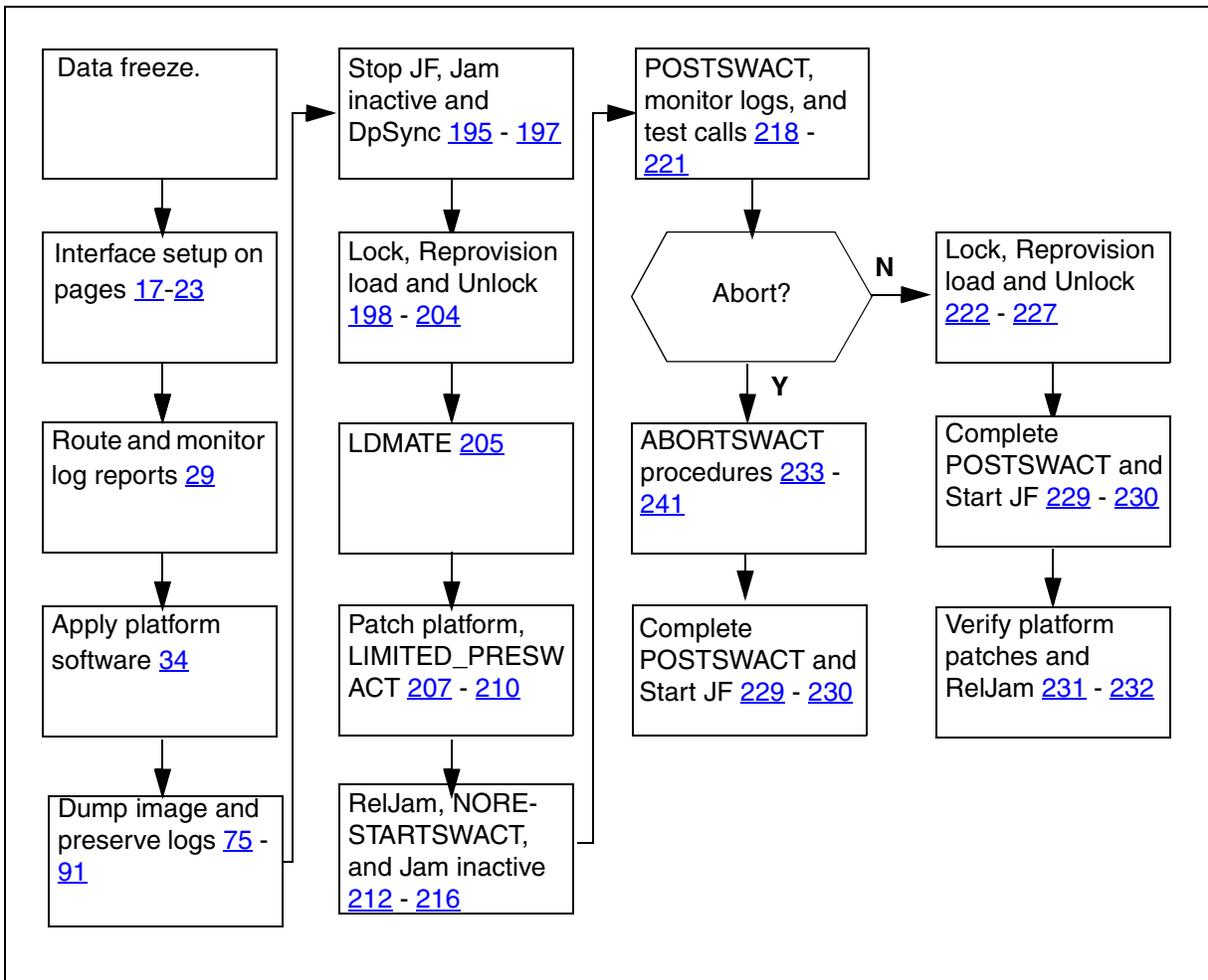
The platform only upgrade procedure is described in this document. Since many of the steps for a platform only upgrade and an ONP are the same, the platform only upgrade is provided as a path through the ONP procedure. Flowcharts and procedures indicate when a procedure applies to the platform upgrade only. The following figure shows an overview of the platform only upgrade. When performing the platform only upgrade, step [Boot new platform software](#) and all following procedures are located in [Appendix , Manual procedures, on page 177](#).

Requirements

A successful platform only software upgrade requires the following:

- the operating company must set aside a maintenance window during low traffic to perform the platform only upgrade
- an image is taken at the beginning of the maintenance window
- no provisioning is allowed during the maintenance window

Platform only upgrade



Terminology

The following information indicates personnel and interfaces.

Personnel

Each procedure identifies which personnel perform the procedure or step.

SITE is the service provider personnel responsible for CS 2000 - Compact maintenance.

SDE is the Nortel Software Delivery Engineer responsible to perform CS 2000 - Compact software upgrades.

Interfaces

Refer to table [Interfaces used to perform procedures and steps](#) in the section [Interface setup](#).

Username and passwords

Username and passwords are required for the following element management interfaces:

- CS 2000 SAM21 Manager client

A valid username and password are required to log into the client workstation. Contact your local administrator.

A valid username and password are required to run the CS 2000 SAM21 Manager client application. Refer to *ATM and IP Administration and Security*, NN10261-600 for information about creating users and changing passwords. A user with mgcrw or mgcadm privilege is required.

- Call Agent Manager

Configure the PassThru feature on the CS 2000 Core Manager or CBM to enable console access from a client machine to a Call Agent unit. Refer to *CS 2000 Core Manager Administration and Security*, NN10170-611 or *Core and Billing Manager 850 Administration and Security*, NN10358-611 for more information about enabling the PassThru feature.

After PassThru is enabled, the maintenance username and password for the Call Agent platform are required. Contact your Nortel account representative for this information.

- call processing application (MAP)
A username and password with maintenance and administrative privilege are required to complete the upgrade. Refer to operating company records for valid usernames and passwords.

Hostnames and IP addresses

The hostname of the CS 2000 Core Manager or CBM is required to perform this upgrade. This hostname is used to provide PassThru access to the Call Agent Manager and the call processing application.

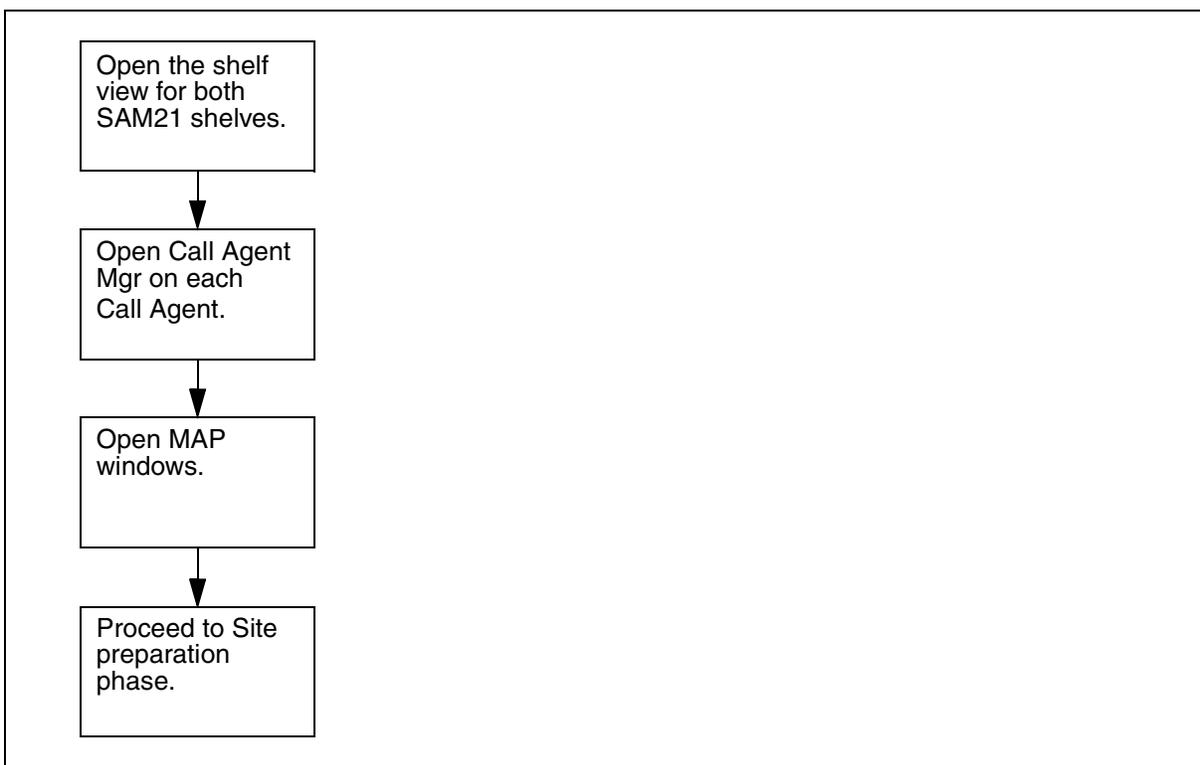
Interface setup

Procedures in this section use the PassThru feature on the CS 2000 Core Manager or CBM. Refer to “Adding or removing PassThru users” in *CS 2000 Core Manager Security and Administration*, NN10170-611 or *Core Business Manager*, NN10358-611 for more information about the PassThru feature. For offices without a CS 2000 Core Manager or CBM, PassThru is not used, and direct connections to the call processing side of the CS LAN are needed.

If the PassThru usernames are not “core0usr,” “core1usr,” and “cmusr,” then substitute the office’s PassThru usernames for core0usr, core1usr, and cmusr in these procedures.

The procedures provide recommended methods for opening the interfaces required to complete an upgrade, as shown in the following figure.

Interface setup



Each procedure indicates the interface used to perform the procedure or step. The following table describes the interfaces.

Interfaces used to perform procedures and steps

Interface type	Description
ACTIVECM	a MAP window connected to the active side session of the call processing application
INACTIVECM	a MAP window connected to the inactive side session of the call processing application. Actions performed at this interface are also indicated by the command prompt Mate>
CORE0	a Call Agent Manager window connected to the Call Agent card identified as core0 and provides a maintenance interface. The maintenance interface is started from the ccamtc command.
CORE1	a Call Agent Manager window connected to the Call Agent card identified as core1 and provides a maintenance interface. The maintenance interface is started from the ccamtc command.
Active maintenance window (CORE0 or CORE1)	the active maintenance window (CORE0 or CORE1) that is connected to the active Call Agent. The example in figure Call Agent Manager with Message Controllers in the office: Example on page 19 shows CORE1 as the active maintenance window.
SDM	a window connected to the CS 2000 Core Manager. The sdmmtc program and UNIX system activities are completed from this window. SDM is relevant only where it is present.
CBM	TBD
CMT	TBD

Call Agent Manager with Message Controllers in the office: Example

CallAgent	SYS	CON	APPL	MC	Unit: 1
.	
CoreMtc		Jam:	Link0:	Link1:	BLnk: FC: Appl:
0 Quit	Unit0	Inact	no	. Act	. Inact . . insync .
2 CAMtc	Unit1	Act	no	. Act	. Inact . . insync .

The following procedure indicates how to create a shell script that changes the title of an xterm window. This procedure only works on UNIX workstations.

At an xterm window on the CS 2000 SAM21 Mgr client workstation

- 1 Use an editor to create the following file. Available editors are vi and dtpad. Save the file with a name of "xtermtitle".

```
#!/bin/sh
# this script changes the title of an xterm
echo "\033]2;$1\007"
echo "\033]1;$1\007"
```

- 2 Make the file executable.

```
UNIX> chmod +x xtermtitle
```

- 3 To use the script, enter the command and the new name for the window.

```
UNIX> ./xtermtitle <window_title>
```

window_title

is a string like core0, core1, sam21gui, activecm, or inactivecm

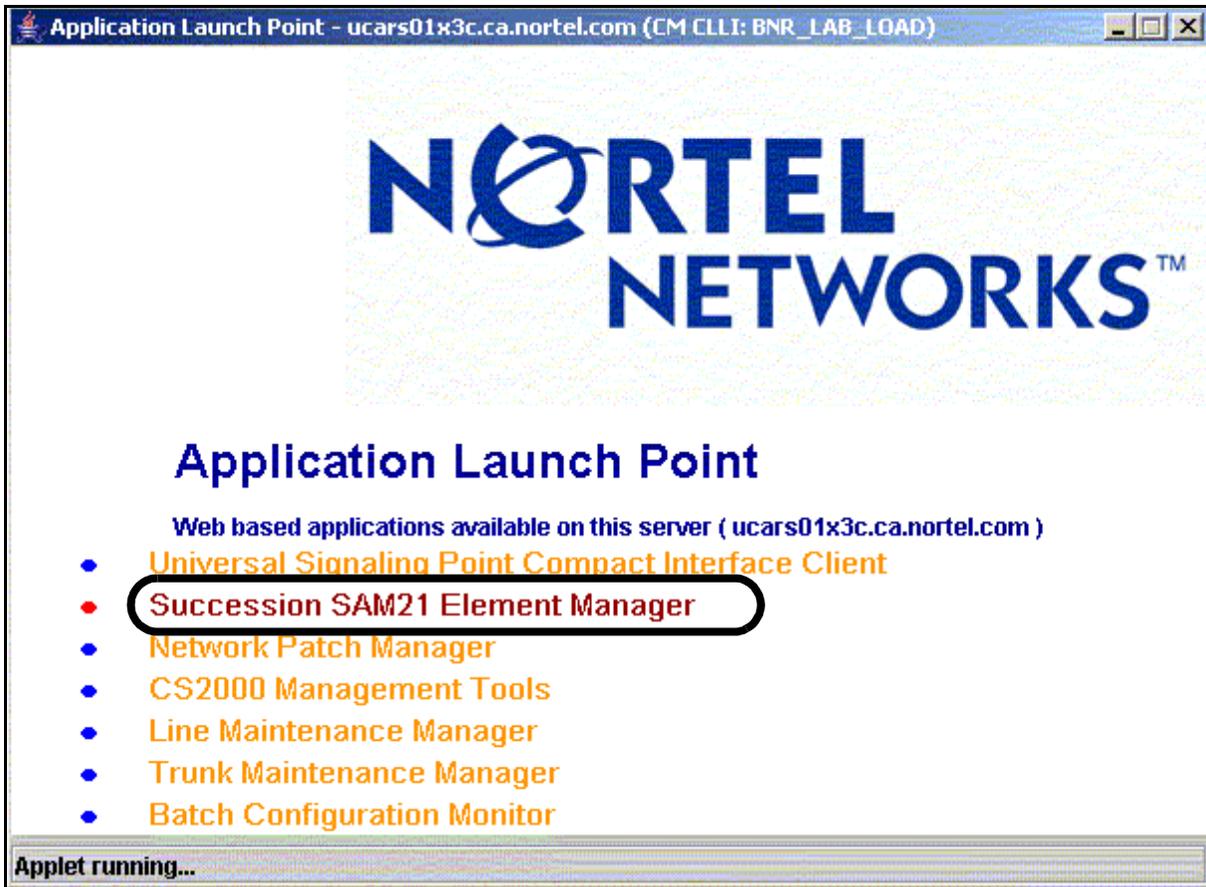
- 4 This procedure is complete.

For Microsoft Windows 2000 based workstations, change the title of a command prompt window with the **title <window_name>** command.

Open SAM21 shelf views

At your workstation

- 1 Open a web browser and enter the IP address or hostname of the host that provides the CS 2000 Management Tools. Click on the link for the CS 2000 SAM21 Manager.



A login window appears.

- 2 Provide the login name and password and then click Log In.



Note: The login account must have mgcrw or mgcadm level permissions.

The application starts and the Subnet View window opens.

- 3 Identify and open the Shelf View window for shelves that contain call agent cards by double-clicking on the shelf icons from the Subnet View window. (Additional shelves may not contain call agent cards.)
- 4 Position the screens so that alarms and access to locking and unlocking cards are available.
- 5 This procedure is complete.

Open Call Agent Mgr windows

The procedure requires that the PassThru feature and usernames are configured on the CS 2000 Core Manager or CBM. For this procedure and the remainder of the upgrade, the documented usernames are core0usr, core1usr, and cmusr. If the office has different PassThru usernames provisioned, substitute the different usernames. Offices that do not have a CS 2000 Core Manager or CBM require two connections, one to each Call Agent card, but will telnet directly to each Call Agent card.

At your workstation

- 1 Open two terminal windows and change the title for one window to "CORE0" and the other window to "CORE1".

SDE — At the CORE0 window

- 2 Telnet to the CS 2000 Core Manager or CBM and log in as user "core0usr".

The CS 2000 Core Manager or CBM forwards the telnet session to the core0 Call Agent card.

- 3 Log in to the core0 Call Agent card.

SDE — At the CORE1 window

- 4 Telnet to the CS 2000 Core Manager or CBM and log in as user "core1usr".

The CS 2000 Core Manager or CBM forwards the telnet session to the core1 Call Agent card.

- 5 Log in to the core1 Call Agent card.

SDE — At the CORE0 and CORE1 windows

- 6 Start the maintenance interface.

```
[mtc@core0_ip_address mtc]$ ccamtc  
[mtc@core1_ip_address mtc]$ ccamtc
```

- 7 This procedure is complete.

Open MAP windows

If the office does not have a CS 2000 Core Manager or CBM, create two telnet connections to the IP address of the call processing application instead of following this procedure. The IP address of the call processing application is the “activeirm” address reported by the **QueryIP** command at the Call Agent Manager interface.

At your workstation

- 1 Open two terminal windows and change the title of one to “ACTIVECM” and the other to “INACTIVECM”.

SDE — At the ACTIVECM window

- 2 Telnet to the CS 20000 Core Manager or CBM and log in as user “cmusr.”

The CS 2000 Core Manager or CBM forwards the telnet session to the call processing application.

- 3 Log in to the call processing application.

SDE — At the INACTIVECM window

- 4 Repeat steps [2](#) and [3](#).
- 5 This procedure is complete.

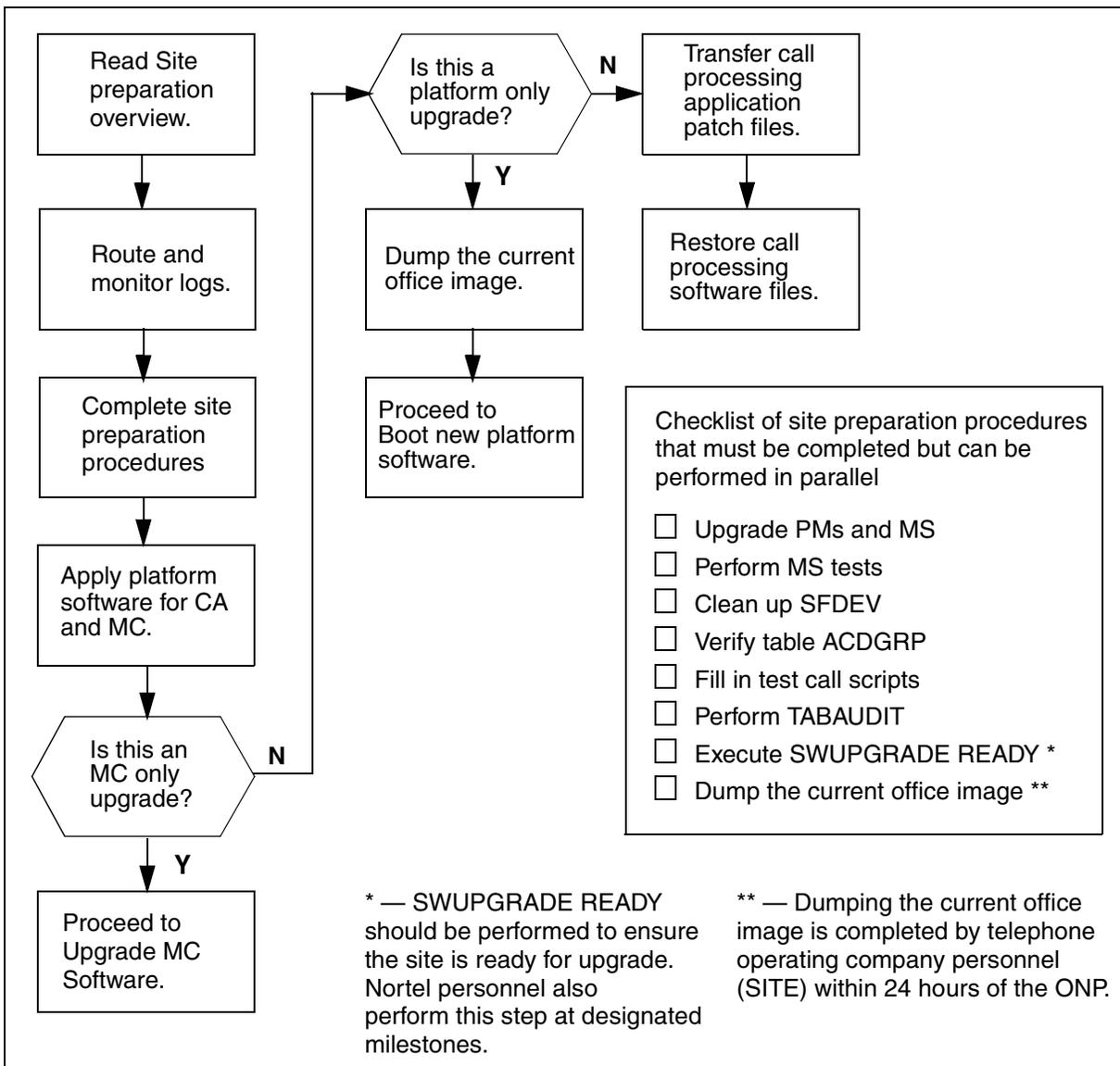
Note: The INACTIVECM window does not connect to the inactive call processing application at this time. Later steps indicate when and how to connect to the inactive call processing application, when necessary.

Site preparation phase

Perform the following procedures when the upgrade software media is delivered, approximately 35 days before the ONP, to verify office stability and prepare the office for an upgrade.

Review [Site preparation overview](#) before performing the procedures in this section. Be sure to understand SITE preparation responsibilities before the ONP and that a current office image must be taken within 24 hours of the ONP.

Site preparation phase



[Table , Process timeline](#) indicates the timing of events that need to be completed by operating company personnel for an ONP. This timeline does not apply to platform only MR upgrades or Message Controller only upgrades.

Process timeline

Days before the upgrade	Site preparation activity
45 days	Site delivery checklist and acceptance of schedule arrives at site
35 days	<ul style="list-style-type: none"> • first software media and documentation shipment arrives at site • site begins checking logs daily, refer to Monitor logs on page 29. Check logs for CCA, SAM21 EM and Ethernet Routing Switch 8600 to be sure links are stable. <p>Note: Continue monitoring logs until the day of SWACT.</p> <ul style="list-style-type: none"> • begin upgrading and verifying PMs and other network components with the latest software loads, refer to "Upgrade Peripheral Modules and Message Switch" in Upgrading the Call Agent, NN10065-461
30 days	Begin data consistency checks, refer to Perform TABAUDIT on page 63
15 days	Ensure that scheduled RExTsts complete successfully
7-4 days	<ul style="list-style-type: none"> • ensure SFDEV is clear, refer to Clean up SFDEV on page 57 • continue to monitor logs for CCA, SAM21 EM and Ethernet Routing Switch 8600 <i>until the day of SWACT. Continue to check the logs to be sure links are stable.</i> • if office is equipped with PMs, ensure that the latest PM loads and XPM patch files are restored to the proper disk volumes • site receives final shipment of software media and documentation

Process timeline

Days before the upgrade	Site preparation activity
6 days	<ul style="list-style-type: none"> • verify all network nodes are loaded, patched, and working • verify dial in connectivity, refer to Remote site access on page 89 • ensure all software media are on site • verify that site personnel are familiar with the upgrade process
5 days	<p>The final site readiness check is performed by Nortel personnel. Nortel Software Delivery Engineer dials in and runs Execute SWUPGRADE READY on page 68.</p>
3-2 days	<ul style="list-style-type: none"> • verify site personnel has prepared test calls plan • obtain name of site personnel representative with the authority to decide in case of an abort with the CANCEL command • verify patches for the new software load are downloaded to the site • ensure all site preparation checklist items are complete • continue monitoring logs for CCA, SAM21 EM and Ethernet Routing Switch 8600 <i>until the day of SWACT. Continue to check the logs to be sure links are stable.</i>
Day of upgrade	<p>Refer to Site responsibilities the day of the software delivery on page 84.</p>
Night of upgrade	<p>Refer to SWUPGRADE on page 92.</p>

Site preparation overview

Planning activities

**CAUTION****Possible service interruption**

Application of the following patch types within 30 days of the ONP must be considered a gating issue to the ONP:

Active (ACT) patch applied and activated

Limited (LTD) status patch

Verification (VO) status patch

If any of the above patches are applied to the office within 30 days of the ONP, immediately contact your Nortel regional customer representative or call the Global Software Delivery Hotline for your market.

A successful software delivery application will require certain activities to be performed before the ONP. Some of these activities will depend on factors such as office type and the PCL software being delivered. This section provides a brief overview of the site preparation activities that must take place before the ONP. Other required activities not listed in this section must be approved by and coordinated through the appropriate Nortel customer representatives. The following information: administrative, warnings, and software delivery data services should be reviewed by office personnel as soon as this document is received.

Pre-application activities

Pre-application activities include upgrading all peripherals (including remotes) to PM loads compatible with the new PCL software load. In addition, Network (ENET) and Message Switch (MS) software upgrades must be completed before the ONP.

Pre-application activities can include (but are not restricted to) the following:

- First shipment of ONP CDRoms and documentation to the site
- Site polling by Nortel to obtain specific switch information
- Site preparation procedures
- TABAUDIT procedure
- Final shipment of ONP CDRoms and documentation to site

- Pre-loading the message switch
- Site ready checks
- Site responsibilities the day of the software delivery application

Some of the above activities will be completed by Nortel personnel and some will be completed by the operating company. Site personnel responsible for completing pre-application activities should become familiar with all sections of this document.

Monitor logs

**CAUTION****Possible loss of service**

Check the logs for CCA, SAM21 EM and Ethernet Routing Switch 8600 to make sure links are stable. Continue to monitor the logs until the day of SWACT.

Perform this activity according to site operating procedures.

SITE — At the ACTIVECM window

- 1 Enter the BCS update level.
 - > **BCSUPDATE**
- 2 Check the logs.
 - > **LOGCHECK**
- 3

ATTENTION

Do not proceed until all log activity is explained.

This procedure is complete.

Upgrade Peripheral Modules and Message Switch

ATTENTION

Only perform this procedure if the office is configured with an MS and legacy Peripheral Modules (PM).

ATTENTION

This is the first shipment of software and arrives approximately 35 days before the ONP.

Do not perform the following procedure if this is a platform only upgrade (MNCL).

The examples provided in this procedure show how to get the MS and the call processing application images, but this procedure also applies to PM loads and cutover tools necessary to upgrade a TDM to Hybrid solution.

If this procedure is not needed, go to [Apply platform software for Call Agent and Message Controller on page 34](#).

Upgrade of the call processing application on the Call Agent requires an upgrade of all network elements in the Carrier Voice over IP network and all element managers before an upgrade of the Call Agent. Refer to *Upgrading a Carrier Voice over IP Network*, NN10440-450 for changes in this policy and the upgrade order.

Do not proceed with the Call Agent upgrade unless all other network elements and element managers have been upgraded or *Upgrading a Carrier Voice over IP Network*, NN10440-450 indicates which network elements and element managers can be upgraded after the Call Agent.

If the CS 2000 - Compact is equipped with Message Controller cards, the Message Switch, Enhanced Network, and any Peripheral Modules must be upgraded before the Call Agent. Refer to the *Peripheral Module Release Document*, 297-9051-599 (EMEA) or 297-2663-599 (NA). Upgrade of the Message Controllers is completed during step SWUPGRADE in this document.

Because the CS 2000 - Compact does not have a tape drive, software loads delivered for TDM peripherals are shipped on CDROM.

SITE — At the CS 2000 Management Tools server

- 1 Insert the DVD or CDROM in the CDROM tray.

SITE — At the CORE0 or CORE1 window

- 2 Exit the Call Agent Manager:

```
> 0 all
```

The operating system prompt is returned.

```
[mtc@hostname mtc]$
```

- 3 Change directory to the destination directory for the peripheral module (PM) loads:

```
> cd /3PC/<sd0x>/<pm_loads_location>
```

Example

```
> cd /3PC/sd00/pmloads
```

- 4 Open an FTP session to the CS 2000 Management Tools server and log in:

```
> ftp <cs_2000_mgmt_tools_ip>
```

Note: Log in to the CS 2000 Management Tools server as a user with privilege to change directory and transfer files with FTP.

Example

```
[mtc@10.40.44.67 image0]$ ftp <cs_2000_mgmt_tools_ip>
Connected to <cs_2000_mgmt_tools_ip>.
220 ProFTPD 1.2.8 Server (Authorized Use Only) [hostname]
Name (hostname:mtc): maint
331 Password required for maint.
Password:
230 User maint logged in.
ftp>
```

- 5 Change directory, list the file size, change the mode to binary, and get the file:

```
ftp> cd /cdrom/cdrom0
ftp> ls
ftp> bin
ftp> prompt
ftp> mget *
```

Note: Do not transfer a file with a name longer than 32 characters.

Example FTP session of getting PMLOADS

```
ftp> cd /cdrom/cdrom0
250 CWD command successful.
ftp> ls
ERS21CE.img1020
ENX21CE.img1020
...
LRS21CE.img1020
MPF21CE.bin128
QLI21BT.img1020
ftp> bin
200 Type set to I.
ftp> prompt
Interactive mode off.
ftp> mget *
local:
200 PORT command successful.
150 Opening data connection for ERS21CE.img1020 (binary mode)(5107140 bytes)
226 Transfer complete.
150 Opening data connection for ENX21CE.img1020 (binary mode)(3913740 bytes)
226 Transfer complete.
...
```

6 End the FTP session by typing bye:

```
ftp> bye
```

At the ACTIVECM window

7 Enter the DISKUT level and import the upgrade PM loads:

```
> DISKUT
> IMPORT SD00PMLoads
```

Example IMPORT of PM loads

```
DISKUT:
>IMPORT SD00PMLoads

Attempting to import 24 files selected on SD00PMLoads.

Imported ERS21CE.img1020 as ERS21CE IMAGE 1020.
Imported ENX21CE.img1020 as ENX21CE IMAGE 1020.
...
Imported MPF21CE.bin128 as MPF21CE BIN 128.
Imported QLI21BT.img1020 as QLI21BT IMAGE 1020.

Imported 24 files successfully of 24 attempts on SD00PMLoads.
```

The PM load files are imported from the native file system into the call processing application file system. If the disk does not have enough space, a prompt to increase the volume size is presented.

- 8 This procedure is complete.

SITE — At a CS 2000 Management Tools terminal

- 9 Issue the eject command to open the CDROM tray:

```
# eject
```

Software on the CS 2000 Management Tools server unmounts the DVD and opens the CDROM tray. If the eject command fails and indicates that the device is busy, ensure that the FTP session is ended and no users have changed directory into /cdrom/... directory. Re-enter the eject command.

SITE — At the CS 2000 Management Tools server

- 10 Remove the DVD from the CDROM tray.
- 11 This procedure is complete.

Apply platform software for Call Agent and Message Controller

Complete this procedure at least two days before the ONP.

This procedure installs the Call Agent platform software, `ncgl_cca_image_7.x.y.z`, and the Message Controller software, `ncgl_mc_image_7.x.y.z` onto the CS 2000 Core Manager or the Core and Billing Manager (CBM). The Message Controller software is installed even if the office is not configured with Message Controller cards. If the office is not configured with a CS 2000 Core Manager or a CBM, this procedure installs the software on `/data/swd/3pc` of the CS 2000 Management Tools server.

For offices without a CS 2000 Core Manager or a CBM, manual action is required. Refer to [Offices without a CS 2000 Core Manager or CBM on page 42](#).

SITE — At the CS 2000 Management Tools server

- 1 Insert the CDROM in the CDROM tray.

SITE — At a CS 2000 Management Tools terminal

- 2 Log in and then use the `su` command to gain root privilege.

```
Trying <hostname>...
Connected to <hostname>.
Escape character is '^]'.

Authorized use only, activities logged.
login: username
Password: <password>
Last login: Fri Jan 30 12:48:10 from <otherhost>
prompt:>
prompt:> su - root
Password: <root_password>
#
```

- 3 Execute the `platform_load_install.sh` script.

```
# /opt/nortel/sspfs/Scripts/platform_load_install.sh
```

The screen clears and a menu is displayed.

```
Welcome to the Platform Installation Tool Version 3.2
=====
RPM INSTALLATION/REMOVAL
=====
1) Install RPM from CDROM          2) Install RPM from Disk
3) Uninstall RPM                  4) Query all RPMs

OTHER
=====
C) Change Rotation Parameters      P) View Rotation Parameters
V) SAM21 Platform Version Installed X) Exit

Please choose one of the following: 1
```

- 4** Enter **1** and press the Return key to install the software.

The screen clears and the contents of the .rpm package are displayed.

```
Verifying CDROM is mounted
/cdrom/cdrom on /vol/dev/dsk/c0t0d0/cdrom read only/nosuid/mapl-
case/noglobal/rr/traildot/dev=16c0001 on Sat Mar 27 16:34:13 2005
CDROM is mounted.
Listing file names in the rpm on the cd.

/swd/3pc/ncgl_cca_7.32.1.0
/swd/3pc/ncgl_mc_7.32.1.0

Do you want to continue (y/n)? Y
```

Note: *If the message There is no cd in the CDROM drive, please check drive is displayed, ensure that the CDROM is inserted in the tray for this unit.*

- 5** Enter **Y** to proceed with the software installation.

The software is extracted from the .rpm package. The .rpm package is transferred to the CS 2000 Core Manager or CBM.

```
Extracting files from the rpm archive on the cd.

Installing RPM package ncgl_cca_mc_image-7.32-1.0.noarch.rpm
Sun Microsystems Inc. SunOS 5.8 Generic Patch December 2005
ncgl_cca_mc_image-7.32-1.0.noarch.rpm 100% 11MB 750.4KB/s 00:14
root@47.135.214.127's password: <enter root password>
```

- 6 Enter the root password for the CS 2000 Core Manager or CBM.
The software is installed on the CS 2000 Core Manager or CBM. If a CBM is used, the .rpm package is then copied to the inactive CBM unit and another prompt for the root password appears. If this happens, enter the root password and press Return. After the load file is installed on the CS 2000 Core Manager or CBM, the transferred .rpm package is deleted from the CS 2000 Core Manager or CBM.

```
Extracting files from the rpm archive on the cd.

Installing RPM package ncgl_cca_mc_image-7.32-1.0
Sun Microsystems Inc. SunOS 5.8 Generic Patch December 2005
ncgl_cca_mc_image-7.32-1.0.noarch.rpm 100% 11MB 750.4KB/s 00:14
root@47.135.214.127's password: <enter root password>
Mate IP is 47.135.214.129
Sun Microsystems Inc. SunOS 5.8 Generic Patch December 2005
root@47.135.214.129's password: <enter root password>

***** Please hit ENTER key to continue *****
```

- 7 A script is run to verify connectivity to the ACTIVEIRM IP address (the call processing application) and to verify hostname aliases. The output depends on whether the office is configured with a CS 2000 Core Manager or a CBM. Refer to [Additional information on page 37](#) for examples.
 - 8 Issue the eject command to open the CDROM tray:
eject
Software on the CS 2000 Management Tools server unmounts the CDROM and opens the CDROM tray. If the eject command fails and indicates that the device is busy, ensure that the FTP session is ended and no users have changed directory into /cdrom/... directory. Reenter the eject command.
- SITE — At the CS 2000 Management Tools server**
- 9 Remove the CDROM from the CDROM tray.

10 This procedure is complete.

If	Do
this is a platform only upgrade	Dump call processing application image on page 75
otherwise	Transfer call processing application patch files on page 50

Additional information

After applying the platform software, the installation process invokes the `/swd/3pc/bin/user_config.sh` script to verify or set:

- the configuration of the PassThru feature on the CS 2000 Core Manager or CBM
- hostname aliases core, core0, and core1
- NFS sharing of the Call Agent platform software load

The installation process asks if the `ncgl_cca_image` software is for CA (Call Agent) or HMEM (Home Location Registry Memory).

The CS 2000 Core Manager or CBM software provides a prompt to determine if the fileset is for a CA or HMEM application.

Enter **CA** and press the Enter key.

```
Is this a CA or HMEM application? [CA/HMEM] CA: CA
```

A check is made to determine if aliases core, core0, and core1, as well as PassThru accounts `cmusr`, `core0usr`, and `core1usr` exist. The response is determined by the current configuration.

New installation on Core Business Manager

The software prompts for the ACTIVEIRM IP address, adds the host aliases to the `/etc/hosts` file, and creates the PassThru users on both CBM units.

New installation on CBM

```
Is this a CA or HMEM application ? [CA/HMEM] CA : CA
Checking for existing core alias...
-----
hostmtc: Hostname or IP address is not in the hosts database: `core`.

No existing alias from core found

Cleaning up any alias for core0 core1 and any related passthru accounts,
if found.

Enter the ACTIVEIRM IP ADDRESS (e.g. 172.16.16.72 ) or q : 10.40.64.72

Adding aliases...
-----
10.40.64.72~core~~
10.40.64.67~core0~~
10.40.64.70~core1~~

Configuring Passthru Users ...
-----

Creating Passthru accounts...
Creating passthru user cmusr
Creating passthru user core0usr
Creating passthru user core1usr

Sharing NFS mount For CCA Access of /swd/3pc ...
-----
NFS mount /swd/3pc successfully shared.
```

Upgrade on CBM

In an upgrade on the CBM, the software always prompts to confirm the ACTIVEIRM IP address, always removes the core, core0, and core1 aliases, and always adds them back to the `/etc/hosts` file.

Upgrade on CBM

```
Is this a CA or HMEM application ? [CA/HMEM] CA : CA
Checking for existing core alias...
-----
10.40.64.72~core~~
Please confirm ACTIVE IRM IP address is [10.40.64.72] (yes/no):YES

Temporarily removing alias from /etc/hosts for core core0 core1
and related passthru accounts, while performing network engineering
validation.

Adding aliases...
-----
10.40.64.72~core~~
10.40.64.67~core0~~
10.40.64.70~core1~~

Configuring Passthru Users ...
-----

Creating Passthru accounts...
Creating passthru user cmusr
Creating passthru user core0usr
Creating passthru user core1usr

Sharing NFS mount For CCA Access of /swd/3pc ...
-----
NFS mount /swd/3pc successfully shared.
```

New installation on CS 2000 Core Manager

For a new installation, the software prompts for the ACTIVEIRM IP address. This information is available from the Nortel Installation Services engineer, or documentation provided by Nortel Installation Services.

New installation on CS 2000 Core Manager

```
Checking for existing aliases...
-----
hostmtc:Hostname or IP address is not in the hosts database:`core`.
hostmtc:Hostname or IP address is not in the hosts database:`core0`.
hostmtc:Hostname or IP address is not in the hosts database:`core1`.

Checking for existing passthru accounts...
-----
passthru:Undefined passthru user cmuser.
passthru:Undefined passthru user core0usr.
passthru:Undefined passthru user corelusr.

Enter the ACTIVEIRM IP ADDRESS (e.g. 172.16.16.72) or q: 10.40.24.80
Do you wish to proceed? [y/n] y: Y

Checking for existing IP in hosts database.
-----
hostmtc:Hostname or IP address is not in the hosts database:`10.40.24.80`
hostmtc:Hostname or IP address is not in the hosts database:`10.40.24.75`
hostmtc:Hostname or IP address is not in the hosts database:`10.40.24.78`

Adding aliases...
-----
10.40.24.80:core::
10.40.24.75:core0::
10.40.24.78:core1::

Adding passthru accounts...
-----
cmuser::221:202,passthru:CA SOS Image:/sdmtools/bin/cm_screener:
/home/cmuser::telnet:core
core0usr::222:202,passthru:CA Unit 0:/sdmtools/bin/cm_screener:
/home/core0usr::telnet:core0
corelusr::223:202,passthru:CA Unit 1:/sdmtools/bin/cm_screener:
/home/corelusr::telnet:core1

exporting NFS mount /swd/3pc...
-----
Mount already exported to core*.
```

The aliases and PassThru accounts are created. The status information about installation in the figure above does not remain on the screen very long since the installation software clears the screen once the configuration is complete. Please read [Important password information](#).

Upgrade configuration on CS 2000 Core Manager

The following figure shows the upgrade configuration on the CS 2000 Core Manager for passthru accounts. Please read [Important password information](#).

Upgrade configuration on CS 2000 Core Manager

```
Checking for existing aliases...
-----
10.40.24.80:core:cm CLLI:Core's IPNETWRK IP Address
10.40.24.75:core0::
10.40.24.78:core1::

Checking for existing passthru accounts...
-----
passthru:Undefined passthru user cmuser.
passthru:Undefined passthru user core0usr.
passthru:Undefined passthru user core1usr.

Adding passthru accounts...
-----
cmuser::221:202,passthru:CA SOS Image:/sdmtools/bin/cm_screener:
/home/cmuser::telnet:core
core0usr::222:202,passthru:CA Unit 0:/sdmtools/bin/cm_screener:
/home/core0usr::telnet:core0
core1usr::223:202,passthru:CA Unit 1:/sdmtools/bin/cm_screener:
/home/core1usr::telnet:core1

exporting NFS mount /swd/3pc...
-----
Mount already exported to core*.
```

Note: Long lines in the display were wrapped.

Important password information

For new installations, new PassThru accounts are created without passwords. Users log in to the CS 2000 Core Manager or CBM with a username of cmusr, core0usr, or core1usr, and are immediately forwarded to a destination host. The destination host provides a login with password authentication. If password authentication is preferred on the CS 2000 Core Manager or CBM, in addition to the destination host, then reconfigure the accounts at the passthru level of sdmmtc or cbmmtc.

Offices without a CS 2000 Core Manager or CBM

Offices without a CS 2000 Core Manager or a CBM require manual action to ensure that load delivery is complete. Failure to perform these actions may result in a “no boot” situation. Two tests are available to determine this situation:

- The CS 2000 Management Tools server boots the cards in the SAM21 shelf. This is indicated at the CS 2000 SAM21 Manager client if the SAM21 EM Server IP value at the Reprovisioning window is also the value for Server IP on the same window.
- If the command **echo \$SDM_IP** returns a blank line from a command prompt at the CS 2000 Management Tools server.

Required actions for offices without a CS 2000 Core Manager or CBM

At a CS 2000 Management Tools terminal

- 1 Become the superuser with the **su - root** command and enter the root password when prompted.
- 2 View the `/etc/hosts` file:

```
# cat /etc/hosts
```
- 3 If values for `core`, `core0`, and `core1` are not listed, enter them in the file.
 - `core` is the same IP address as the ACTIVEIRM IP address. For example, 172.16.16.72.
 - `core0` is the same as the `core` value, but the last octet is 5 less than the last octet of the `core` value. For example, 172.16.16.67.
 - `core1` is the same as the `core` value, but the last octet is 2 less than the last octet of the `core` value. For example, 172.16.16.70.

Make a backup copy of the `/etc/hosts` file:

```
# cp /etc/hosts /etc/hosts.bak
```

Enter the values with the vi editor, the dtpad graphical editor, or appending the lines to the end of the file:

```
# echo "172.16.16.72 core" >> /etc/hosts
# echo "172.16.16.67 core0" >> /etc/hosts
# echo "172.16.16.70 core1" >> /etc/hosts
```

- 4 Edit the `/etc/dfs/dfstab` file to allow the `/data/swd/3pc` directory to be shared on the network:

```
# echo "#Begin CCA NFS Configuration" >>
/etc/dfs/dfstab
```

```
# echo "share -F nfs -o rw=core0:core1
/data/swd/3pc" >> /etc/dfs/dfstab
```

```
# echo "#End CCA NFS Configuration" >>
/etc/dfs/dfstab
```

- 5 View the file to ensure the changes are correct:

```
# cat /etc/dfs/dfstab
```

Ensure that the end of the file resembles the following output.

```
...
#Begin CCA NFS Configuration
share -F nfs -o rw=core0:core1 /data/swd/3pc
#End CCA NFS Configuration
```

- 6 Enable the sharing:

```
# /usr/sbin/shareall
```

- 7 This procedure is complete.

Electronic Software Delivery (ESD) for Call Agent

Both the PCL and NCL software loads for the Call Agent are available for electronic transfer from Nortel to a customer dropbox. An example of the PCL is CSNN07BG, and an example of the NCL is ncgl_cca_image_7.33.1.0.

ATTENTION

This procedure applies only to the following loads: CM Core, CCA LINUX, and MC.

Audience

This procedure is for operating company personnel who have an ESD agreement with Nortel. When the agreement was established, the operating company provided Nortel with the location of an electronic dropbox, a username, and a password pair for delivering software loads. When Nortel delivers a software load to the dropbox, an electronic mail notification is sent to the E-mail address specified by the operating company when the ESD agreement was established.

When to use this procedure

Use this procedure after receiving electronic notification for the following software loads:

- PCL
 - SNC0000n.n.R.PCL.PPC3.vault.nn.D.tar.gz for North America
 - SWC0000n.n.R.PCL.PPC.vault.nn.D.tar.gz for International
 - SEC0000n.n.R.PCL.PPC3.vault.nn.D.tar.gz for SL-100
 - SDC0000n.n.R.PCL.PPC3.vault.nn.D.tar.gz also for SL-100
- NCL
 - 3PC000n0.n.R.NCL.NAP.vault.nn.D.tar.gz for Standard release
 - 3PC0M0n0.n.R.NCL.NAP.vault.nn.D.tar.gz for Maintenance releases

n

is an integer value such as 8 and is part of the product order code

vault

is a string that identifies the Nortel software vault that holds the software

nn

is an integer value that indicates the repository version of the software

Action

At a CS 2000 Management Tools server terminal

- 1 Log in as root user:

```
$ su - root
```
- 2 At the prompt, enter the root password.
- 3 Change directory to the iso_esd directory:

```
# cd /data/iso_esd
```
- 4 List the contents of the ESD directory:

```
# ls
```

If the iso_esd directory	Do
has been created	step 9
has not been created	step 5

- 5 Make a directory to store the ESD software:

```
# cd data
```
- 6 Make a temporary directory to store the ESD software:

```
# mkdir iso_esd
```
- 7 Change the permissions mode to the iso_esd directory:

```
# chmod 777 iso_esd
```
- 8 Change directory to the iso_esd directory:

```
# cd iso_esd
```
- 9 Ensure that enough disk space is available for the ESD software. For one PCL and one NCL, 500 MB is recommended.

```
# df -k /data
```

The free space on the device that /data is mounted is printed. The value for "avail" is the number of free kilobytes. Divide that number by 1000 to determine the number of free megabytes.

```
$ df -k /data
```

Filesystem	kbytes	used	avail	capacity	Mounted on
/dev/md/dsk/d20	3082223	14412	2876454	5%	/data

```
2876454 / 1000 = 2876 MB free
```

- 10 Transfer the ESD software files from the dropbox on the repository server. The repository server is the machine owned by the telephone operating company that was selected to be the destination for the ESD software files:

```
# ftp <repository_server>
```

Log in and change directory to the dropbox location on the repository server.

- 11 Change the transfer mode to binary.

```
ftp> bin
```

- 12 Retrieve the ESD software load:

```
ftp> get <esd_filename>.tar.gz
```

Example

```
ftp> get 3PC0M080.8.R.NCL.NAP.SDC.1.D.tar.gz
```

Note: Determine the actual ESD filename from the Nortel notification, or listing the contents of the dropbox with the **ls** command.

- 13 Repeat [step 12](#) for all ESD software loads recorded in the notification from Nortel and then end the FTP session:

```
ftp> bye
```

- 14 Extract the ESD software load from the tape archive format:

```
# gtar xvzf <esd_filename>.tar.gz
```

Example

```
# gtar xvzf 3PC0M080.8.R.NCL.NAP.SDC.1.D.tar.gz
```

The ESD software load is uncompressed, and a new directory named after the ESD software filename is created. The directory name is the name of the ESD filename without the .tar.gz suffix. The contents of the ESD software load are placed in this new directory.

- 15 Change directory to the newly created directory:

```
# cd <esd_filename>
```

Example

```
# cd 3PC0M080.8.R.NCL.NAP.SDC.1.D
```

- 16 The remainder of this procedure depends on the ESD file:

If the ESD file is a	Do
PCL	step 17
NCL	step 18

- 17 This step applies to PCL ESD software loads only.

- a Rename the PCL file from a .bin1020 suffix to a .img1020 suffix:

```
# mv SNC0008_CM.bin1020 SNC0008_CM.img1020
```

- b Record the location of the call processing application files, /data/iso_esd/<esd_filename>, such as /data/iso_esd/SNC00008.8.R.PCL.PPC3.SDC.2.D.

- c Go to procedure [Restore call processing application files on page 52](#) and specify this location for the call processing application files instead of /cdrom/cdrom0 in [step 5](#). This procedure is complete.

- 18 The ESD software is formatted as an ISO 9660 image. Use the mount_iso.ksh script to mount the ISO 9660 image:

```
# /opt/nortel/sspfs/Scripts/mount_iso.ksh mount /data/iso_esd/<esd_directory>/<iso_image>.img.tape
```

Example

```
# mount_iso.ksh mount /data/iso_esd/3PC0M080.8.R.NCL.NAP.SDC.1.D/iso_ncg I_cca-7.33-1.0.img.tape
```

Note: A space is required after the word **mount** and before the word **/data**.

A response is printed to the terminal. Use the response to determine if the command was successful:

mount_iso.ksh command responses

Response	Meaning
Is is very important for the user of this command to know that if you mount an iso image. It is a MUST that you unmount an image before removing the image file. If the file is deleted while the OS has it mounted, it can be harmful to the runtime applications on this unit	This response indicates success.
Provided full path to ISO image does not exist	Verify the location and name of the ISO 9660 image, such /data/iso_esd/3PC0M080.../...img.tape, and retry.
ISO Image Already Mounted	Enter mount_iso.ksh umount to unmount whatever ISO 9660 image is currently mounted, and retry.
Error creating the image device location	This response indicates an operating system error with the loopback file driver. Retry the command, and if it fails a second time, contact Nortel support personnel.
ERROR MOUNTING <ESD_filename>	This response indicates that either the ISO 9660 file is corrupt, or the /tmpmnt directory has been deleted.

The contents of the ESD software file are available in directory /tmpmnt/noarch.

19 To install the software now, use the following procedure:

a List the contents of the /tmpmnt/noarch directory:

```
# ls/tmpmnt/noarch
```

b Record the name of the .rpm file.

c Enter the following command:

```
# /opt/nortel/sspfs/Scripts/platform_load_install.sh
```

Note: There is no space between the word **load_** and the word **install**.

- d** Install RPM from Disk. Select:
 - > 2
 - e** When prompted, enter the .rpm filename.
 - f** When prompted for the location of the .rpm file, enter:
 - > **/tmpmnt/noarch**
- 20** To install the software later, copy the contents to a location on the CS 2000 Management Tools server. When installing the software at the later date, proceed as in [step 19](#) except specify the location of the software instead of /tmpmnt.
- 21** Unmount the ESD file:

```
# /opt/nortel/sspfs/Scripts/mount_iso.ksh
umount
```

Note: A space is required after the word **.ksh** and before the word **umount**.
- 22** This procedure is complete.

Transfer call processing application patch files

Complete this procedure at least two days before the ONP.

ATTENTION

Do not perform this procedure for a platform only upgrade.

Call processing application patch files are delivered electronically through Regional Patch Selector (RPS). Contact Nortel support personnel for information about RPS and call processing application patch files.

SITE — At a terminal window

- 1 Log in to the CS 2000 Core Manager or CBM as the root user if not already logged in:

```
AIX Version 4
(C) Copyrights by IBM and by others 1982, 1996.
login: root
root's Password: <password>
```

- 2 Change directory to the location of the call processing application patch files:
cd <path_to_files>
- 3 Open an FTP session to the call processing application:
ftp cm
- 4 Login with a valid username and password.
Note: The user must have FTP privilege and permission to write to SFDEV.
- 5 Change directory to the store file device (SFDEV):
ftp> cd /SFDEV
- 6 Set the transfer options:
ftp> bin; site lrecl 128
- 7 Use the put command to transfer the call processing application patch files:
ftp> put <patch_file_name>

Note: Optionally use the MPUT and PROMPT commands to transfer multiple files. The MPUT command transfers multiple files. The MPUT command accepts wildcard pattern matching characters. The PROMPT command prevents prompting for each file.

- 8 This procedure is complete.

Restore call processing application files

Complete this procedure when the final shipment of software arrives.

ATTENTION

Do not perform this procedure for a platform only upgrade.

SITE — At the CS 2000 Management Tools server

- 1 Insert the DVD in the CDROM tray.

SITE — At the CORE0 or CORE1 window

- 2 Exit the Call Agent Manager:

```
> 0 all
```

The operating system prompt is returned.

```
[mtc@hostname mtc]$
```

- 3 Change directory to the destination directory for the upgrade call processing application image:

```
> cd /3PC/<sd0x>/<image_file_location>
```

Example

```
> cd /3PC/sd00/image
```

- 4 Open an FTP session to the CS 2000 Management Tools server and log in:

```
> ftp <cs_2000_mgmt_tools_ip>
```

Note: Log in to the CS 2000 Management Tools server as a user with privilege to change directory and transfer files with FTP.

Example

```
[mtc@10.40.44.67 image0]$ ftp <cs_2000_mgmt_tools_ip>
Connected to <cs_2000_mgmt_tools_ip>.
220 ProFTPD 1.2.8 Server (Authorized Use Only) [hostname]
Name (hostname:mtc): maint
331 Password required for maint.
Password:
230 User maint logged in.
ftp>
```

- 5 Change directory, list the file size, change the mode to binary, and get the file:

```
ftp> cd /cdrom/cdrom0
ftp> ls
ftp> bin
ftp> prompt
ftp> mget *
```

Note: Do not transfer a file with a name longer than 32 characters.

Example

```
ftp> cd /cdrom/cdrom0
250 CWD command successful.
ftp> ls
MUC00021810335_MS.img1020
SNC00008810335_CM.img1020
ftp> bin
200 Type set to I.
ftp> prompt
Interactive mode off.
ftp> mget *
local: SNC00008810335_CM.img1020 remote: SNC00008810335_CM.img1020
200 PORT command successful.
150 Opening data connection for SNC00008810335_CM.img1020 (binary mode)
226 Transfer complete.
150 Opening data connection for MUC00021810335_MS.bin1020 (binary mode)
226 Transfer complete.
```

- 6 End the FTP session by typing bye:

```
ftp> bye
```

At the ACTIVECM window

- 7 Enter the DISKUT level and import the upgrade call processing application and Message Switch images:

```
> DISKUT
> IMPORT <volume_name>
> QUIT
```

Example of IMPORTing image files

```
DISKUT:
>IMPORT SD00IMAGE1

Attempting to import 2 files selected on SD00IMAGE1.

Imported MUC00021810335_MS.img1020 as MUC00021810335_MS IMAGE 1020.
Imported SNC00008810335_CM.img1020 as SNC00008810335_CM IMAGE 1020.

Imported 2 files successfully of 2 attempts on SD00IMAGE1.
```

The call processing application and Message Switch images are imported from the native file system into the call processing application file system. If the disk does not have enough space, a prompt to increase the volume size is presented.

- 8 Use the set boot file command to enter the image in to the ITOC and make it bootable:

```
> ITOCCI
> SBF CM <filename_cm> 15
```

Example

```
> SBF CM SNC00008547159_CM 15
```

```
> QUIT
```

The complete ITOC is printed to the terminal. If an MS image was loaded too, use the SBF MS <image_name> <position> command for the MS image too. If there is no free space in the ITOC use the clear boot file command to remove the oldest entry: CBF CM <image_name>.

SITE — At a CS 2000 Management Tools terminal

- 9 Issue the eject command to open the CDROM tray:

```
# eject
```

Software on the CS 2000 Management Tools server unmounts the DVD and opens the CDROM tray. If the eject command fails and indicates that the device is busy, ensure that the FTP session is ended and no users have changed directory into /cdrom/... directory. Reenter the eject command.

SITE — At the CS 2000 Management Tools server

- 10 Remove the DVD from the CDROM tray.
- 11 This procedure is complete.

Perform MS tests

ATTENTION

Only perform this procedure for offices with Message Controllers and a Message Switch.

If the CS 2000 - Compact is configured with Message Controller cards, test the Message Switch at this point.

SITE — At the ACTIVECM window

1 Enter the MS level of the MAP:

> **MAPCI;MTC;MS**

The MS level of the MAP is displayed and the master and slave Message Switches are identified.

```

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

MS
0 Quit      MS 0      .      Clock  Shelf  0      Inter-MS Link 0 1
2           MS 1      .      Master
3           Slave
4
5
6 Tst_      MS:
7 Bsy_
8 RTS_
9
10 LoadMS_
11
12 SwMast
13 Shelf
14 QueryMS
15
16
17 InterMS_
18 Clock
  ADMIN
Time 09:52 >

```

- 2** Busy the slave Message Switch:
> **BSY <x>**
MS101 and MS305 log reports and a major ManB alarm are raised.
- 3** Test the slave Message Switch:
> **TST <x>**
The results of the test are displayed. If the test failed, resolve any problems and repeat the test.
- 4** Return the busied Message Switch to service:
> **RTS <x>**
MS304, MS100, and MS104 log reports are generated. The major ManB alarm clears, and a report about the RTS is displayed.
Wait 5 minutes to ensure the clocks are stable and to allow the hardware audit to run. Both Message Switches should be in service.
- 5** Switch clock mastership:
> **SWMAST**
Two MS104 log reports are generated and the Master and Slave Message Switches exchange mastership.
Wait 10 minutes to allow the Message Switch clocks to stabilize.
- 6** Test the other Message Switch by completing steps [2](#) through [4](#).
- 7** After completing the tests, quit to the CI level:
> **QUIT ALL**
- 8** Monitor Message Switch logs until the scheduled start of the ONP.

Clean up SFDEV

Use this procedure to remove files from the Store File Device (SFDEV).

If call processing application patch files were downloaded in SFDEV, do not delete these files.

ACT — At the ACTIVECM window

- 1 Determine the files in SFDEV:
 > **LISTSF ALL**
- 2 Copy files from SFDEV to storage:
 > **SCANF SFDEV COPY <disk_vol> NAME <file_name>**
 disk_vol
 is the destination storage volume like SD00TEMP
 file_name
 is the name of the file to copy
- 3 Erase files that are not essential from SFDEV:
 > **ERASESF <file_name>**
- 4 This procedure is complete.

Verify table ACDGRP

Perform this procedure to prevent the software from incorrectly renumbering tuples in table ACDGRP during the call processing software upgrade.

ACT — At the ACTIVECM window

- 1 Determine if there are non-consecutive keys in table ACDGRP:

> **OMSHOW ACDGRP ACTIVE**

- 2 Review the output and note if any keys are missing:

```

ACDGRP
CLASS:    ACTIVE
START:2005/06/20 09:30:00 THU; STOP: 2005/06/20 09:54:27 THU;
SLOWSAMPLES:    15 ; FASTSAMPLES:    147 ;
KEY (AUTOMATIC_CALL_DISTRIB_GROUP)
  ACDOFFR    ACDANSR    ACDDFLCT    ACDAABNDN
  ACDNS      ACDPRMPT    ACDBLOCK    ACDTMOFL
  ACDTMINF   ACDTMANS    ACDCIF      ACDXFER
  ACDCPK     ACDUSAGE    ACDUSAG2    ACDICQD
  ACDREQD    ACDDMCT     ACDRQABN    ACDRQRTE

```

Key	ACDOFFR	ACDANSR	ACDDFLCT	ACDAABNDN
0 NACDP	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
2 NACD2P	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0

Index key
1 is missing.

- 3 If any index keys are missing, have translation personnel provision dummy tuples in the key indexes. Also provide datafill in table DNROUTE for each tuple added to table ACDGRP.
- 4 This procedure is complete.

Fill in test call scripts

Test calls should be made and verified to work as expected prior to the software upgrade, preferably on the day of the ONP. Identify calling irregularities ahead of time. This will avoid unnecessary investigation of a pre-existing condition after SWACT.

ATTENTION

Nortel recommends that SITE personnel complete their Test Call Scripts before continuing with the software release upgrade process. Identifying calling irregularities now avoids unnecessary troubleshooting after SWACT.

This section presents generic guidelines for creating a test call plan to be used both before and after the switch of activity (SWACT) to a new load.

The purpose of test calls is to verify the performance of newly installed software for telephone switching systems. Test calls can ensure the smooth operation of thousands of calling situations with different combinations of telephone sets, service features, and traffic conditions on the network. Such testing helps ensure the availability and reliability of features and services for telephone users.

“Test call scripts” refers to the verification calls as predefined by the Telephone/Carrier Operating Company. These are test calls to be performed after activating the new software load in order to confirm acceptability of the new load. In the ONP procedure the test call scripts are put to use as follows:

- As a part of site preparation, this procedure instructs the operating company to fill in and test the test call scripts before beginning the upgrade. This is to provide a thorough test plan exercise for validating the new software load.
- Then, after activating the new software load, the operating company performs the test call scripts again to verify the software load.

The test call scripts provided below are only examples of call types that could be included in the Test Call Scripts. These samples include only basic call processing tests and provide some, but not all, critical test calls. These are provided only as a guideline. Each telephone/carrier

office should determine the best mix of test calls to use based on the office's unique configuration.

ATTENTION

The test calls listed in the following procedures will not apply to every office.

The telephone office will have to customize the list according to its own particular configuration.

Nortel recommends including the following items in your POSTSWACT testing routine.

Add any other items that are determined to be important.

POSTSWACT call checklist

- Verify date, time and DIALTONE
- Perform Critical Call Tests (for example, 0- and 0+7/10). See the following procedure.
- Perform IDDD (International Direct Distance Dialing) calls
- Check Equal Access origination and termination
- Perform CCIS (Common Channel Inter-office Signaling) calls
- Verify ACTS (Automatic Coin Toll Service)
- Verify DRAMS (announcements and SIT tones)
- Check WATS (Wide Area Telephone Service), INWATS, OUTWATS, 2-way
- Verify Pay Station Coin Control (Coin Collect and Coin Return)
- Verify miscellaneous services such as 311, 411, 611, and repair services
- Check EAS (Extended Area Service) calls
- Perform TOPS (Traffic Operator Position System) calls
- Perform MCCS (Mechanized Calling Card Service) calls
- Perform DISA (Direct Inward System Access) calls
- Verify Custom Calling Features

SITE — At the office

1 Perform the critical test calls and record the results.

Test description	From: line type or CLLI	To: call type and digits dialed	Test result
Check for DIALTONE on all line modules			
Verify '0' minus route			
Verify '0' plus route			
Verify ONI 1-7, 1-10 digits			
Verify EAS incoming and outgoing routes			
Verify CAMA routes			
Verify local Tandem routes			
Verify DDO routes			
Verify Directory Assistance			
Verify critical service routes (911, police, fire, hospitals, and radio stations)			
Verify TOLL COMP (DTS) route			
Verify 1FR intra-office call			
Verify Remotes: <ul style="list-style-type: none"> • EAS outgoing (one route) • '0' plus '0' minus • CAMA ANI • 1FR intra-Remote 			
Verify Operator Intercept route			
Verify all (idle) customer/network trunks			

2 Perform additional test calls sample.

- a** Verify regular POTS calls:
 - line (1FR) -> line (1FR)
(969-xxxx -> 969-xxxx)
 - line (PPHONE) -> trunk -> line (1FR)
(969-xxxx -> 9-1-514-970-xxxx)
 - b** Verify use of different PM types:
 - line (LM) -> line (RLM)
(969-xxxx -> 969-xxxx)
 - line (LCM) -> line (RLCM)
(969-xxxx -> 969-xxxx)
 - c** Verify use of different trunk types:
 - line (1FR) -> PTS trunk -> line (1FR)
(968-xxxx -> 969-xxxx)
 - line (1FR) -> ISUP trunk (all variants supported by office) ->
line (KSET-Disp M5209T)
(968-xxxx -> 6-456-xxxx)
 - d** Verify ISDN calls:
 - line (KSET-Disp M5317T) -> trunk -> line (KSET-Disp
M5209T)
(968-xxxx -> 6-456-xxxx)
 - line (PPHONE-Disp M5317T) -> trunk -> line (1FR-Disp
Maestro)
(968-xxxx -> 9-969-xxxx)
 - line (KSET-Disp M5317T) -> trunk -> line
(PPHONE-Meridan Bus.)
(968-xxxx -> 9-1-819-456-xxxx)
 - line (KSET-Disp M5317T) -> line (KSET-PSET)
(968-xxxx -> 968-xxxx)
 - line (BRAMFT set) -> line (BRAFS set)
(968-xxxx -> 968-xxxx)
 - line (1FR) -> line (BRAKS set)
(968-xxxx -> 968-xxxx)
- 3** Proceed after test call scripts are verified.

Perform TABAUDIT

Begin this procedure 30 calendar days before the software delivery application date and complete the TABAUDIT with no errors at least 10 days before the ONP. Nortel Global Software Delivery recommends scheduling automatic TABAUDITs (AUTOTABAUDIT), rather than manual TABAUDITs.

Nortel recommends using TABAUDIT as part of normal maintenance practices for regular ongoing table data integrity checks. This can be done by using the automatic scheduling function. For assistance with TABAUDIT, contact your Nortel regional customer representative.

Restrictions on AUTOTABAUDIT:

- Only one user at a time is allowed to enter the AUTOTABAUDIT level.
- Before executing AUTOTABAUDIT, a list of session parameters must be defined from within the AUTOTABAUDIT level.
- Only one AUTOTABAUDIT session can execute at a time. However, multiple AUTOTABAUDIT sessions can be scheduled.
- The parameters for the active AUTOTABAUDIT session cannot be changed without terminating the session first.
- AUTOTABAUDIT cannot be executed at the same time as TABXFR or an image dump.
- For wireless applications on HLR offices, AUTOTABAUDIT should be scheduled to execute during off hours to avoid delays with subscriber provisioning.

SITE — At the ACTIVECM window

1



CAUTION

Possible service interruption

Review software delivery bulletins and current warning bulletins about TABAUDIT.

Enter the automated table audit level:

> **TABAUDIT; AUTO**

2

Clear the list of tables to be included in the check:

> **CLEAR INCLUDED**

3 Clear the scheduled list of time frames:

> **CLEAR SCHEDULE ALL**

Note: This command clears all scheduled TABAUDIT sessions identified in table AUTOTAB.

4 Set all tables for verification:

> **INCLUDE ALL**

5 Define the scheduled AUTOTABAUDIT session:

> **TIMEFRAME SINGLE** <start_time> [<start_date>]
<stop_time> [<stop_date>]

start_time

is the hour and minute to begin the TABAUDIT and is specified as HH:MM, such as 23:30

start_date

is an optional parameter and is specified as YYYY:MM:DD, such as 2002:06:21

stop_time

identifies the latest time by which that the TABAUDIT must complete

Note: The timeframe options include SINGLE, DAILY, WEEKLY and MONTHLY sessions. A timeframe cannot be less than 30 minutes or more than six hours. For the MONTHLY option, the 31st day of the month cannot be used. Up to eight sessions can be set up. Timeframe definitions must not overlap.

Scheduling a minimum of 3 hours to complete the AUTOTABAUDIT is recommended. The time can be spread over more than one session, if required.

6 Verify the parameters:

> **STATUS**

AUTOTABAUDIT is scheduled to execute during the start and stop period between the start and stop dates.

AUTOTABAUDIT STATUS					
Active Timeframe		Executing Timeframe			
Start Date	Stop Date	Start Time	Stop Time	Scheduling Option	REGULAR or SUBSET
2005/06/24	2005/06/24	18:30	20:00	SINGLE	REGULAR

Current time : 2005/06/24 07:16:07

AUTOTABAUDIT : Inactive

The following events were logged while verifying tables:

1 TABAUDIT aborted. All included tables not verified. Out of time.

The following tables are included for the REGULAR AUTOTABAUDIT:

From table VERSIONS (0) to table INWATNPA (1408).

No tables have been excluded for the REGULAR AUTOTABAUDIT.

No tables have been included for the SUBSET AUTOTABAUDIT.

The following tables are excluded for the SUBSET AUTOTABAUDIT:

From table VERSIONS (0) to table INWATNPA (1408).

7 Execute the scheduled AUTOTABAUDIT session

> EXECUTE

The system displays a STATUS. If the status is correct, enter **YES** at the prompt.

Note: The scheduler starts AUTOTABAUDIT at the specified start time(s), and stops testing at the specified stop time(s).

Only the included tables are tested in the order they are listed in table DART.

8 Check the status of AUTOTABAUDIT after the scheduled stop time. Enter:

> STATUS

Determine if AUTOTABAUDIT has completed verifying all tables.

If AUTOTABAUDIT	Do
has completed verifying all tables	step 9
has not completed verifying all tables (process failed, insufficient time, or other reasons)	determine what steps are necessary to complete the process. It may be necessary either to repeat steps 1 through 3 , or to schedule multiple sessions to verify all tables in the office.

9 After AUTOTABAUDIT completes, obtain an error report. Enter:

> **REPORT ERRORS**

If	Do
no errors are reported	step 11
errors are reported	Correct the errors using the table editor and repeat from step 4 . Refer to the Additional information .

10 If any tables failed, perform the following steps for each table.

a Quit to the TABAUDIT level:

> **QUIT**

b Include the failed table:

> **INCLUDE <table_name>**

c Execute the TABAUDIT:

> **EXECUTE**

d View the results:

> **REPORT <table_name>**

e Repeat from [step b](#) for each failed table.

11 Quit to the CI level:

> **QUIT ALL**

12 This procedure is complete.

Additional information

Use the following procedure to assist in repairing tables.

SITE — At the ACTIVECM window

- 1 Enter the table that has an error:

```
> TABLE <table_name>
```

tab_name
is a table name like TRKMEM
- 2 Position on the failed tuple:

```
> POS <tuple>
```

tuple
is the failed tuple such as “AL7ITICS7 2”
- 3 Check the tuple:

```
> CHECK
```
- 4 Note the error message and make corrections.
- 5 Repeat this procedure for all failed tables.

Execute SWUPGRADE READY

Nortel Global Software Delivery personnel complete this procedure at scheduled milestones before the ONP.

At any time during this procedure, to determine the status, use the **DISP STEPS** command. Help for steps is available with the **HELP** command. A step can be re-run with the **RUNSTEP <step_name>** command. Ensure that all steps complete successfully, but a step can be overridden with the **OVERRIDE** command. To cancel the procedure, use the **CANCEL** command.

The steps are determined by the CS 2000 - Compact configuration. If the CS 2000 - Compact is configured with Message Controller cards, more steps are provided.

SWUPGRADE READY steps

without Message Controllers	with Message Controllers
SETUP_ENV_VARS	SETUP_ENV_VARS
	VERIFY_SN_PPCS_INFO
VERIFY_LOGS_INFO	VERIFY_LOGS_INFO
DEVICE_CHECK	DEVICE_CHECK
TABAUDIT_VERIFY_TABLES	TABAUDIT_VERIFY_TABLES
	DISPLAY_PERIPHERAL_LOAD_NAMES
	DISPLAY_SPM_LOADNAMES
	DISPLAY_PRL_LOADS
	CHECK_ISN_PMS
	DISPLAY_MS_FW_LOADS
	VERIFY_PM_LOAD_NAMES
	LIUINV_CHECK
	C7LINK_CHECK
	CHECK_LTCINV

SWUPGRADE READY steps

without Message Controllers	with Message Controllers
DISPLAY_NOP_USERS	DISPLAY_NOP_USERS
DISPLAY_DPP_VERSION	DISPLAY_DPP_VERSION
	CHECK_LCMINV
SBA_CHECK	SBA_CHECK
SBA_VOLSIZE_CHECK	SBA_VOLSIZE_CHECK
READY_STATUS	READY_STATUS
READY_COMPLETE	READY_COMPLETE

SDE — At the ACTIVECM window

1 Enter the SWUPGRADE level:

> **SWUPGRADE READY**

2 Begin the process:

> **START**

Step SETUP_ENV_VARS begins. This step sets the environment variables that will be used during the READY session. Default values appear in square brackets and variables without brackets have no default. To accept the default value press the Return key without entering a value.

Values consisting of more than one word must not be enclosed in quotes. If they are, the quotes will be considered as part of the word and the variable will be either set to an incorrect value or not set at all.

a Set the TRACE_USER variable.

TRACE_USER (no default)

Holds the USER name on whose console output messages are printed. Changing the value of this variable, also changes the value of the TRACE_DEVICE variable, and causes the output to be redirected to the new USER device.

Value: <user name> or ME - a user name, such as ADMIN, or ME which indicates the current user

Note: For clarity purposes, it is recommended to set this variable to a user other than the current user.

The USER must be LOGGED IN when this variable is set.
The current setting is: <none>

> **ME**

- b** Do not change the TRACE_DEVICE variable, press the Enter key.

TRACE_DEVICE

Holds the device name on which output messages are printed. Changing the value of this variable causes the output to be redirected to the new device.

Value: <trace device name> - a string, such as MAP

Note: For clarity purposes, it is recommended to set this variable to a device other than the terminal currently logged onto.

The current setting is: <none>

>

- c** Set LOGS variable.

LOGS

Holds the names of the logs that are checked by the LOGS step. More than one log can be specified by entering log names separated by a blank.

Example

CM — Check CM logs and display a message if CM logs are recorded.

Example

'SWERR TRAP' — Check traps and swerrs. Display a message if traps or swerrs are recorded.

The current setting is: TRAP SWERR

> **TRAP SWERR**

- d** Set TO_CSP_CM_LOAD variable. Enter the value of the CSP load number.

TO_CSP_LOAD

The TO_CSP_LOAD variable allows the user to set the CSP load to which the site plans to upgrade. This variable is then used to check the PMs for a software load which equals this value.

The current setting is: 0

> **21**

Note: CSP 21 is equivalent to the SN08 release.

- e Set the PM_VERIFY_FILE variable, and press the Enter key.

PM_VERIFY_FILE

The PM_VERIFY_FILE variable allows the user to set which verification file will be used to validate if the queried peripheral module loads are valid.

The default setting is: NONE

>

- f Do not change the PRINTER variable, press the Enter key.

PRINTER

The PRINTER variable holds the name of the printer on which output messages are recorded. The printer echoes all output sent to the trace device. Changing the value of this variable causes the recording to be directed to the new device.

Value: <printer name> or SINK

where <printer name> is a device datafilled in table TERMDEV. SINK indicates not to record to a printer device.

The current setting is: SINK

>

- g Do not change the PAUSE_ENABLED variable, press the Enter key.

PAUSE_ENABLED

PAUSE_ENABLED is used to determine if the READY steps will run continuously or be paused out after executing. A NO setting allows the READY platform to run until completion of all the steps. A YES setting prompts the process to pause after each step is run. This pause allows time for the user to review the results and set a step COMPLETED/NEEDED before proceeding.

Note: Type HELP STEP_STATUS for more information on setting the step status.

The current setting is: YES

>

SWUPGRADE variables for target READY:

Variable Name		Value

TRACE_USER	=	ME
TRACE_DEVICE	=	TELNSVR00033
LOGS	=	TRAP SWERR
TO_CSP_LOAD	=	21
PM_VERIFY_FILE	=	NONE
PRINTER	=	SINK
PAUSE_ENABLED	=	YES

Setup completed.

Enter GO to begin execution of steps.

h Commit the variable changes:

> **GO**

Step SETUP_ENV_VARS completes.

If the CS 2000 - Compact is configured with Message Controller cards, step VERIFY_SN_PECES_INFO runs. This step checks and prints the Message Switch software load and all the hardware in the Message Switch.

Step VERIFY_LOGS_INFO runs and completes. This step displays any log reports provided in environment variable LOGS. These logs should be checked periodically for front-end stability. Include or exclude any log(s) the user would like displayed.

Step DEVICE_CHECK runs. This step verifies that all devices on the active CPU are in an OK, OFFLINE, or UNEQUIPPED status. These are acceptable states for SWACT. Any devices found in any other state are displayed.

Step TABAUDIT_VERIFY_TABLES runs. This step verifies that TABAUDIT has been executed and tables to be dumped and restored have been audited in the last thirty days.

If the CS 2000 - Compact is configured with Message Controller cards, steps DISPLAY_PERIPHERAL_LOAD_NAMES, DISPLAY_SPM_LOADNAMES, DISPLAY_PRL_LOADNAMES, CHECK_ISN_PMS, and DISPLAY_MS_FW_LOADS run. These steps print all the PM names, locations, and software load names for the PMs in the office, as well as the firmware loads in the Message Switch.

- 3** If the CS 2000 - Compact is configured with Message Controller cards, step VERIFY_PM_LOAD_NAMES runs. This step queries all the PMs with downloadable software and verifies that each PM is loaded with the load specified in PM_VERIFY_FILE. PM_VERIFY_FILE was set during step SETUP_ENV_VARS. This file is a PM to PM load cross reference. If the file is not available, or a PM is running a different load, the process stops. Correct the problem, type GO and press the Enter key.

Step VERIFY_PM_LOAD_NAMES completes.

If the CS 2000 - Compact is configured with Message Controller cards, steps LIUINV_CHECK, C7LINK_CHECK, CHECK_LTCINV, and CHECK_LCMINV run. These steps ensure that no LIU name has a LIUNO greater than 512, that all MSB7 and LIU7 PMs have field LINKNAME datafilled, that all DTCs datafilled in table LTCINV for CCS7 are datafilled correctly, and that LCMs have the amount of memory datafilled in table LCMINV and that the LCMs are in service.
- 4** Step DISPLAY_NOP_USERS runs and completes.

This step displays all NOP/MPC users and their status.
- 5** Step DISPLAY_DPP_VERSION runs and completes.

This steps displays DPP hardware and software information and DPP status.
- 6** Steps SBA_CHECK runs and completes.

This step verifies that on an XA-Core machine if an upgrade is being performed to CSP16 and beyond, then all the backup volumes are configured only on IOP disks. No older disk types are supported as backup for the SBA streams on an XA-Core platform from CSP16 onwards.
- 7** Step SBA_VOLSIZE_CHECK runs and completes.

This step verifies that the size of the volumes that are configured as backup for SBA satisfy the minimal size requirements. This check will print out those stream-volume pairs whose backup volume sizes are below the minimal criterion that have been set.
- 8** Step READY_STATUS runs and completes.

This step displays step state and status.

- 9 Step READY_COMPLETE runs and completes. Ensure that step READY_STATUS indicates all steps are complete.
> QUIT
This step reminds the user to quit the SWUPGRADE increment and QUIT from the switch after the READY program is completed.
- 10 This procedure is complete.

Dump call processing application image

Complete this procedure the day of the ONP.

SITE — At the ACTIVECM window

- 1 Enter the disk utilities level:
 - > **DISKUT**
- 2 Verify that there are at least 500 000 free blocks for an office image:
 - > **LV SD00IMAGE; LV SD01IMAGE**

```

> LV SD00IMAGE; LV SD01IMAGE
Volumes found matching the prefix SD00IMAGE:
-----
NAME          TYPE      TOTAL      FREE TOTAL  OPEN  ITOC  LARGEST
          BLOCKS  BLOCKS  FILES  FILES  FILES  FREE SEGMENT
-----
SD00IMAGE  STD      1638400    822665     0     0     0     822665
Total number of volumes matching prefix SD00IMAGE : 1.
Volumes found matching the prefix SD01IMAGE:
-----
NAME          TYPE      TOTAL      FREE TOTAL  OPEN  ITOC  LARGEST
          BLOCKS  BLOCKS  FILES  FILES  FILES  FREE SEGMENT
-----
SD01IMAGE  STD      1638400    814430     3     0     1     814430
Total number of volumes matching prefix SD01IMAGE : 1.
>

```

Note: If there is not enough space, determine if old images can be deleted. Use the **DDF** command to delete files. Refer to [DDF Example](#) for more information.

- 3 Dump the image to a disk volume:
 - > **AUTODUMP MANUAL**
 - if AUTODUMP is active for the office.
 - or*
 - > **DUMP <image_name> <disk_vol> ACTIVE UPDATE**
VERBOSE NODE CM
 - image_name**
is the name of the file to create
 - disk_vol**
is sd00image or sd01image
 - if AUTODUMP is not active for the office
 - The dump can require two hours to complete.*

- 4 Record the name of the image on a sheet of paper. If this upgrade is an ONP, it is important to have a current image as a backup in the event that the ONP fails. If this is a platform only MR upgrade, it is necessary to know the name of the image so it can be loaded during procedure “LDMATE (Load inactive)” in *Upgrading the Call Agent*, NN10065-461.
- 5 Nortel recommends backing up the image. The backup procedure is documented in *Call Agent Fault Management*, NN10087-911 and is reproduced here for convenience under heading [Backup image](#).
- 6 This procedure is complete.

If this is a platform only upgrade, proceed to “Boot new platform software” in *Upgrading the Call Agent*, NN10065-461. Otherwise, the next phase of the upgrade takes place on the day of the upgrade is begins on [Site responsibilities the day of the software delivery on page 84](#).

DDF Example

The following figure shows an example of using the DDF command.

```

>diskut
Disk utility now active.
DISKUT:
>lf sd00image0

File information for volume SD00IMAGE0:
{NOTE: 1 BLOCK = 512 BYTES }

-----
FILE NAME                                O R I O O V FILE  MAX   NUM OF   FILE
R E T P L L CODE  REC   RECORDS  SIZE
G C O E D D      LEN      IN      IN
          C N                FILE  BLOCKS
-----
CSNW06BA                                I F          0 1020   208457  415286
.ITOC                                   O F          0 1024     1     2
SCS06BA_WC_0131_CM                     I F Y        0 1020   213073  424482
SCS05BK_WC_0131_CM                     I F          0 1020   196563  391591
SCS05BK_WC_0128_CM                     I F          0 1020   196563  391591

>ddf CSNW06BA
Delete CSNW06BA from volume SD00IMAGE0?
Please confirm ("YES", "Y", "NO", "N"):
>y
File CSNW06BA has been deleted from volume SD00IMAGE0.

```

Backup image

Use the following procedure to back up a call processing application image.

At the active Call Agent Manager window (CORE0 or CORE1)

- 1 Quit the Call Agent Manager interface:
 - > **QUIT ALL**
- 2 Change directory to the location of the image. If the image was dumped to disk SD01, substitute sd01 for sd00 in the following figure.

```

[mtc@hostname mtc]$ cd /3PC/sd00/image0
[mtc@hostname image0]$ ls -l IMG_TO_BACKUP
-rw-r--r-- 1 root root 225820860 Feb 27 11:37 IMG_TO_
[mtc@hostname image0]$

```

- 3 Use the mount command to determine the IP addresses of the STORM units.

```
[mtc@ip_address mtc]$ mount
```

Determine which STORM unit provides sd00 and which provides sd01. This information is needed in [step 7](#).

```
[mtc@10.40.44.67 mtc]$ mount
/dev/ram0 on / type ext2 (rw)
proc on /proc type proc (rw)
devpts on /dev/pts type devpts (rw,mode=0622)
10.40.44.238:/nfsserv/3pc/mtc/tape0 on /TAPE type nfs (rw,rsize=4096...
10.40.44.239:/nfsserv/3pc/mtc/tape1 on /TAPE1 type nfs (rw,rsize=409...
10.40.44.238:/nfsserv/3pc/cs/sd00 on /3PC/sd00 type nfs (rw,rsize=409...
10.40.44.239:/nfsserv/3pc/cs/sd01 on /3PC/sd01 type nfs (rw,rsize=409...
10.40.44.238:/nfsserv/3pc/mtc/log0 on /var/log_mate type nfs (rw,rsi...
10.40.44.239:/nfsserv/3pc/mtc/log1 on /var/log type nfs (rw,rsize=409...
```

At the CS 2000 Management Tools frame

- 4 Insert a DVD-RW (write once DVD) in the CDROM tray. A rewritable DVD (DVD+RW) will not work. If the CS 2000 Management Tools server uses two Sun Microsystems Netra 240 machines, insert the DVD-RW into the active unit. The active unit is identified by a lit USER LED.

At a CS 2000 Management Tools terminal

- 5 Log in as a maintenance level user such as the maint user. Root permissions are needed later in this procedure to write the DVD.
- 6 Change directory to /data and create a temporary directory to store the files:

```
$ cd /data
```

```
$ mkdir tmp
```

Note: Do not change directory into tmp now. The tmp directory will hold the data to backup.

- 7 Secure copy the files from the STORM unit to the /data/tmp directory created in [step 6](#). Enter the root password for the STORM unit when prompted.

```
$ scp "root@<stormip>:</path_to_files>"
/data/tmp
```

Note: There is a space before the /data/tmp argument.

stormip

is the IP Address of the STORM unit such as 10.40.44.238.
Use the value determined in [step 3](#).

/path_to_file

is the absolute path to the files on the STORM unit to copy
such as

```
/nfsserv/3pc/cs/sd00/image0/IMG_TO_BACKUP
```

Example

Copy an office image named S040210135002_CM from
SD00ADUMP0:

\$ scp

```
“root@<stormip>:/nfsserv/3pc/cs/sd00/adump0/S04021  
0135002_CM” /data/tmp
```

Note: The first time this command is issued, the secure copy
program provides a prompt to exchange keys. Confirm the
exchange with a “yes.” The root password for the STORM unit
is needed.

*The secure copy program provides a progress indicator during
the copy. Wait for the copy to complete and the \$ prompt to
return.*

- 8 Rename the image file to end in “.img1020:”

```
$ cd /data/tmp  
$ mv <IMG_TO_BACKUP> <IMG_TO_BACKUP>.img1020
```

- 9 Change directory to /data and make an ISO9660 image named
dvdimage.iso with Rock Ridge extensions from the image:

```
$ cd /data  
$ mkisofs -R -o /data/dvdimage.iso  
/data/tmp/<IMG_TO_BACKUP>.img1020
```

Note: There is a space after /data/dvdimage.iso and before
/data/tmp/<IMG_TO_BACKUP>.img1020

Status is printed to the terminal:

Create dvdimage.iso with mkisofs command

```
$ mkisofs -R -o /data/dvdimage.iso /data/tmp/<IMG_TO_BACKUP>.img1020
4.56% done, estimate finish Tue Feb 10 14:52:00 2005
9.11% done, estimate finish Tue Feb 10 14:52:00 2005
13.67% done, estimate finish Tue Feb 10 14:52:00 2005
...
95.67% done, estimate finish Tue Feb 10 14:52:05 2005
Total extents actually written = 109764
Total translation table size: 0
Total rockridge attributes bytes: 421
Total directory bytes: 0
Path table size(bytes): 10
Max brk space used 8000
109764 extents written (214 Mb)
$
```

10 Become the root user:

```
$ su - root
```

Provide the root password at the prompt.

11 Optionally verify the ISO9660 image:

```
# lofiadm -a /data/dvdimage.iso /dev/lofi/1
# mount -F hsfs /dev/lofi/1 /mnt
# ls -as1 /mnt
```

The contents of the ISO 9660 image are displayed. These files will be written to the DVD-RW. Ensure the display looks similar to the following image.

Note 1: *If the lofiadm command reports the error “lofiadm: could not map file /data/dvdimage.iso to /dev/lofi/1: Device busy,” then the first loopback file driver is already in use. Re-enter the command and substitute /dev/lofi/2 for /dev/lofi/1. Continue incrementing the number until the command succeeds and then use the successful value in the mount command.*

Note 2: *If the mount command reports the error “mount: /dev/lofi/1 is already mounted, /mnt is busy, or allowable number of mount points exceeded,” unmount the /mnt directory with the **umount /mnt** command and reenter the mount command.*

List contents of the ISO 9660 image

```
# lofiadm -a /data/dvdimage.iso /dev/lofi/1
# mount -F hsfs /dev/lofi/1 /mnt
# ls -asl /mnt
total 431996
  4 dr-xr-xr-x  2 root  sys      2048 Apr 20 09:48 .
  2 drwxr-xr-x 33 root  root    1024 Apr 20 11:16 ..
431990 -rw-r--r--  1 maint maint 221178840 Apr 20 09:47 IMG_TO_BACKUP.img1
```

- 12** Determine the name of the DVD-RW device:

```
# cdrw -l
```

All optical disk devices are printed.

Determine the DVD-RW device name

```
# cdrw -l
Looking for CD devices...
  Node                Connected Device                Device type
-----+-----+-----
  cdrom0              | TOSHIBA DVD-ROM SD-R6012 1033 | CD Reader/Writer
```

Note: *If the command responds with “No CD writers found or no media in the drive,” and the CS 2000 Management Tools server is a cluster then verify that the DVD-RW is placed in the active unit. The active unit is identified by a lit USER LED on the face of the unit.*

- 13** Optionally simulate (-S flag) recording the image to verify that the ISO 9660 image can be recorded on the DVD-RW. This step requires approximately 10 minutes:

```
# cdrw -d <dvd_dev> -S -i /data/dvdimage.iso
```

Example

```
# cdrw -d cdrom0 -S -i /data/dvdimage.iso
```

*The CDROM tray ejects after this simulation. **Close the CDROM tray and continue this procedure to write the DVD-RW.***

- 14** Record the image. This step requires approximately 10 minutes:

```
# cdrw -d <dvd_dev> -i /data/dvdimage.iso
```

Example

```
# cdrw -d cdrom0 -i /data/dvdimage.iso
```

If the error response “Media in the device is not writable” is returned, verify that the CDROM tray is closed.

Approximately two minutes pass before progress is printed to the screen. After the first 1% is written, each additional percent requires about two seconds.

CDRW command progress

```
# cdwr -d cdrom0 -i /data/dvdimage.iso
Initializing device...done.
Preparing to write DVD
Writing track 1 ... 99 %
```

Approximately nine minutes pass before the command completes.

```
done.
done.
Finalizing (Can take up to 4 minutes)...done.
$
```

*The CDROM tray on the CS 2000 Management Tools server ejects. **Close the CDROM tray and continue this procedure to verify the contents of the DVD-RW.***

- 15** Check that ISO 9660 image recorded correctly:

```
# ls -as1 /cdrom/cdrom
```

The contents of the DVD-ROM are printed.

- 16** Unmount the DVD-RW, eject it, and exit from root privilege:

```
# eject cdrom
```

If the ISO 9660 image was verified with the lofiadm command, remove the loopback file driver device:

```
# umount /mnt
```

```
# lofiadm -d /dev/lofi/1
```

Note: If /dev/lofi/2 was used above, substitute /dev/lofi/2 in this command.

Exit from root privilege:

```
# exit
```

```
$
```

The dollar sign command prompt returns.

- 17** Use the **rm** command to erase the image so the volume does not fill up:

```
$ rm /data/tmp/<IMG_TO_BACKUP>.img1020
$ rm /data/dvdimage.iso
```

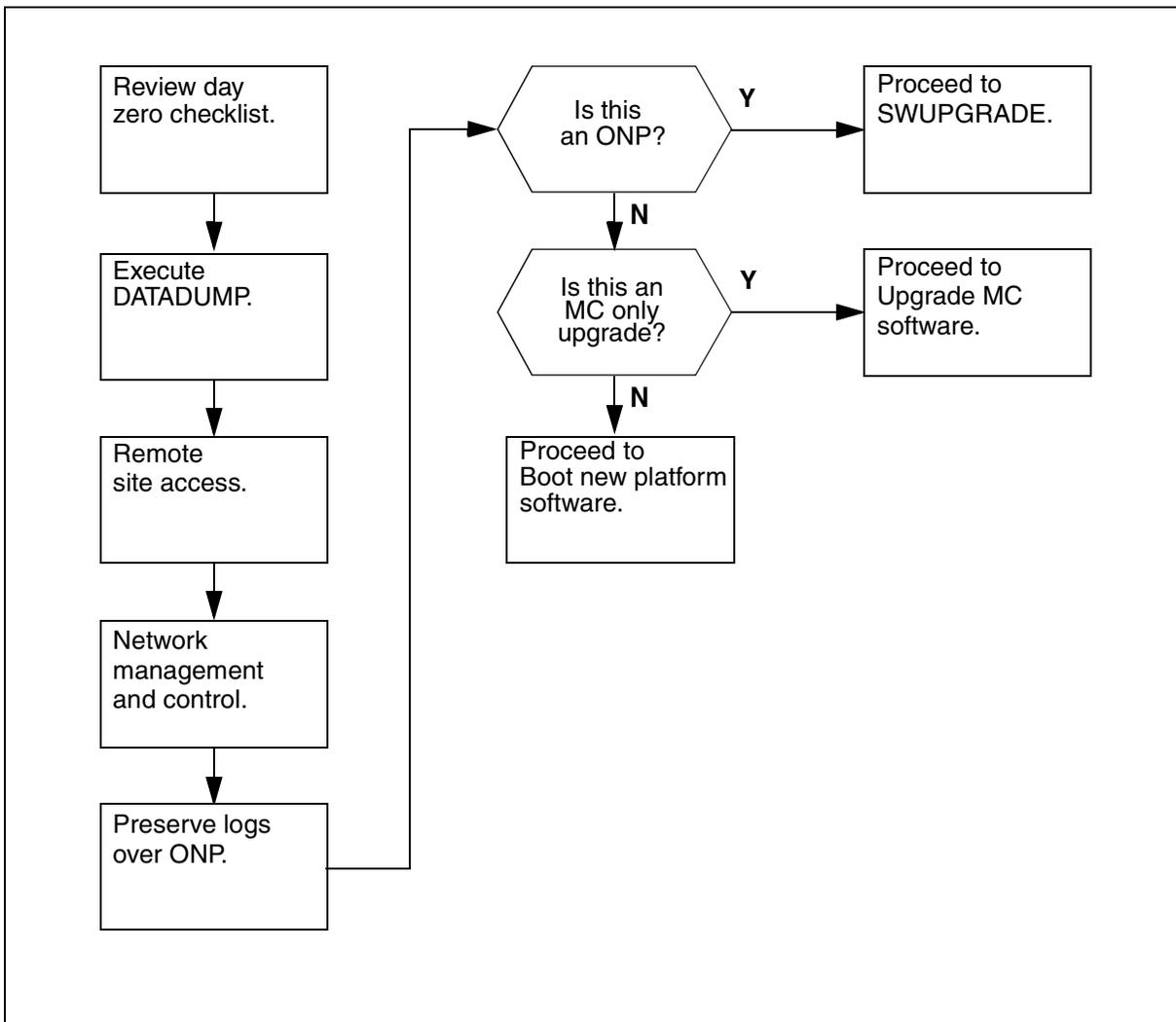
At the CS 2000 Management Tools server

- 18** Remove the DVD-RW from the tray and close the tray. Label the DVD-RW.
- 19** Store the DVD-RW per office procedure.
- 20** This procedure is complete.

Site responsibilities the day of the software delivery

Complete this section on the day of the ONP. Site personnel should have the following procedures completed before the Software Delivery Applicator contacts the site to begin the scheduled ONP.

Site responsibilities the day of the software delivery



Day zero checklist

SITE — At the ACTIVECM window

- 1 Verify that all pre-application activities are complete. This includes the [Site preparation overview on page 27](#), [Perform TABAUDIT on page 63](#), and [Restore call processing application files on page 52](#).
- 2 Verify the ONP start time. Either Nortel and/or the operating company established this start time during the site preparation phase. To verify this time, refer to the software delivery site-ready reports or contact your next level of support. If requesting a change to the start time contact your Nortel regional customer representative.
- 3 Verify front-end stability by ensuring the last REx test passed.
- 4 Take an office IMAGE and back it up. Refer to [Dump call processing application image on page 75](#). Store the copy of the office IMAGE for at least 30 days following the ONP.
- 5 Ensure you have defined and tested the Test Call Scripts. The test call plan must be ready before activation of the new software load.
- 6 Patches and process files downloaded for the ONP must remain where they are. Do not erase these files.
- 7 Check for a SOC file “<cli>_SCF” or “<cli>\$SCF” in SFDEV (or download device). If a SOC file is present, copy the file to a disk drive.

Note: For information on installing the RTU (right-to-use) SOC password file, refer to the *Software Optionality Control User's Manual*, 297-8991-900.
- 8 Verify that SFDEV is clear of unnecessary files. (This is to clear Store File Device space for ONP work.)
- 9 Ensure that no peripheral hardware or software changes, including retrofits, extensions, or maintenance activities, are scheduled to take place during the ONP. Any affected hardware must be made INB (installation busy), in both the host and remote offices.

Note: Recently removed hardware must have all associated software removed as well. Peripheral hardware that is not in the in-service or offline state may jeopardize the ONP.

- 10** For offices equipped with a CS 2000 Core Manager or Core and Billing Manager (CBM), ensure the SuperNode Billing Application (SBA) is not undergoing backup or recovery. The SBA system must be operating in normal mode during the ONP. If necessary, refer to *CS 2000 Core Manager Fault Management*, NN10082-911 or *Core and Billing Manager 850 Fault Management*, NN10351-911 for alarm clearing procedures.
- 11** Set up user interfaces and ensure they are available.
- 12** This procedure is complete.

Execute DATADUMP

ATTENTION

Allow sufficient time to run the DATADUMP. Depending on the office, DATADUMP can require eight hours or more. Failure to allow sufficient time may impact the application start time.

SITE — At the MAP

1 Record the datadump on disk or in the storefile device (SFDEV):

> **RECORD START ONTO <device>**

device

is a disk device such as SD00TEMP or is the storefile device, SFDEV

Note: The name of the created file is RECORDFILE.

2 Execute the DATADUMP:

> **BCSUPDATE;DATADUMP**

Several confirmation prompts are presented. Confirm each prompt with "yes."

```
Data Dump for CO: OFC_CLLI                               Date: MAY 11, 2005 13:36:34
=====
Do you want to display INB, MB and RES trunks?
Please confirm ("YES", "Y", "NO", or "N"):
>YES
Do you want to display 1MR registers?
Please confirm ("YES", "Y", "NO", or "N"):
>YES
Do you want to display INB lines?
Please confirm ("YES", "Y", "NO", or "N"):
>YES
Do you want to display tables?
Please confirm ("YES", "Y", "NO", or "N"):
>YES
Do you want to display hardware?
Please confirm ("YES", "Y", "NO", or "N"):
>YES
```

The datadump runs and completes.

- 3 When the DATADUMP completes, quit to the CI level:
> **QUIT ALL**
- 4 Stop the recording:
>**RECORD STOP ONTO <device>**
- 5 This procedure is complete.

Remote site access

At the established ONP start time, the operating company is responsible for providing remote site access to the Nortel Applicator. If not provided to Nortel in advance, be prepared to furnish all the necessary information for this task.

SITE

- 1 Ensure there will be uninterrupted communication with the Applicator during the ONP. Nortel recommends using Foreign Exchange (FX) voice and data lines for this purpose.
 - Two site connections — One connection is used for the active terminal (controlling the ONP procedure) and the second is used for tracing. If IOC or IOM equipment is available, Nortel recommends that one site connection reside on one unit of the device, and the other connection on the second unit.
 - One reliable voice number is required.

Note 1: If these services are unavailable, contact Nortel support personnel to determine if the available services are sufficient.

Note 2: Foreign Exchange (FX) numbers are recommended for both voice and data lines for Applicator remote site access.

- 2 Ensure two usernames and passwords with at least the following settings are provided for the ONP:
 - COMCLASS — ALL
 - PRIVCLASS — ALL
 - STACKSIZE — 10000
 - PRIORITY — 4

3



DANGER

Prolonged software upgrade time

Failure to provide working and reliable remote access can cause problems during the software upgrade.

Network management control

ATTENTION

If necessary, contact your Network Maintenance support for assistance with these steps.

If Network Management code blocking is active before the ONP, the code blocking must be restored after the ONP is complete.

SITE — At the MAP

- 1 Make a list of all active code controls before the ONP to aid in restoration of code blocking.
> MASSCALL LIST CGAP ACODE ALL
- 2 Code blocking must be restored after the ONP. Make arrangements with Network Maintenance personnel for assistance.
- 3 This procedure is complete.

Preserve logs over ONP

Logs that are suppressed or have a threshold set are configured for each site. Unless these logs are datafilled in table LOGCLASS, the settings will not be restored in the new call processing software load. Follow this procedure to determine which log reports are specially configured and how to provision table LOGCLASS.

SITE — At the MAP

- 1 Determine which log reports are specially configured:
 - > LOGUTIL
 - > LISTREPS SPECIAL
 - > QUIT
- 2 Determine if these log reports are already datafilled in table LOGCLASS:
 - > TABLE LOGCLASS
 - > LIS ALL (THRESHLD NE '0')
 - > LIS ALL (SUPPRESS NE 'N')

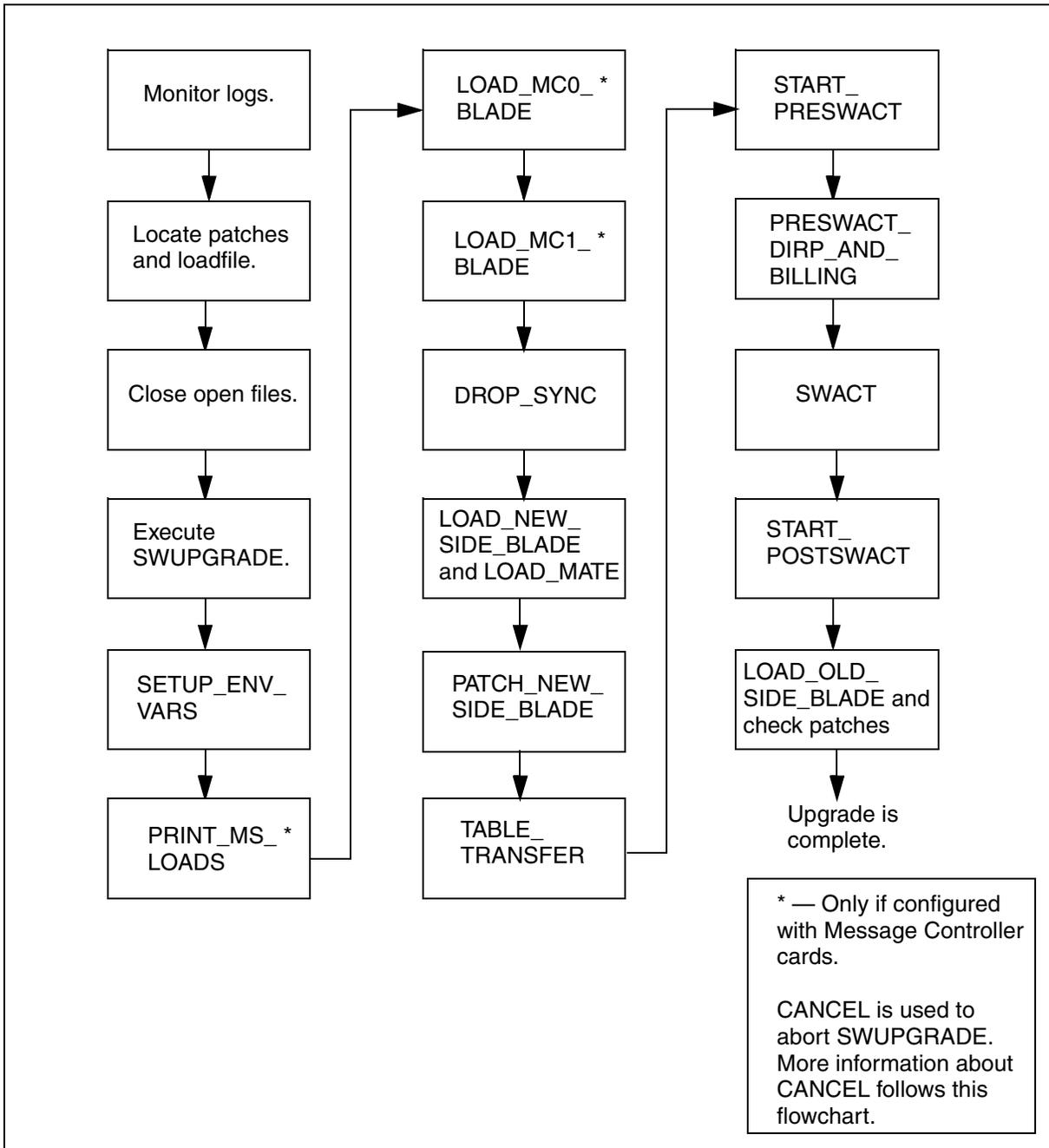
Note: The field for threshold is spelled THRESHLD. The second command lists all tuples with a threshold that does not equal zero.
- 3 If the output from [step 2](#) does not equal the output from [step 1](#), change as necessary to match the output from the LISTREPS output:
 - > RWOK ON
 - > POS <log_name>
 - > CHA <THRESHLD or SUPPRESS> <value or Y>
 - > YES

log_name
is the log report name such as TRKMEM listed in the LISTREPS output

value
is an integer value listed in the LISTREPS output
- 4 Repeat [step 3](#) for each required change and then exit the LOGUTIL level:
 - > QUIT
- 5 This procedure is complete.

SWUPGRADE

This section contains procedures that automate many of the upgrade tasks. Please read the important information following this flowchart.



Before proceeding with the procedures in this SWUPGRADE section of this document, complete the procedures in sections [Interface setup on page 17](#), [Site preparation phase on page 24](#), and [Site responsibilities the day of the software delivery on page 84](#).

Software

The CS2K Management Tool reads CD-ROMS and DVDs.

Software for the Call Agent platform is available on CDROM as a package for the CS 2000 Management Tools server. The software package is installed with the **platform_load_install.sh** tool on the CS 2000 Management Tools server. Software for the Message Controller cards is automatically installed in all offices even though not all offices have Message Controller cards. If the software is not installed, refer to [Apply platform software for Call Agent and Message Controller on page 34](#).

The software image for the call processing application is taken from DVD on the CS 2000 Management Tools server, and then transferred to the Call Agent card file system. It is then imported with the IMPORT command at the MAP to make the new image available for booting. If the upgrade software load is not available on one of the disk volumes, refer to [Restore call processing application files on page 52](#).

If the office is configured with Message Controller cards, then a Message Switch software image is required for the Message Switch. This software image is taken from DVD on the CS 2000 Management Tools server at the same time as the upgrade call processing application image. Once the Message Switch software is transferred, it is imported to one of the disk volumes. If the Message Switch software load is not available on one of the disk volumes, refer to "Upgrade Peripheral Modules and Message Switch" in Upgrading the Call Agent, NN10065-461.

CANCEL command

The CANCEL command issued on the active terminal to abort SWUPGRADE. Instructions for the rollback are printed to the device that is selected as the TRACE_DEVICE.

To ensure that the TRACE_DEVICE is prepared to receive messages, enter command **TRACECI TEST 'TESTMESSAGE'** at the active terminal. The TRACE_DEVICE is still connected if TESTMESSAGE is printed to it.

Monitor logs

SDE — At the ACTIVECM window

- 1 Check log reports to verify stability:
> **BCSUPDATE; LOGCHECK**
- 2 Investigate any log reports that indicate an office stability problem. If necessary, contact Nortel support personnel for assistance.

3

ATTENTION

Do not continue if any log report indicates an office stability problem.

- Quit the BCSUPDATE level:
> **QUIT**
- 4 This procedure is complete.

Locate patches and loadfile

Call processing application patch files were loaded into the first device listed in table PADNDEV during the preparation phase. Use this procedure to verify the location of the patch files. The location is a required parameter during the SETUP_ENV_VARIABLES step of the software upgrade.

The call processing application image was retrieved from DVD, transferred, and stored during the preparation phase. Verify the location of the image.

SDE — At the ACTIVECM window

- 1 Determine the default call processing application patch file location provisioned in table PADNDEV:

```
> TABLE PADNDEV; LIS ALL; QUIT
```
- 2 Make a note of the location. This value is a required parameter for the software upgrade.
- 3 Enter the disk utilities level and list the disk volumes:

```
> DISKUT; LV
```
- 4 List the contents of the volume with the upgrade call processing software image:

```
> LF <volume_name>
```

volume_name
is a string like SD00IMAGE
- 5 Make a note of the image file name. This value is a required parameter for environment variable LDMATE_IMAGE.
- 6 This procedure is complete.

If the CS 2000 - Compact is configured with Message Controller cards, check the Message Switch software loads and ensure that both Message Switches are running the same load and the load is specified in the *Peripheral Module Software Release Document*.

SDE — At the ACTIVECM window

- 1 Remote login to Message Switch 0:

```
> REMLOGIN MS 0
```

The terminal is now active on Message Switch 0.

- 2 Issue the IMAGENAME command:

MS0> IMAGENAME

The software load running in the Message Switch is displayed.

```
MS-U BCS 56 CE built on 2005-APR-12 at 19:26:00
using mux21ce
LOAD: NIL.000
LAYER: BAS.22.0.CE
LAYER: TL.21.0.CE
```

- 3 Logout of the Message Switch:

MS0> REMLOGOUT

- 4 Ensure that the software load displayed (mux20ce in the example) is the correct Message Switch load for this release.

Use the REMLOGIN command to log into Message Switch 1, issue the IMAGENAME command, and REMLOGOUT. Ensure that the two Message Switches are running the same software load.

- 5



CAUTION

Possible service interruption

If the Message Switch is not loaded correctly, escalate immediately. Incorrect MS loads will cause subsequent AutoONP processes to fail and will jeopardize the software delivery application.

This procedure is complete.

Close open files

Open files may have data in cache rather than written to storage. Follow this procedure to ensure that data is written to storage.

SDE — At the ACTIVECM window

- 1 Determine if there are any open files:

> **DISKUT; LV**

```
DISKUT:
Volumes found:
-----
```

NAME	TYPE	TOTAL BLOCKS	FREE BLOCKS	TOTAL FILES	OPEN FILES
SD00IMAGE	STD	1638400	269821	4	0
SD00IMAGE1	STD	1638400	718476	3	0
SD00TEMP	STD	409600	409498	4	0

- 2 For billing and Device Independent Recording Package (DIRP) files, rotate the volumes:

> **MAPCI;MTC;IOD;DIRP**
 > **ROTATE <subsystem>**
 > **QUIT ALL**

subsystem

is a billing or DIRP subsystem such as AMA

- 3 For regular files, determine the name of the open file and close the file:

> **LF <volume_name>**
 > **FILECLOSE <file_name> <volume_name>**

volume_name

is the name of the volume with open files from [step 1](#)

file_name

is the name of the file to close returned by the LF command

- 4 For assistance with closing open files, contact Nortel support personnel.
- 5 This procedure is complete.

Execute SWUPGRADE

The Automated One Night Process (AutoONP) maintains a list of steps to execute. When a step fails or requires user input, the process stops, the user responds to the problem and types **GO** to continue until all steps are executed.

Help for the SWUPGRADE level commands is available by typing **HELP** while in the SWUPGRADE level.

Step **DOWNLOAD_FILES** reminds the Software Delivery Engineer to retrieve the bulletins file. If the bulletins file is not available in SFDEV, the software upgrade will fail.

The number of steps in the AutoONP process is determined by the CS 2000 - Compact configuration. If the CS 2000 - Compact is configured with Message Controller cards, there are more steps.

SWUPGRADE CA steps

without Message Controllers	with Message Controllers
SETUP_ENV_VARS	SETUP_ENV_VARS
NOTIFY_USERS	NOTIFY_USERS
SET_LOGIN_BANNER	SET_LOGIN_BANNER
DOWNLOAD_FILES	DOWNLOAD_FILES
READ_BULLETINS	READ_BULLETINS
VERIFY_DEVICES	VERIFY_DEVICES
PRINT_PARMs_AND_SAVE	PRINT_PARMs_AND_SAVE
CHECK_LOGS_1	CHECK_LOGS_1
STOP_JOURNAL_FILE	STOP_JOURNAL_FILE
	PRINT_MS_LOADS
DISABLE_PRSM_AUDIT_ACT	DISABLE_PRSM_AUDIT_ACT
	LOAD_MC0_BLADE
	LOAD_MC1_BLADE

SWUPGRADE CA steps

without Message Controllers	with Message Controllers
DROP_SYNC	DROP_SYNC
LOAD_NEW_SIDE_BLADE	LOAD_NEW_SIDE_BLADE
LOAD_MATE	LOAD_MATE
PATCH_NEW_SIDE_BLADE	PATCH_NEW_SIDE_BLADE
MATELINK_RTS	MATELINK_RTS
UPDATE_STEPS_AND_VARS	UPDATE_STEPS_AND_VARS
CHECK_NEW_LOAD	CHECK_NEW_LOAD
SET_DATE_AND_LOGMSG	SET_DATE_AND_LOGMSG
CHECK_LOGS_2	CHECK_LOGS_2
CLEAR_TRAPINFO	CLEAR_TRAPINFO
TRANSFER_DEVICES_INFO	TRANSFER_DEVICES_INFO
TRANSFER_PARM_VALUES	TRANSFER_PARM_VALUES
	MS_CHECK
DISABLE_AUTOIMAGE	DISABLE_AUTOIMAGE
SET_OFFICE_TUPLES	SET_OFFICE_TUPLES
SET_PADNDEV	SET_PADNDEV
SEND_PATCHES	SEND_PATCHES
APPLY_PATCHES	APPLY_PATCHES
CHECK_LOGS_3	CHECK_LOGS_3
RESTORE_PADNDEV	RESTORE_PADNDEV
TABLE_TRANSFER	TABLE_TRANSFER
TABXFR_REPORT	TABXFR_REPORT
CHECK_LOGS_4	CHECK_LOGS_4
START_PRESWACT	START_PRESWACT

SWUPGRADE CA steps

without Message Controllers	with Message Controllers
PRESWACT_DIRP_AND_BILLING	PRESWACT_DIRP_AND_BILLING
PRINT_SPMS_INDICES	PRINT_SPMS_INDICES
GET_FIRST_SWACT_AGREEMENT	GET_FIRST_SWACT_AGREEMENT
PREPARE_FOR_SWACT	PREPARE_FOR_SWACT
STATUSCHECK	STATUSCHECK
CHECK_LOGS_5	CHECK_LOGS_5
TRANSFER_TIMINGS	TRANSFER_TIMINGS
SWACT	SWACT
DISPLAY_DATE	DISPLAY_DATE
RECOVER_DIRP_AND_BILLING	RECOVER_DIRP_AND_BILLING
PERFORM_TEST_CALLS_1	PERFORM_TEST_CALLS_1
START_POSTSWACT	START_POSTSWACT
RESTART_OLD_LOAD	RESTART_OLD_LOAD
DRTIME_PRINT	DRTIME_PRINT
PERFORM_TEST_CALLS_2	PERFORM_TEST_CALLS_2
LOAD_OLD_SIDE_BLADE	LOAD_OLD_SIDE_BLADE
SYNC_SWITCH	SYNC_SWITCH
FINISH_POSTSWACT	FINISH_POSTSWACT
RESTORE_PARMS	RESTORE_PARMS
RESET_DEVICES	RESET_DEVICES
COMPLETE_NEW_LOAD_INIT	COMPLETE_NEW_LOAD_INIT
RESET_LOGIN_BANNER	RESET_LOGIN_BANNER
DUMP_NEW_LOAD	DUMP_NEW_LOAD

SWUPGRADE CA steps

without Message Controllers	with Message Controllers
RESUME_REX_TEST	RESUME_REX_TEST
START_JOURNAL_FILE	START_JOURNAL_FILE
PRINT_SWUPGRADE_REPORT	PRINT_SWUPGRADE_REPORT
STOP_RECORD	STOP_RECORD
UPGRADE_COMPLETE	UPGRADE_COMPLETE

SDE — At the ACTIVECM window

- 1 Enter the software upgrade level:
> **SWUPGRADE CA**
- 2 Press return twice to display the current office header message. Note the office header message for environment variable `INACT_LOGMSG`.
- 3 Begin the upgrade:
> **START**
- 4 Proceed to [SETUP_ENV_VARS](#).

Additional information**How to insert, delete, or modify steps**

To allow customization of the AutoONP, SWUPGRADE allows the user to change the steps that are normally performed. Commands are available to insert, delete, or otherwise modify the AutoONP steps.

Use the **INSERT** command to add a new step or copy an existing step into another location in the step list. The step list is printed with command **DISP STEPS**. **REMOVE** removes any step or pause that was added. **OVERRIDE** disables the execution of a step. **PAUSE** is used to halt the AutoONP process before or after a step until **RESUME** is entered.

Use of the BULLETINS file

The BULLETINS file is maintained by Nortel Global Software Delivery and is used to provide as much automation as possible when performing the application bulletins and workarounds. Since application bulletins and workarounds will vary depending on the "from and to" software loads, it is recommended that the BULLETINS file and all bulletins and workarounds be reviewed before starting the AutoONP.

When required, bulletins and workarounds should be followed and manually executed during the AutoONP.

ATTENTION

The BULLETINS file is a critical file that must be located in SFDEV for execution during the AutoONP.

If this file is missing from SFDEV or if it is named incorrectly, the AutoONP will fail. For assistance with the BULLETINS file contact the Global Software Delivery hotline for your market.

Step DOWNLOAD_FILES, towards the beginning of the AutoONP process, will remind the user to download the BULLETINS file (along with other required files). If desired, print a hard copy of the BULLETINS file and review the file contents.

Step READ_BULLETINS will read (that is, execute) the BULLETINS file during the AutoONP.

Using the CANCEL command

The CANCEL command is used to terminate or abort the software upgrade and halt the execution of the SWUPGRADE process at any time during the AutoONP. This command reverts all SWUPGRADE steps and returns the switch to its original state.

Getting help on AutoONP steps

The SWUPGRADE increment is used to perform the AutoONP. At any time within this increment you may type HELP for a list of the commands available. Also, the HELP command has options to obtain information about a command syntax, specific step, or variable.

HELP displays a brief description of the SWUPGRADE increment and a list of the available CI commands. **HELP <swupgrade command>** displays a brief description and syntax of the command. **HELP STEP <step>** displays a brief description of a step's functionality. **HELP VAR <variable>** displays a brief description and the current value of the variable.

For additional information about SWUPGRADE commands, refer to section "SWUPGRADE summary" of Appendix A in *Software Delivery One Night Process Software Delivery Procedures*, 297-8991-303.

SETUP_ENV_VARS

SDE — At the ACTIVECM window

- 1 Set variable TRACE_USER to the user name logged in for TRACE_DEVICE:

TRACE_USER (no default)

Holds the USER name on whose console output messages are printed. Changing the value of this variable changes the value of the TRACE_DEVICE variable, and causes the output to be redirected to the new USER device.

Value: <user_name> where <user_name> is the username of the trace user

Note: For clarity, it is recommended that you set this variable to the user logged in to the TRACE_DEVICE.

The USER must be LOGGED IN when this variable is set. The current setting is: <none>

- 2 It is recommended that you do not change the TRACE_DEVICE variable. Press the Enter key.

TRACE_DEVICE

Holds the device name on which output messages are printed. Changing the value of this variable causes the output to be redirected to the new device.

Value: <trace_device_name> - a string, such as MAP

Note: For clarity, it is recommended to set this variable to a device other than the currently logged on terminal.

The current setting is: <none>

The selected device indicates “This device is selected for TRACing.”

- 3 Do not change the PRINTER variable. Press the Enter key.

PRINTER

Holds the name of the printer on which output messages are recorded. The printer echoes all output sent to the trace device. Changing the value of this variable causes the recording to be directed to the new device.

Value: <printer name> or SINK where <printer name> is a device datafilled in table TERMDEV. Choosing SINK means choosing no printer output.

> **SINK**

- 4 Do not change the LOGS variable. Press the Enter key.

LOGS

Holds the names of the logs that are checked by the LOGS step. More than one log can be specified by entering log names separated by a blank.

Example

'SWERR TRAP' — Check traps and swerrs. Display a message if traps or swerrs are recorded.

The current setting is: TRAP SWERR

- 5 Enter the INACT_LOGMSG variable. Use the existing office header *except* update the new job order number, software level, and current date.

INACT_LOGMSG

Holds the log message that will be displayed on the inactive side of the switch.

Example

*** H1234 Office_Name SN000008 17/MAR/2005 ***

- 6 Enter the LDMATE_IMAGE variable:

LDMATE_IMAGE

Holds the volume name and filename used to load the inactive unit.

Example

SD00IMAGE0 CSN0008BG

Note: The software checks to verify that a file with the specified name exists on the volume.

- 7 Enter the PADNDEVS variable. The default value is SFDEV. If the call processing application files were loaded into SFDEV, press the Enter key. Otherwise, enter up to three device names if the patches were loaded into a location other than SFDEV during procedure [Transfer call processing application patch files](#).

- 8 Do not change the TABXFR_STOPIF variable. Press the Enter key.

TABXFR_STOPIF

Determines the threshold for the maximum number of failed tables allowed before halting TABXFR.

- 9 Do not change the TABXFR_LIMIT variable. Press the Enter key.

TABXFR_LIMIT

Determines the threshold for the maximum number of tuple failures allowed before halting TABXFR.

- 10 Do not change the TABXFR_INITIAL_PRINT variable. Press the Enter key.

TABXFR_INITIAL_PRINT

Determines the time interval for printing a single message containing the current table name.

- 11 Set the TABXFR_INTERVAL_PRINT variable to 30 seconds:

TABXFR_INTERVAL_PRINT

Determines the time interval for printing regular table transfer status messages. This is particularly useful for large tables.

> 30 SECS

- 12 Do not change the SPMS_OPTION variable. Press the Enter key.

SPMS_OPTION

Holds the date, or number of days, to generate the SPMS (Switch Performance Monitoring System) indices.

- 13 Do not change the DRTIME_REPORT variable. Press the Enter key.

DRTIME_REPORT

Determines if the DRTIME report should be printed before SYNC. DRTIME provides statistics on the TABXFR process. Normally this information is not used unless this information is requested.

- 14 Set the DUMP_NEW_LOAD variable:

DUMP_NEW_LOAD

Determines if an image dump of the new load should be taken.

> NO

Note: If the value of this variable is set to NO, the Site is responsible for manually taking an image of the new software load immediately after the AutoONP is complete.

The variables are printed to the terminal.

WARNING: An ACTIVE VOLUME must be datafilled in table
IMAGEDEV to use AUTODUMP.

SWUPGRADE variables for target CA:

Variable Name	Value
TRACE_USER	= USERNAME
TRACE_DEVICE	= TELNSVR00018
PRINTER	= SINK
LOGS	= TRAP SWERR
INACT_LOGMSG	= INACT_LOGIN_MESSAGE
LDMATE_IMAGE	= SD00IMAGE0 CSN0008BG
PADNDEVS	= SFDEV
TABXFR_STOPIF	= 1
TABXFR_LIMIT	= 25
TABXFR_INITIAL_PRINT	= 30 SECS
TABXFR_INTERVAL_PRINT	= 30 SECS
SPMS_OPTION	= NONE
DRTIME_REPORT	= NO
DUMP_NEW_LOAD	= NO

- 15** Type **GO** and press the Enter key to proceed with the upgrade. Monitor messages on the TRACE_DEVICE.

Step NOTIFY_USERS is automatically run. The notified usernames and environment variables are printed to the terminal.

Step SET_LOGIN_BANNER is automatically run.

Step DOWNLOAD_FILES begins, reminds the SDE to download optional application and BULLETINS file and then waits for the SDE to type GO.

- 16** After downloading any required files, type **GO** and press the Enter key.
- 17** If a BULLETINS files is located in SFDEV, it is read and executed during step READ_BULLETINS.
- If a BULLETINS file is not found in SFDEV, the step fails. If a BULLETINS file is not needed, type **OVERRIDE READ_BULLETINS**, press the Enter key, and confirm the override.

Type **GO** and press the Enter key to continue.

The following steps are automatically run:

- *VERIFY_DEVICES*
- *PRINT_PARMS_AND_SAVE*
- *CHECK_LOGS1*

Note: Display the contents of all logs listed. Use the **DISPLAY LOG <log_name> ALL <ACT or INACT>** command.

- *STOP_JOURNAL_FILE*

If the CS 2000 - Compact is equipped with Message Controller cards, step [PRINT MS LOADS](#) runs. Otherwise, step *DISABLE_PRSM_AUDIT_ACT* runs.

Note: Step *DISABLE_PRSM_AUDIT_ACT* has several substeps.

Additional information

If any variables require correction, use the **SET** command to change the variable. If the variable consists of two or more words such as SD00PATCH and SD01PATCH, use quotation marks to enclose the words.

Example

```
SET PADNDEVS 'SFDEV SD00PATCH SD01PATCH'
```

Variables can be displayed at any time with the **DISP VAR** command.

Example

```
DISP VAR PADNDEVS
```

PRINT_MS_LOADS

ATTENTION

This step only runs if the CS 2000 - Compact is configured with Message Controller cards.

SDE — At the ACTIVECM window

- 1 Step PRINT_MS_LOADS runs.

```
Starting step PRINT_MS_LOADS.  
Please note that the displayed information corresponds  
to the BASE layer of the MS load.  
Load in MS 0 = MS-U22BC  
Load in MS 1 = MS-U22BC
```

```
Please check the above MS loads for correctness.  
Step PRINT_MS_LOADS is complete.
```

```
The SWUPGRADE process has paused. Enter GO.
```

Note: MS-U22xx is the correct value for upgrading to SN08.

- 2 If the value reported is not correct, do not proceed. Contact Nortel support personnel immediately.
- 3 Type **GO** and press the Enter key.
Step PRINT_MS_LOADS completes.
Step DISABLE_PRSM_AUDIT_ACT runs and completes.

LOAD_MC0_BLADE

ATTENTION

This step only runs if the CS 2000 - Compact is configured with Message Controller cards.

SDE — At the ACTIVECM window

1 Step LOAD_MC0_BLADE runs.

Starting step LOAD_MC0_BLADE.

Upgrade load of MC 0 at the SAM21 EM GUI by using the following manual procedure:

- 1) At the MAPCI;MTC;MS map level, verify that MS 1 is the master MS.
- 2) If MS 1 is not the master, perform a SWMAST. If performed, soak 10 minutes.
- 3) At SAM21 EM GUI, open Card View for MC 0
 - a) Under Provisioning Tab, determine IP address of the card.
 - b) Ensure IP address in GUI matches IP address of MC 0.
- 4) Under the States Tab, Lock the card.
 - a) Wait for the lock icon to appear.
- 5) Under the Provisioning Tab, change the boot file:
 - a) Click Modify.
 - b) Change boot file name to new load.
 - c) Click Save.
- 6) Under the States Tab, Unlock the card
 - a) Wait for the lock icon to disappear.
- 7) At Active CCAMTC MAP; MC level, Validate newly booted load.
 - a) QryLd command for MC0 must indicate new MC load version.
- 8) Soak for 10 minutes, monitoring logs.

Type GO to continue SWUPGRADE when above steps are successfully completed.

Step LOAD_MC0_BLADE is not complete.
The SWUPGRADE process has paused. Enter GO.

2 At the MAPCI;MTC;MS level, ensure that MS 1 is the master MS.

MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
MS								
0	Quit	MS 0	Message Switch	Clock	Shelf	0	Inter-MS Link	0 1
2		MS 1	.	Slave				.
3				M Free				.
4								
5								
6	Tst_							
7	Bsy_							
8	RTS_							
9								
10	LoadMS_							

- 3 If MS 1 is not the master MS, perform a **SWMAST**. If SWMAST is performed, then soak 10 minutes before continuing.

At the active Call Agent Manager interface (CORE0 or CORE1)

- 4 At the MCMtc level, verify that both Message Controllers are in service (.) prior to Locking Message Controller 0 in the next step.

CallAgent	SYS	CON	APPL	MC	Unit: 0		
MCMtc	Blade:	Eth0:	Eth1:	Atm0:	Atm1:		
0	Quit	MC0	.	. Act	. Inact	open	open
2		MC1	.	. Act	. Inact	open	open
3							

- 5 Exit the Call Agent Manager interface and determine the IP address of Message Controller 0:

```
>0 ALL
```

```
[mtc@hostname mtc]$ grep mc0 /etc/hosts
```

The grep command returns the address of Message Controller 0.

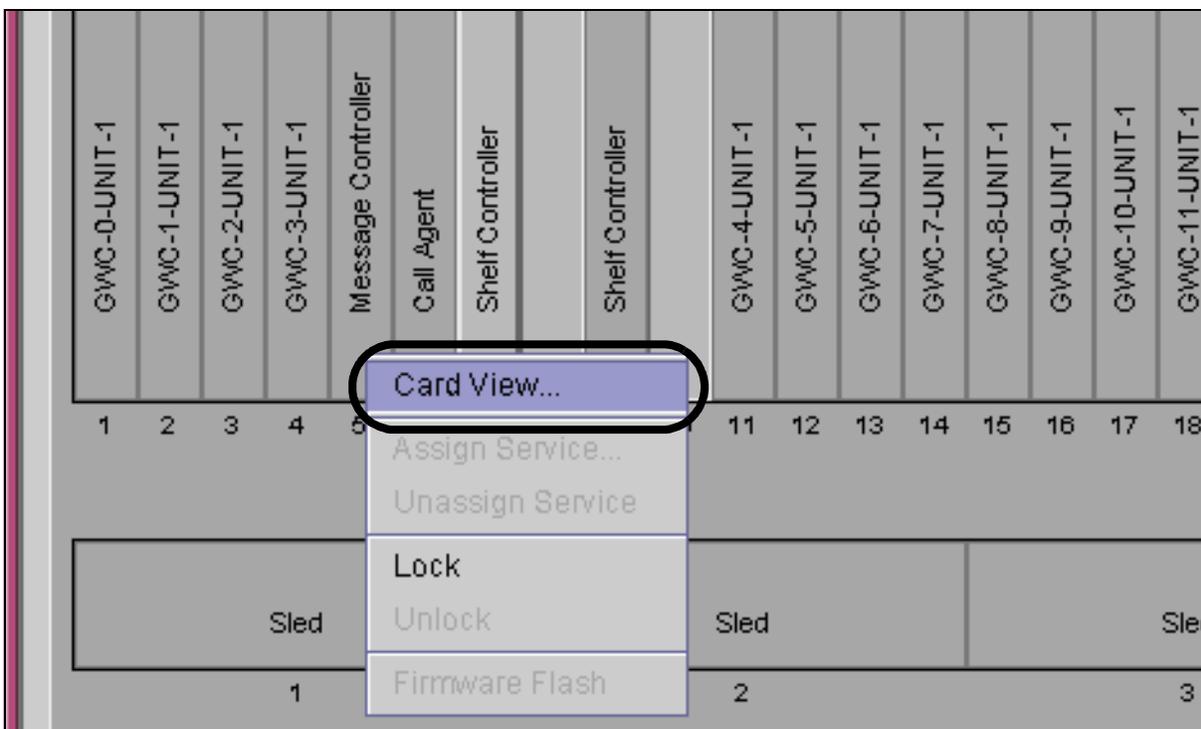
```
10.40.54.60 mc0
```

- 6 Start the Call Agent Manager interface again:

```
[mtc@hostname mtc]$ ccamtc mcmtc
```

At the CS 2000 SAM21 Manager client

- 7 From the Shelf View, right click on the card and select Card View.

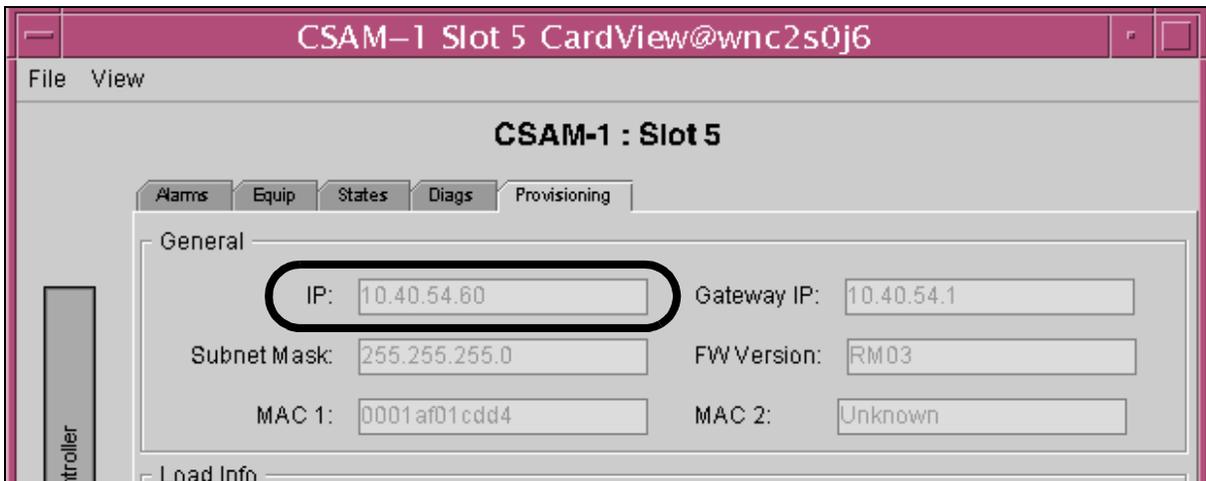


Note: The Shelf View window will reflect office provisioning and the hardware configuration of the SAM21 shelf.

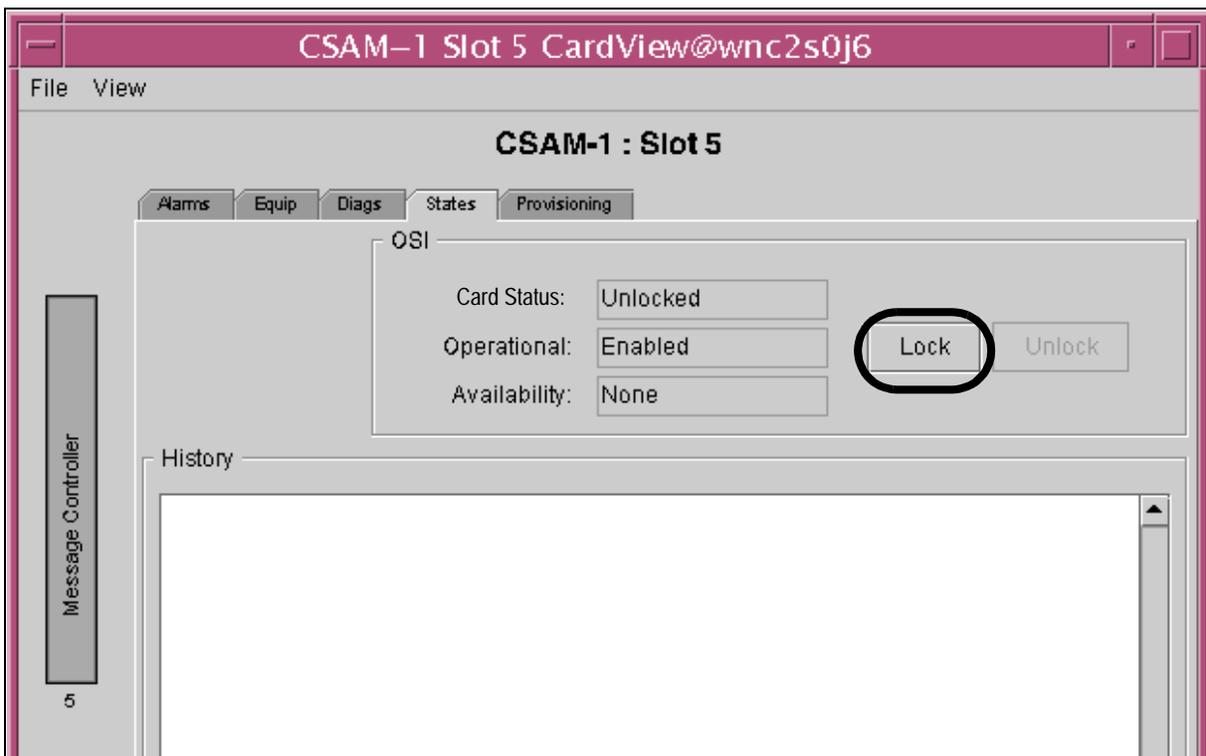
The Card View window opens.

- 8 Select the Provisioning tab on the Card View window.
Ensure that the IP address specified in the IP field matches the IP address of Message Controller 0 from [step 5](#). If the values do not match, open the other Shelf View from the CS 2000 SAM21

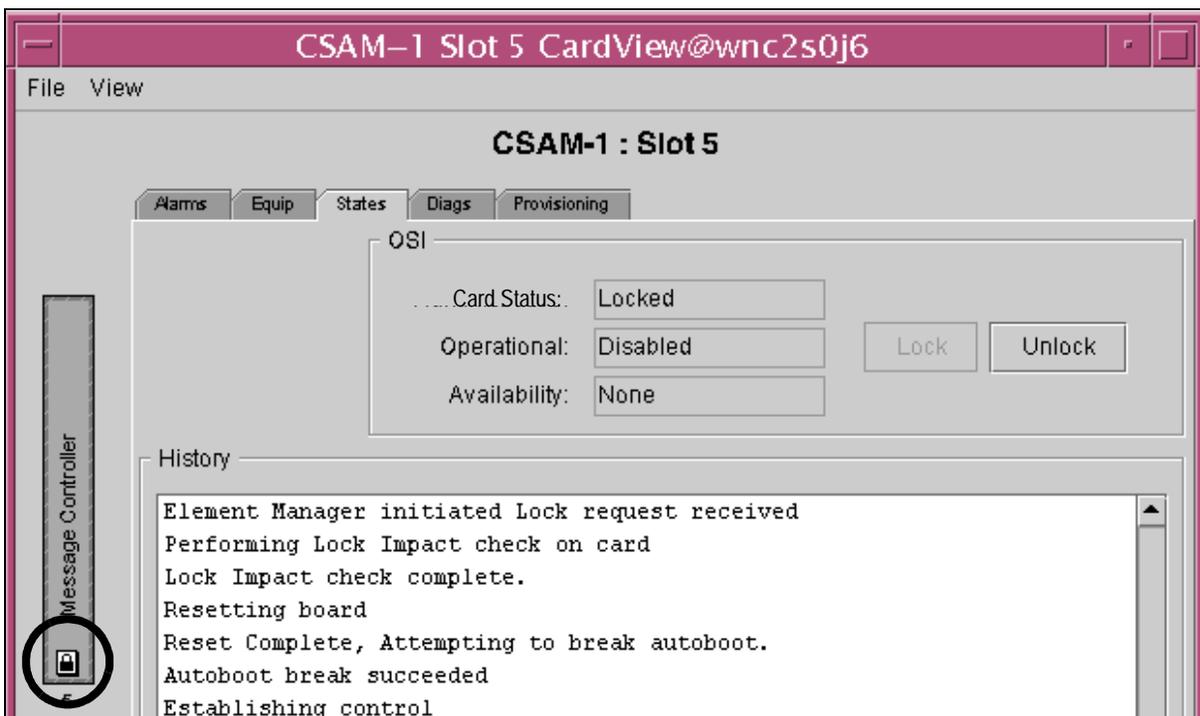
Manager and check the Message Controller provisioning for that shelf.



- 9 Click on the States tab.
Click on the Lock button.



A lock warning dialog window opens. Confirm the lock warning.

10 Wait for the lock icon to appear on the card icon.

At the Call Agent Manager, a major ATM alarm is raised. The Message Controller enters the Remote Busy (R) state and is reported as out of service.

- 11 Click on the Provisioning tab, change the Load value to the new software load name, and click Save.

CSAM-1 Slot 5 CardView@wnc2s0j6

File View

CSAM-1 : Slot 5

Alarms Equip Diags States **Provisioning**

General

IP: 10.40.54.60 Gateway IP: 10.40.54.1

Subnet Mask: 255.255.255.0 FW Version: RM03

MAC 1: 0001af01cdd4 MAC 2: Unknown

Load Info

Server IP: 10.40.54.1

Path: /swd/3pc

Load: ncgl_mc_image_7.15.1.0

FW Flash Enable

Message Controller Data

Unit 0 Unit 1

Call Agent Links

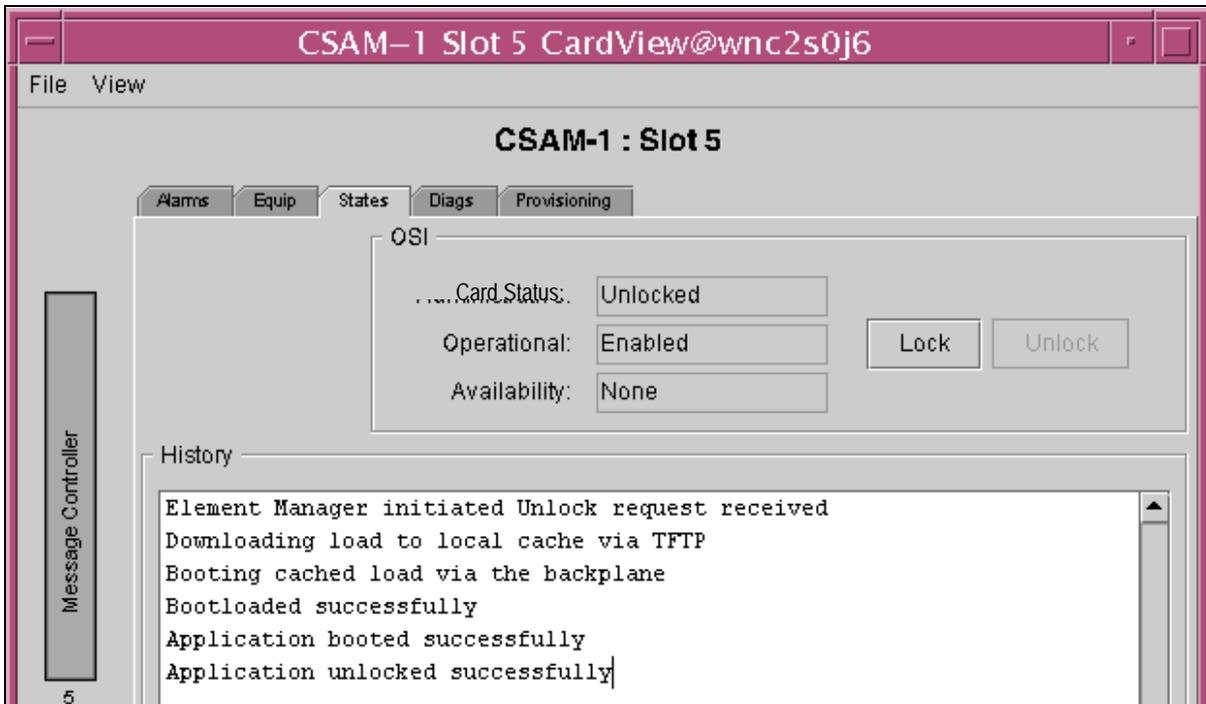
Call Agent 0 IP: 10.40.54.67

Call Agent 1 IP: 10.40.54.70

Modify **Save** Clear Cancel Details...

A warning dialog is generated indicating a load mismatch between the provisioning for the two Message Controller cards. Confirm the warning dialog by clicking OK.

- 12 Click on the States tab and click the Unlock button.
Wait for the lock icon to disappear.



At the Call Agent Manager, the card enters the in service state (.), and the major ATM alarm clears. The Message Controller may raise a major MCTbl alarm while the Message Controller synchronizes to the NTP server.

At the active Call Agent Manager interface (CORE0 or CORE1)

- 13 Query the software load for Message Controller 0 and ensure that the new load is reported:
 - > **MCMtc**
 - > **QryLd 0**

```
CallAgent      SYS      CON      APPL      MC      Unit: 0
.              .        .        .          .
MCMtc          Blade:   Eth0:    Eth1:    Atm0:    Atm1:
0 Quit         MC0     .        . Act    . Inact  open     open
2              MC1     .        . Act    . Inact  open     open
3
4
5 QryLd
6 QryHits
7 ClrHits
8 Trnsl
9
10
11
12
13 LogQuery
14 Alarm
15
16             MC Load report retrieved on Thu Mar 19 13:48:45 2005:
17 Help
18 Refresh     Ramdisk: ncgl_mc_image_7.15.1.0
   mtc
Time 13:48 >
```

Soak the load for 10 minutes while monitoring log reports.

SDE — At the ACTIVECM window

14 Type **GO** and press the Enter key to continue.

LOAD_MC1_BLADE

ATTENTION

This step only runs if the CS 2000 - Compact is configured with Message Controller cards.

SDE — At the ACTIVECM window

1 Step LOAD_MC1_BLADE runs.

Starting step LOAD_MC1_BLADE.

Upgrade load of MC 1 at the SAM21 EM GUI by using the following manual procedure:

- 1) At the MAPCI;MTC;MS map level, verify that MS 0 is the master MS.
- 2) If MS 0 is not the master, perform a SWMAST. If performed, soak 10 minutes.
- 3) At SAM21 EM GUI, open Card View for MC 1
 - a) Under Provisioning Tab, determine IP address of the card.
 - b) Ensure IP address in GUI matches IP address of MC 1.
- 4) Under the States Tab, Lock the card.
 - a) Wait for the lock icon to appear.
- 5) Under the Provisioning Tab, change the boot file:
 - a) Click Modify.
 - b) Change boot file name to new load.
 - c) Click Save.
- 6) Under the States Tab, Unlock the card
 - a) Wait for the lock icon to disappear.
- 7) At Active CCAMTC MAP; MC level, Validate newly booted load.
 - a) QryLd command for MC 1 must indicate new MC load version.
- 8) Soak for 10 minutes, monitoring logs.

Type GO to continue SWUPGRADE when above steps are successfully completed.

Step LOAD_MC1_BLADE is not complete.

The SWUPGRADE process has paused. Enter GO.

- 2 At the MAPCI;MTC;MS level, ensure that MS 0 is the master MS.

	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL

MS			Message Switch	Clock	Shelf	0		Inter-MS Link	0 1
0 Quit	MS 0	.		M Free		F			..
2	MS 1	.		Slave		F			..
3									
4									
5									
6 Tst_									
7 Bsy_									
8 RTS_									
9									
10 LoadMS_									

- 3 If MS 1 is not the master MS, perform a **SWMAST**. If SWMAST is performed, then soak 10 minutes before continuing.

At the active Call Agent Manager interface (CORE0 or CORE1)

- 4 At the MCMtc level, verify that both Message Controllers are in service (.) prior to Locking Message Controller 1 in the next step.

CallAgent	SYS	CON	APPL	MC	Unit: 0
.
MCMtc	Blade:	Eth0:	Eth1:	Atm0:	Atm1:
0 Quit	MC0	. Act	. Inact	open	open
2	MC1	. Act	. Inact	open	open
3					

- 5 Exit the Call Agent Manager interface and determine the IP address of Message Controller 0:

```
>0 ALL
```

```
[mtc@hostname mtc]$ grep mc1 /etc/hosts
```

The grep command returns the address of Message Controller 1.

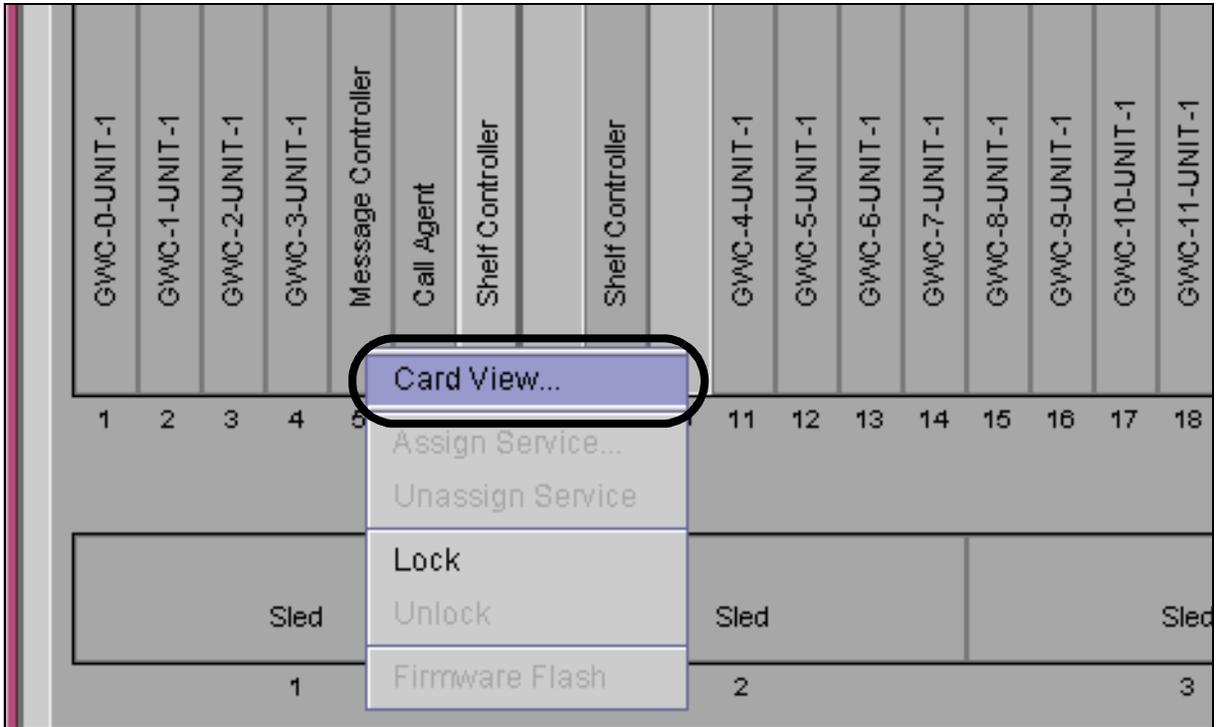
```
10.40.54.61 mc1
```

- 6 Start the Call Agent Manager interface again:

```
[mtc@hostname mtc]$ ccamtc mcmtc
```

At the CS 2000 SAM21 Manager client

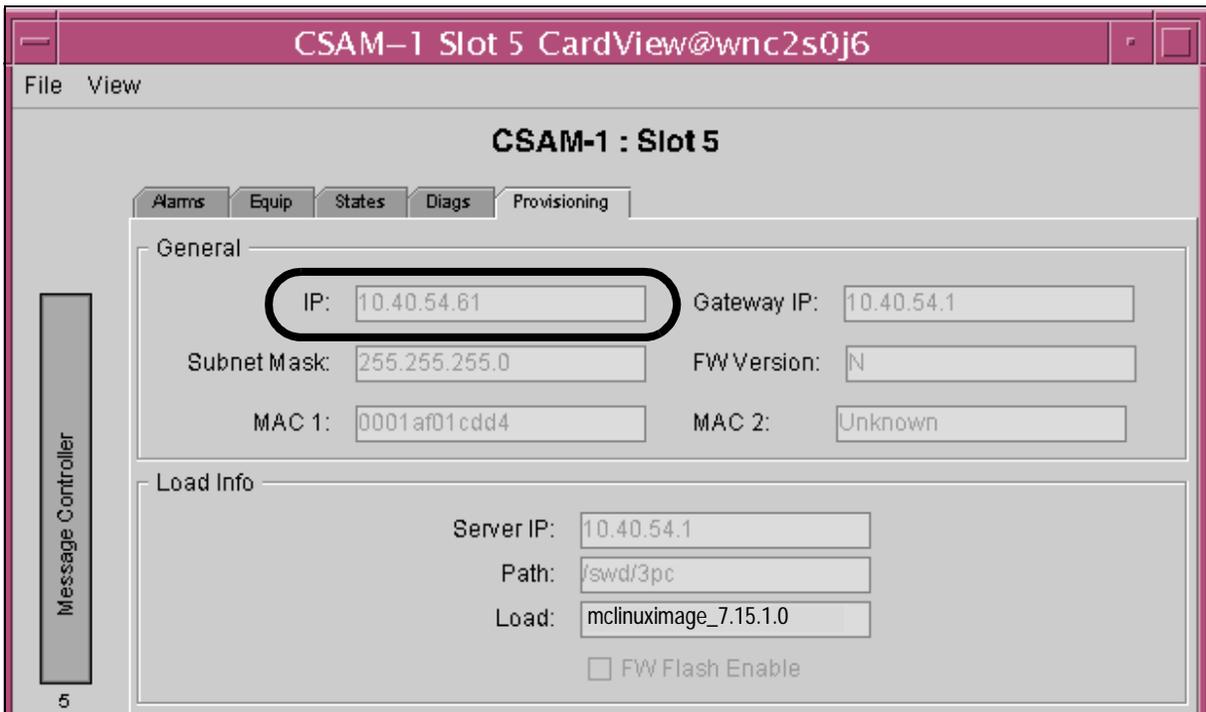
7 From the Shelf View, right click on the card and select Card View.



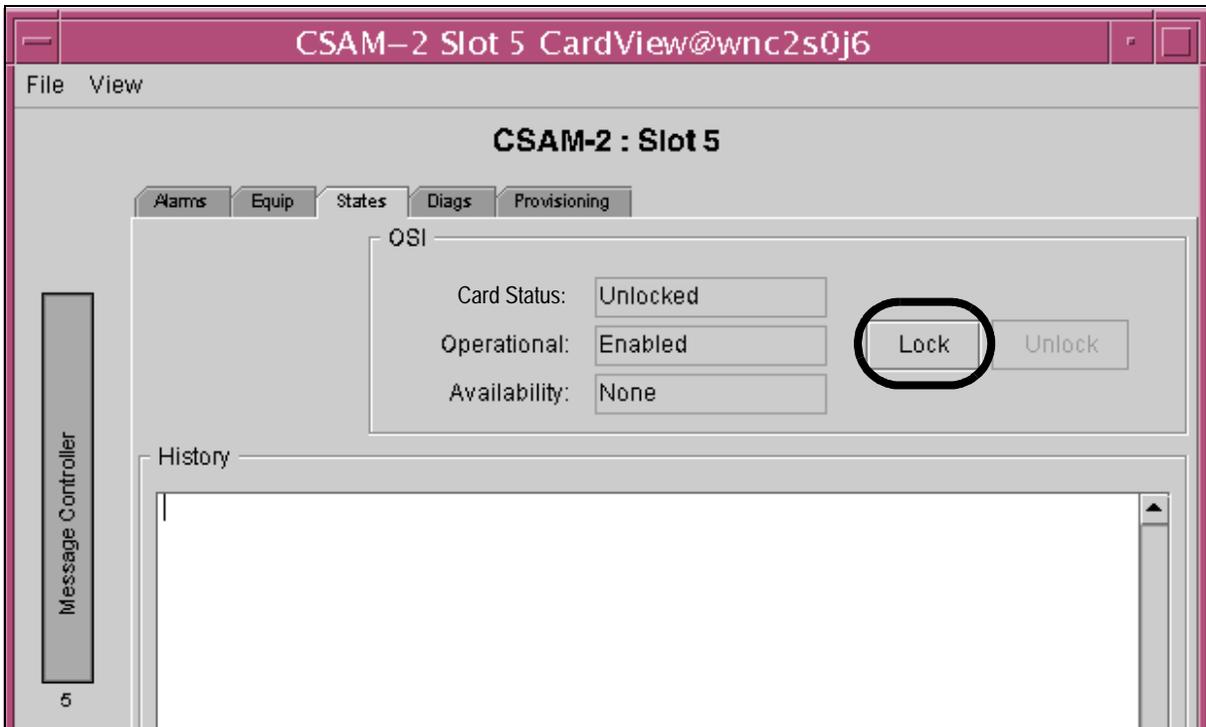
Note: Message Controller 1 is located in slot 12 for some markets.

The Card View window opens.

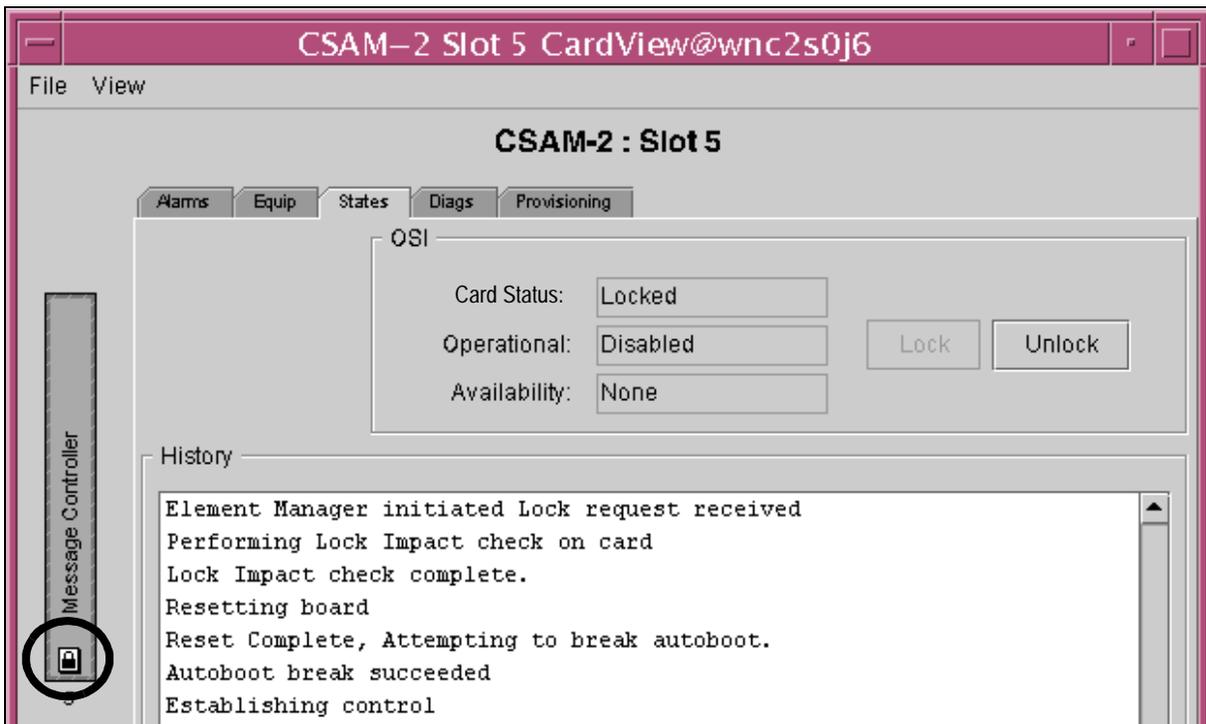
- 8 Select the Provisioning tab on the Card View window.
Ensure that the IP address specified in the IP field matches the IP address of Message Controller 1. If the values do not match, open the other Shelf View from the CS 2000 SAM21 Manager and check the Message Controller provisioning for that shelf.



- 9 Click on the States tab.
Click on the Lock button.



A lock warning dialog window opens. Confirm the lock warning.

10 Wait for the lock icon to appear on the card icon.

At the Call Agent Manager, a major ATM alarm is raised, the Message Controller enters the Remote Busy (R) state and is reported as out of service.

- 11 Click on the Provisioning tab, click on Modify, change the Load value to the new software load name, and click Save.

CSAM-2 Slot 5 CardView@wnc2s0j6

File View

CSAM-2 : Slot 5

Alarms Equip States Diags Provisioning

General

IP: 10.40.54.61 Gateway IP: 10.40.54.1

Subnet Mask: 255.255.255.0 FW Version: N

MAC 1: 0001af01cdd4 MAC 2: Unknown

Load Info

Server IP: 10.40.54.1

Path: /swd/3pc

Load: **ncgl_mc_linux_7.15.1.0**

FWFlash Enable

Message Controller Data

Unit 0 Unit 1

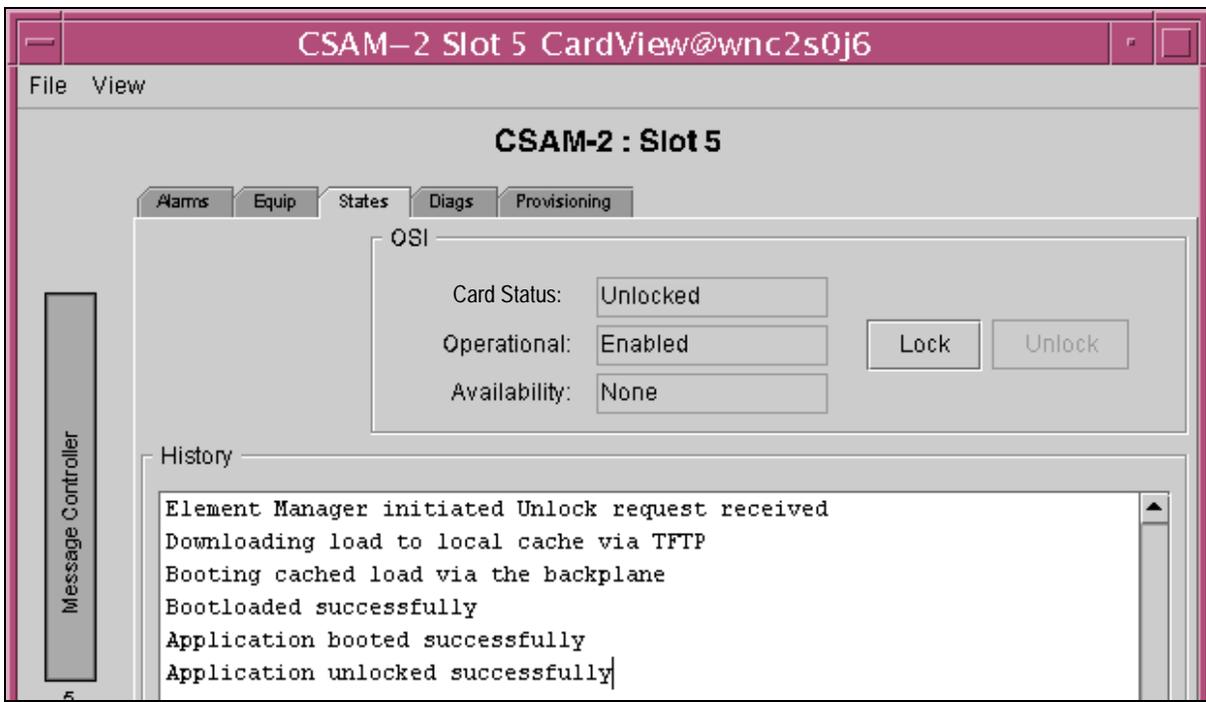
Call Agent Links

Call Agent 0 IP: 10.40.54.67

Call Agent 1 IP: 10.40.54.70

Modify **Save** Clear Cancel Details..

- 12 Click on the States tab and click the Unlock button.
Wait for the lock icon to disappear.



At the Call Agent Manager, the card enters the in service state (.), and the major ATM alarm clears. The Message Controller may raise a major MCTbl alarm while the Message Controller synchronizes to the NTP server.

At the active Call Agent Manager interface (CORE0 or CORE1)

- 13 Query the software load for Message Controller 1 and ensure that the new load is reported:
 - > **MCMtc**
 - > **QryLd 1**

```
CallAgent      SYS      CON      APPL      MC      Unit: 0
.              .        .        .        .        .

MCMtc          Blade:   Eth0:    Eth1:    Atm0:    Atm1:
0 Quit         MC0      .        . Act    . Inact  open     open
2              MC1      .        . Act    . Inact  open     open
3
4
5 QryLd
6 QryHits
7 ClrHits
8 Trnsl
9
10
11
12
13 LogQuery
14 Alarm
15
16             MC Load report retrieved on Thu Jun 19 14:15:54 2004:
17 Help
18 Refresh     Ramdisk: ncgl_mc_image_7.15.1.0
   mtc
Time 13:48 >
```

Soak the load for 10 minutes while monitoring log reports.

SDE — At the ACTIVECM window

14 Type **GO** and press the Enter key to continue.

DROP_SYNC

Step DROP_SYNC requires jamming the inactive Call Agent from the active Call Agent Manager.

SDE — At the ACTIVECM window

- 1 Obtain approval to drop synchronization of the call processing application.
- 2 Type **GO** and press the Enter key to continue.

Starting step DROP_SYNC.

Please JAM the Inactive CA Application and confirm when complete:

At the Active COREMTC MAP (ccamtc coremtc); CAMtc Level:

1) JAM - Jam the Inactive application

Type GO to continue the SWUPGRADE when JAM is completed

Step DROP_SYNC is not complete.

The SWUPGRADE process has paused. Enter GO.

SDE — At the CORE0 or CORE1 window

- 3 Jam the inactive Call Agent from the active Call Agent Manager window.
> CoreMtc;CAMtc;Jam
- 4 Monitor the jam and verify that a JInact alarm is raised.

SDE — At the ACTIVECM window

- 5 Type **GO** and press the Enter key to continue.
- 6 Proceed to [LOAD_NEW_SIDE_BLADE](#) and [LOAD_MATE](#).

LOAD_NEW_SIDE_BLADE and LOAD_MATE

This procedure requires the SDE to perform the following actions:

- lock the inactive Call Agent card
- reprovision the platform software load
- unlock the inactive Call Agent

SDE — At the ACTIVECM window

- 1 Review the message printed to the terminal.

Starting step LOAD_NEW_SIDE_BLADE.

Upgrade the New Side Call Agent load at the SAM21 EM GUI by using the following manual procedure:

- 1) At Active COREMTC MAP (ccamtc coremtc), query the Inact blade IP addr
 - a) Use QueryIP command to determine the IP address of mate blade.
- 2) At SAM21 EM GUI, open Card View for Inact Call Agent Card:
 - a) Under the Provisioning Tab, determine IP address of the card.
 - b) Ensure IP address in GUI matches inactive card IP address.
- 3) Under the States Tab, Lock the card.
- 4) Under the Provisioning Tab, change the boot file:
 - a) Click Modify.
 - b) Change boot file name to new load.
 - c) Click Save.
- 5) Under the States Tab, Unlock the card.
 - a) Monitor the boot progress in the History pane.
- 6) At Active COREMTC MAP, monitor Inact load initialization:
 - a) Inact status begins with "/booting"
 - b) Wait until the status becomes "/waiting"
- 7) At Inactive COREMTC map (ccamtc coremtc), Validate newly booted load:
 - a) Telnet/Login to the Inact Blade
 - b) Under the Sys level, QryLd must indicate the new load version

Type GO to continue the SWUPGRADE when above steps are successfully complet
Step LOAD_NEW_SIDE_BLADE is not complete.

The SWUPGRADE process has paused. Enter GO.

- 2 Perform the instructions listed in the output. Refer to the following procedures for assistance:
 - Lock the inactive Call Agent — "Call Agent Lock" in *Upgrading the Call Agent*, NN10065-461
 - Change the boot file — "Reprovision Call Agent platform load" in *Upgrading the Call Agent*, NN10065-461
 - Unlock the inactive Call Agent — "Call Agent Unlock" in *Upgrading the Call Agent*, NN10065-461
- 3 Type **GO** and press the Enter key.

Step LOAD_NEW_SIDE_BLADE completes.

Step LOAD_MATE begins, loads the new call processing application on the inactive Call Agent, and completes. The image specified in variable LDMATE_IMAGE is loaded. Progress is displayed at the ACTIVEECM window and the CORE0 and CORE1 windows.
- 4 Proceed to [PATCH_NEW_SIDE_BLADE](#).

PATCH_NEW_SIDE_BLADE

This step provides a prompt for the SDE to apply patches to the upgraded Call Agent platform software load. Patches for the call processing application are applied later in the upgrade. The patches must reside in the `/swd/3pc/patch` directory on the CS 2000 Core Manager or CBM.

Note: The steps printed to the terminal may not be accurate. Perform the following steps to patch the new side blade.

1. At the inactive maintenance window (CORE0 or CORE1) verify that this is the inactive Call Agent.
2. Enter the Admin level and then the SWIM level.
3. At the TRANSFER level a list of available patches is displayed
 - a. SELECT the patch by number
 - b. FETCH INA the patch to the INACTIVE unit
4. At the PATCH level, for each patch to be applied and committed:
 - a. SELECT the patch by number
 - b. APPLY INA FORCE the patch to the INACTIVE unit
 - c. SELECT the patch by number
 - d. COMMIT INA the patch to the INACTIVE unit

Each patch is applied and committed to the inactive Call Agent unit. The Status for each patch changes from NEW to COMMITTED. Using the **COMMIT** command commits the patch to the load so that the patch is reapplied the next time the card is reset. If the patch is not committed, it will not be reapplied the next time the card is reset.

SDE — At the ACTIVECM window**1** Review the message printed to the terminal.

Starting step PATCH_NEW_SIDE_BLADE.

If patches for the New Side Call Agent Load are available, upgrade the load to the current patch level

using the following manual procedure:

1) At the Inact COREMTC map (ccamtc corematc):

a) Verify that this card is the Inact unit.

2) At the TRANSFER map level:

a list of available patches is displayed.

For each patch to be transferred:

a) SELECT the patch by number

b) FETCH the patch to BOTH units

3) At the PATCH map level:

For each patch to be applied and committed:

a) SELECT the patch by number

b) APPLY INA - apply the patch on Inactive only

c) SELECT the patch by number

d) COMMIT INA - commit the patch on Inactive only

Type GO to continue the SWUPGRADE when above steps are successfully complete. Step PATCH_NEW_SIDE_BLADE is not complete.

The SWUPGRADE process has paused. Enter GO.

2 Refer to [Patching software on page 242](#) for assistance with the platform software patching procedure.

3 After patching is complete, or if no patches are available, type **GO** and press the Enter key.

Step PATCH_NEW_SIDE_BLADE completes.

Step MATELINK_RTS runs and completes. This step verifies the communication path between the active call processing application and the upgraded, inactive call processing application.

Step UPDATE_STEPS_AND_VARS runs and completes. This step automatically provisions environment variables and updates the list of steps on the inactive call processing application. The active and inactive call processing application data for the ONP is synchronized.

Step *CHECK_NEW_LOAD* runs and completes. This step verifies that the inactive call processing application on the inactive Call Agent has no datafill. The software verifies that this load has no datafill by checking that table *TERMDEV* has a single tuple.

Step *SET_DATE_AND_LOGMSG* runs and completes. This step sets the inactive side time and date from the active side. The login message is set from variable *INACT_LOGMSG*.

Step *CHECK_LOGS_2* runs and completes. This step displays the count of logs in the *LOGUTIL* buffer since the start of the process. The log report types displayed are determined by the variable *LOGS*.

Step *CLEAR_TRAPINFO* runs and completes. This step clears all traps on the upgraded inactive call processing application. By clearing the traps now, it is easier to differentiate between old and new traps that are caused by subsequent steps.

Step *TRANSFER_DEVICES_INFO* runs and completes. This step copies data from variable *VERIFY_DEVICES* on the active call processing application to the inactive call processing application.

If the CS 2000 - Compact is configured with Message Controllers, step *MS_CHECK* runs. This step checks that the software load in the Message Switch is the correct load for the upgraded call processing application load.

Step *DISABLE_AUTOIMAGE* runs and completes. This step disables the automatic image dump process since the automatic image dump process could interfere with the ONP.

Step *SET_OFFICE_TUPLES* runs and completes. This step retains the current state of office parameters *NODEREXCONTROL*, *LCDREX_CONTROL*, and *GUARANTEED_TERMINAL_CPU_SHARE* and then sets both *NODEREXCONTROL* and *LCDREX_CONTROL* to OFF. *GUARANTEED_TERMINAL_CPU_SHARE* is set to its maximum value.

Step *SET_PADNDEV* runs and completes. This step saves the tuples in table *PADNDEV*, deletes all the tuples, and then adds tuples according to variable *PADNDEVS*.

Step *SEND_PATCHES* runs and completes. This step copies the patch files for the upgraded inactive call processing application from the location specified by variable *PADNDEVS* to the inactive call processing application.

Step APPLY_PATCHES runs and completes. The patches that were copied in step SEND_PATCHES are applied.

Step CHECK_LOGS_3 runs and completes. This step displays the count of log reports stored in the LOGUTIL buffer.

Step RESTORE_PADNDEV runs and completes. This step restores table PADNDEV to contain the exact tuples it contained before step SET_PADNDEV.

- 4 Proceed to [TABLE TRANSFER](#).

TABLE_TRANSFER

This step copies table provisioning data from the active call processing application to the undatafilled, inactive call processing application.

Step TABLE_TRANSFER is automated. Manual intervention is needed only if some of the table data fails to transfer. The table transfer stops according to variables STOPIF and LIMIT.

For any failed tables, compare the old, active side data to the new, inactive side data to identify and correct any tuples. If necessary, contact your translations engineer or Nortel support personnel for assistance.

For some offices, it may be necessary or preferred to change office variables and parameters on the inactive side after this step completes. One possible parameter to change is field LOG_OFFICE_ID in table OFCVAR. Change this parameter after TABLE_TRANSFER completes and before step START_PRESWACT. Use the procedure below for logging into the inactive call processing application.

ATTENTION

If it is necessary to access the inactive call processing application to correct a problem, use the following procedure.

If it is necessary to abort the upgrade at this point, issue the CANCEL command at the ACTIVEECM window.

At the INACTIVEECM window

- 1 Log in to the active call processing application by telnetting to the CS 2000 Core Manager as user cmusr.
- 2 Enter the mate input/output level and log in to the inactive call processing application:

```
>MATEIO;MATELOG ME;SLEEP 60 MINS
```

Note 1: The `Mate>` prompt indicates that the command is sent to the inactive call processing application.

Note 2: If the **MATELOG ME** command fails, enter **MATELINK RTS** and retry the **MATELOG ME** command.

```
>mateio
MATEIO -- MATECOM link not available. Attempt RTS.
>matelink rts
RTS PASSED
```

- 3 At the Mate> prompt, log in to the inactive call processing application:

Mate> username password

- 4 Use the table editor to correct any datafill problems.
- 5 Use the LOGOUT command at the Mate> prompt to exit the inactive call processing application:

Mate> LOGOUT

Note: Do not log out of the active call processing application. Verify that the prompt is the Mate> prompt.

- 6 Wake up the active side terminal. Enter:

> <Ctrl+B> HX

At the ACTIVECM window

- 7 Type **GO** and press the Enter key to continue.

Step TABXFR_REPORT runs and completes. This step prints a report of all table failures to the trace device.

Step CHECK_LOGS_4 runs and completes.

- 8 Proceed to [START_PRESWACT](#).

START_PRESWACT

Step START_PRESWACT has several sub steps. If any sub step fails to complete, make corrections according to the error message and continue the START_PRESWACT step by typing **GO** and pressing the Enter key. START_PRESWACT re-executes the failed step and continues.

Read the following notes while step START_PRESWACT executes:

START_PRESWACT sub step TABLE_DELTA displays the changes, additions, and deletions between the old and new call processing application software loads for the following tables:

- OFCENG
- OFCSTD
- OFCVAR
- OFCOPT
- DATASIZE
- TCAPTRID
- OPTCTL

For any tables with differences, compare the OLD/NEW and ADDED tuples to identify and correct any errors.

Note: Errors stop sub step TABLE_DELTA from completing with the message "TABLE_DELTA not complete." The software also provides informative messages such as "Table ATTCONS Checksum incorrect, keys match." The informative messages do not stop the step from completing and do not require any manual action. At a convenient point during the upgrade, compare the old and new loads to understand and validate the differences.

If office parameter changes were made after step TABLE_TRANSFER on the inactive call processing application, then TABLE_DELTA displays the change.

Proceed to [PRESWACT_DIRP_AND_BILLING](#).

PRESWACT_DIRP_AND_BILLING

SDE — At the ACTIVECM window

- 1 Step PRESWACT_DIRP_AND_BILLING runs and completes, but pauses the process. The CS 2000 - Compact requires no manual action for DIRP and billing.

Starting step PRESWACT_DIRP_AND_BILLING.

AMA and SMDR Billing subsystem information

MAPCI:

MTC:

IOD:

DIRP:

SSNAME	SSNO	SEQNO	ROTATES	POOLNO	PARLPOOL	EMERGENCY
AMA	3	1	4	1	NONE	NO

REGULAR

FILE(S)	STATE	VOLUME	RECCOUNT	BLOCK	E	V	V_B	VLID	FNUM	FRN#
ACTIVE	AVAIL	SD00AMA0	181941	9098	0	71	NO	8402	0000	718F
STANDBY1	AVAIL	SD01AMA0	0	0	0	69	NO	8442	0001	5191

PARALLEL

FILE	STATE	VOLUME	BLOCK	E	V	V_B	VLID	FNUM	FRN#
	NONE								

MAPCI:

MTC:

IOD:

DIRP:

SSNAME	SSNO	SEQNO	ROTATES	POOLNO	PARLPOOL	EMERGENCY
SMDR	7	1	2	5	NONE	NO

REGULAR

FILE(S)	STATE	VOLUME	RECCOUNT	BLOCK	E	V	V_B	VLID	FNUM	FRN#
ACTIVE	AVAIL	SD00SMDR	1	1	0	71	NO	8407	0058	6190

PARALLEL

FILE	STATE	VOLUME	BLOCK	E	V	V_B	VLID	FNUM	FRN#
	NONE								

.....

```
TRANSFERRING table DIRPPPOOL to inactive side.  
-----
```

```
ACT-WARNING: If any DIRP actions other than those described in this step  
              occur between now and SWACT, the user may need to manually  
              correct any discrepancies in table DIRPPPOOL.
```

```
D/R DART# 719->          DIRPPPOOL: Restored      13, Failed      0
```

To prepare DIRP billing subsystems for the SWACT, please follow instructions in the NTP 'One Night Process Software Delivery Procedures.'

This verifies that all DIRP billing subsystems have been properly prepared for the upcoming SWACT and DIRP information is readily available for timely restoration to minimize the loss of existing data, should DIRP file storage devices become corrupted during the transition.

These measures may include, but are not limited to:

- DIRP rotation of disk primary billing.
- DIRP rotation of tape primary billing.
- close existing billing file and open a new one.
- prepare tape billing standby volumes.
- prepare tape parallel standby volumes.
- copy unprocessed disk billing file to backup tape.
- copy disk parallel files to backup.
- match DIRPPPOOL volumes between active and inactive.

```
Step PRESWACT_DIRP_AND_BILLING is complete.  
The SWUPGRADE process has paused. Enter GO.
```

- 2 Type **GO** and press the Enter key to confirm PRESWACT_DIRP_AND_BILLING.

Step PRINT_SPMS_INDICES runs and completes.

- 3 Step GET_FIRST_SWACT_AGREEMENT begins and pauses the process. The SDE must receive agreement from the customer to proceed with the SWACT.

Note: If a delay of longer than 15 minutes is expected before the SWACT, the SDE should wait until all preparations are made before continuing.

System response:

Starting step GET_FIRST_SWACT_AGREEMENT.
NORESTARTSWACT will be used for initiating a CC Warm SWACT.
Do you wish to proceed with the preparation for the CC warm swact?
Step GET_FIRST_SWACT_AGREEMENT is complete.
The SWUPGRADE process has paused. Enter GO.

- 4 Type **GO** and press the Enter key to confirm GET_FIRST_SWACT_AGREEMENT.
- 5 Step PREPARE_FOR_SWACT begins.

Starting step PREPARE_FOR_SWACT.

DISPLAY_NOP_USERS executing

SESSION	STATE	APPL.	ID	NODE
0	IDLE			
1	IDLE			
2	IDLE			
3	IDLE			
4	IDLE			
5	IDLE			
6	IDLE			
7	IDLE			
8	IDLE			
9	IDLE			
10	IDLE			
11	IDLE			
12	IDLE			
13	IDLE			
14	IDLE			

DISPLAY_NOP_USERS complete

Please perform the following:

- Remind the Telco personnel to inform 'active' NOP users listed above (if any) to log out of their session(s) before the S/W upgrade can continue.
- Remind the Telco personnel to contact the high profile customers to ensure that they are not in emergency call processing mode and inform them of the approximate SWACT time.
- Disable all polling and periodic testing. There is to be no activity on the Core, MS and CLOCK until cleared by the software delivery engineer.

WARNING: FAILURE TO COMPLY MAY RESULT IN A SYSTEM RESTART.

- Ensure no further activity is performed on the DPP, including DPP polling or disk backup, and inform the downstream processing center.
- Dump all special logs so they can be restored onto the new load after postswact has completed.

Step PREPARE_FOR_SWACT is complete.

The SWUPGRADE process has paused. Enter GO.

- 6** Type **GO** and press the Enter key to confirm **PREPARE_FOR_SWACT**.
Step STATUSCHECK runs and completes.
Step CHECK_LOGS_5 runs and completes.
Step TRANSFER_TIMINGS runs and completes.
- 7** Proceed to [SWACT](#).

SWACT

**CAUTION****Possible loss of service**

Check the GUIs for CCA, SAM21 EM and Ethernet Routing Switch 8600. *Before proceeding with SWACT:* Check the logs for those devices to be sure that the links are stable and clear and any alarms for those devices.

SDE — At the ACTIVECM window

- 1 Review the instructions for step SWACT.

Starting step SWACT.

Confirm that the Inactive CA Application is NOT JAMmed,

-or- RELEASE the JAM and confirm when complete:

At the Active TPCMTC MAP; CAMtc Level:

- 1) RELJAM - Release the Jam on the Inactive application

Type GO to confirm, and to continue the SWUPGRADE

Step SWACT is not complete.

The SWUPGRADE process has paused. Enter GO.

SDE — At the CORE0 or CORE1 window

- 2 Confirm that inactive Call Agent is not jammed or release the jam.

SDE — At the ACTIVECM window

- 3 Type **GO** and press the Enter key to continue with the SWACT.
The process performs final checks and pauses for a final NORESTARTSWACT confirmation.

```
Beginning SWACT checks:
All the SWACT checks have finished successfully.

The VR_PRESWACT_TRANSFER step completed successfully.
All INSV and ISTB series 1 PMs will have execs loaded after the SWACT.

***** FINAL SWACT CONFIRMATION *****
Do you wish to proceed with the NORESTARTSWACT CC warm swact?
Step SWACT is not complete.
The SWUPGRADE process has paused. Enter GO.
```

- 4 Receive final agreement from the telephone operating company personnel to proceed with the SWACT. Type **GO** and press the Enter key once confirmation is received.

5 Monitor the messages printed to the terminal and verify that activity does switch at the CORE0 or CORE1 windows.

```
Starting step SWACT.
After the completion of the CC warm swact, please log
both the TRACE user and the ACT user
onto the new active side and enter SWUPGRADE;GO.
All Pre-SWACT checks completed. Starting Warm SWACT now.
*****          The cursor will not be returned          *****
*****          unless a critical failure occurs.          *****
***** Now monitoring Warm SWACT messages.*****

Pre-initialization done

Communication established

Exchange of data with the mate done

Transfer of data done (FASPECT)

Data estimation done

Store allocated on active CC

Store allocated on inactive CC

AMA processing completed

          SWACT Inactive Procs running, this may take a few minutes

Before_callp_stopped procs completed

Call processing in PM stopped

Call processing I/O in CC stopped

Call data extracted

Data transfer completed
```

Activity switches to the upgrade call processing application. The connection at the ACTIVECM window is dropped.

6 Log in to the upgraded call processing application by telnetting to the CS 2000 Core Manager or CBM as user cmusr from the ACTIVECM and INACTIVECM windows.

Note: The switch provides a prompt to perform test calls after step RECOVER_DIRP_AND_BILLING.

7 Continue the software upgrade.

> **SWUPGRADE ; GO**

8

ATTENTION

Instruct the operating company to perform a 911 test call. If the test call fails to complete, contact Nortel Emergency Recovery immediately. **Do not continue.** If the test call is successful, continue with the software upgrade and ensure the following actions take place:

- system recovery of all DIRP and billing subsystems
- system recovery of any critical alarms
- operating company begins test calls
- system logs are monitored for office stability

Tracing begins and the software upgrade continues.

Step DISPLAY_DATE completes.

Step RECOVER_DIRP_AND_BILLING begins.

```

2005/07/08 09:52 INACT_LOGMSG
>SWUPGRADE;GO
SWUPGRADE:
This device is selected for TRACEing
Variable TRACE_DEVICE has been set to TELNSVR00001.

Starting step DISPLAY_DATE.
Date: 2005/07/08, Time: 10:18:17
Finished step DISPLAY_DATE.

Starting step RECOVER_DIRP_AND_BILLING.

To recover DIRP billing subsystems after the SWACT, please follow
instructions in the NTP 'One Night Process Software Delivery Procedures'.

This verifies that all DIRP billing subsystems have properly recovered
from the SWACT.

Check these devices for proper operation.

The DIRP increment of the IOD MAPCI level provides a QUERY command to
verify the resulting disposition of these subsystems (i.e. QUERY AMA)
and the DPP increment of the IOD MAP level allows the applicator to
display the alarm status for the DPP active and standby units (command
ERRMAP ALARMS) and also provides the ability to list DPP active files
(command LSTACT).
Step RECOVER_DIRP_AND_BILLING is complete.
The SWUPGRADE process has paused. Enter GO.

```

Determine the next action.

	If	Do
	reversion to the old call processing application load is required	Type CANCEL , press the Enter key, and refer to "Revert and Abort" in <i>Upgrading the Call Agent</i> , NN10065-461
	reversion is not required	step 9
9	No manual action is required for step RECOVER_DIRP_AND_BILLING. Type GO and press the Enter key.	<i>Step RECOVER_DIRP_AND_BILLING completes.</i> <i>Step PERFORM_TEST_CALLS_1 begins.</i>
10	Have telephone operating company personnel perform test calls while the software upgrade process pauses 20 seconds.	

Starting step PERFORM_TEST_CALLS_1.

AMAB has been added to the LOGS variable for automatic monitoring during the execution of the test calls for possible AMA test call failures.

Please perform the test calls that were identified ahead of time and documented in the test file scripts.

WARNING: If an abort becomes necessary due to critical test failures, refer to the 'Revert to the old load' procedure described in the ONP MOP.

The AutoONP process will continue in 20 seconds.

Finished step PERFORM_TEST_CALLS_1.

11 Determine the next action.

If	Do
reversion to the old call processing application load is required	Type CANCEL , press the Enter key, and refer to "Revert and Abort" in <i>Upgrading the Call Agent</i> , NN10065-461
reversion is not required	proceed to START_POSTSWACT on page 147

START_POSTSWACT

Step START_POSTSWACT is automated and runs many substeps. The automated process stops at step PERFORM_TEST_CALLS_2.

SDE — At the ACTIVECM window

- 1 Monitor the progress of step START_POSTSWACT.

Step START_POSTSWACT completes.

Step RESTART_OLD_LOAD runs and completes. This step performs a restart on the old call processing application software to verify that the old call processing software can accept activity in the event of software reversion.

Step PERFORM_TEST_CALLS_2 begins.

```
Finished step START_POSTSWACT.
```

```
Starting step RESTART_OLD_LOAD.
```

```
Finished step RESTART_OLD_LOAD.
```

```
Starting step DRTIME_PRINT.
```

```
A DRTIME PRINT was not requested.
```

```
Finished step DRTIME_PRINT.
```

```
Starting step PERFORM_TEST_CALLS_2.
```

```
    If not already done, please perform test calls.
```

```
    WARNING: If an abort becomes necessary due to critical test
              failures, refer to the 'Revert to the old load'
              procedure described in the ONP MOP.
```

```
Step PERFORM_TEST_CALLS_2 is not complete.
```

```
The SWUPGRADE process has paused. Enter GO.
```

2

ATTENTION

Do not proceed to step LOAD_OLD_SIDE_BLADE until the test calls complete successfully. Once the old side Call Agent card is locked, normal abort is not supported.

Receive confirmation from the telephone operating company to proceed with the software upgrade.

Have operating company personnel perform test calls.

If

Do

reversion is required

Type **CANCEL**, press the Enter key, and refer to "Revert and Abort" in *Upgrading the Call Agent*, NN10065-461

reversion is not required

[step 3](#)

- 3** Type **GO** and press the Enter key to continue the upgrade.
- 4** Proceed to [LOAD_OLD_SIDE_BLADE.](#)

LOAD_OLD_SIDE_BLADE

SDE — At the ACTIVECM window

- 1 Review the instructions printed to the terminal.

Starting step LOAD_OLD_SIDE_BLADE.
ACT - WARNING: The revert to the old load is not possible after the
ACT - WARNING: Old Side Call Agent card has been Locked.
Are you ready to continue?.
Type GO to continue the SWUPGRADE.
Step LOAD_OLD_SIDE_BLADE is not complete.
The SWUPGRADE process has paused. Enter GO.

Type **GO** and press the Enter key.

- 2 Review the instructions printed to the terminal.

Starting step LOAD_OLD_SIDE_BLADE.
Upgrade the Old Side Call Agent load at the SAM21 EM GUI
by using the following manual procedure:

- 1) At Active COREMTC MAP (ccamtc coremtc), query the Inact blade IP address:
 - a) Use QueryIP command to determine IP address of mate blade.
 - 2) At SAM21 EM GUI, open Card View for Inact Call Agent Card:
 - a) Under the Provisioning Tab, determine IP address of the card.
 - b) Ensure IP address in GUI matches inactive card IP address.
 - 3) Under the States Tab, Lock the card
 - 4) Under the Provisioning Tab, change the boot file:
 - a) Click Modify.
 - b) Change boot file name to new load.
 - c) Click Save.
 - 5) Under the States Tab, Unlock the card
 - a) Monitor the boot progress in the History pane.
 - 6) At Active COREMTC MAP, monitor Inact load initialization:
 - a) Inact status begins with "/booting"
 - b) Wait until the status becomes "/waiting"
 - 7) At Inact COREMTC map (ccamtc coremtc), Validate newly booted load
 - a) Telnet/Login to the Inact Blade
 - b) Under the Sys level, QryLD must indicate the new load version

Type GO to continue the SWUPGRADE when above steps are successfully completed
Step LOAD_OLD_SIDE_BLADE is not complete.
The SWUPGRADE process has paused. Enter GO.

For assistance, refer to the following procedures:

- "Call Agent Lock" in *Upgrading the Call Agent*, NN10065-461
- "Reprovision Call Agent platform load" in *Upgrading the Call Agent*, NN10065-461
- "Call Agent Unlock" in *Upgrading the Call Agent*, NN10065-461

Note: If CallAgent C_MisM alarm is active at the CORE0 or CORE1 window, patch the platform software:

1. At the inactive maintenance window (CORE0 or CORE1) verify that this is the inactive Call Agent.
 2. Enter the Admin level and then the SWIM level.
 3. At the TRANSFER level a list of available patches is displayed
 - a. SELECT the patch by number
 - b. FETCH INA the patch to the INACTIVE unit
 4. At the PATCH level, for each patch to be applied and committed:
 - a. SELECT the patch by number
 - b. DISADMIN the patch and follow any special instructions
 - c. APPLY INA the patch to the INACTIVE unit
 - d. SELECT the patch by number
 - e. COMMIT INA the patch to the INACTIVE unit
- 3** Type **GO** and press the Enter key to complete step LOAD_OLD_SIDE_BLADE.
- Step LOAD_OLD_SIDE_BLADE completes.*
- 4** Continue to procedure [FINISH_POSTSWACT](#).

FINISH_POSTSWACT

The events in the following procedure occur after Step [LOAD_OLD_SIDE_BLADE](#) completes.

SDE — At the ACTIVECM window

1 Step SYNC_SWITCH begins.

Starting step SYNC_SWITCH.
Confirm that the Inactive CA Application is NOT JAMmed,
-or- RELEASE the JAM and confirm when complete:
At the Active COREMTC MAP (ccamtc coremtc); CAMtc Level:
1)RELJAM - Release the Jam on the Inactive application
Type GO to confirm, and to continue the SWUPGRADE
Step SYNC_SWITCH is not complete.
The SWUPGRADE process has paused. Enter GO.

Starting step SYNC_SWITCH step.
SWUPGRADE has now reached the SYNC_SWITCH step.
Are you ready to SYNC the switch?
Step SYNC_SWITCH is not complete.
The SWUPGRADE process has paused. Enter GO.

Starting step SYNC_SWITCH.
Step Footprint transfer is 0 % complete.
Step Footprint transfer is 10 % complete.
Step Footprint transfer is 20 % complete.
Step Footprint transfer is 30 % complete.
Step Footprint transfer is 40 % complete.
Step Footprint transfer is 50 % complete.
Step Footprint transfer is 60 % complete.
Step Footprint transfer is 70 % complete.
Step Footprint transfer is 80 % complete.
Step Footprint transfer is 90 % complete.
Step Footprint transfer is 100 % complete.
Step Memory Sync is 0 % complete.
Step Memory Sync is 10 % complete.
Step Memory Sync is 20 % complete.
Step Memory Sync is 30 % complete.
Step Memory Sync is 40 % complete.
Step Memory Sync is 50 % complete.
Step Memory Sync is 60 % complete.
Step Memory Sync is 70 % complete.
Step Memory Sync is 80 % complete.
Step Memory Sync is 90 % complete.
Step Memory Sync is 100 % complete.
Finished step SYNC_SWITCH.

2 Type **GO** and press the Enter key.

Step SYNC_SWITCH completes. Optionally, monitor the synchronization from the CORE0 or CORE1 windows.

*Step FINISH_POSTSWACT runs and completes. This step executes any remaining POSTSWACT steps. Several reports about the software upgrade are printed to the terminal. If a step fails to complete, follow the instructions given; type **GO** and press the enter key to continue.*

Step RESTORE_PARMS runs and completes. This step restores the office parameters NODEREXCONTROL, LCDREX_CONTROL, GUARANTEED_TERMINAL_CPU_SHARE, and DUMP_RESTORE_IN_PROGRESS that were saved in step PRINT_PARMS_AND_SAVE.

Step RESET_DEVICES runs and completes. This step verifies that all devices used during the software upgrade are set to their original values.

Step COMPLETE_NEW_LOAD_INIT runs and completes. This step prints messages as a reminder to SITE that need to be performed after POSTSWACT is complete.

Starting step COMPLETE_NEW_LOAD_INIT.

- 1) Re-input any data changes made prior to the software update but not captured on journal file, if any.
- 2) Notify NOP end users to log back in.
- 3) Reassign all current PROFILE information (LOGIN or RESTART) in SFDEV.
- 4) Restore any special logs (listreps special).
- 5) Reassign any temporary log ROUTING setup via LOGUTIL.
- 6) Reassign any changes in the INTEG level of the MAP (for example, UPTH, BUFFSEL, FILTER and others).
- 7) If Network Management code blocking was removed earlier, have Network Maintenance personnel restore code blocking active.

Step COMPLETE_NEW_LOAD_INIT is complete.
The SWUPGRADE process has paused. Enter GO.

SITE — At the ACTIVECM window

- 3 Perform any actions specified in step COMPLETE_NEW_LOAD_INIT.

SDE — At the ACTIVECM window

- 4 Type **GO** and press the Enter key to complete step COMPLETE_NEW_LOAD_INIT.

Step COMPLETE_NEW_LOAD_INIT completes.

Step RESET_LOGIN_BANNER runs and completes. This step erases the software upgrade banner.

Step DUMP_NEW_LOAD runs and completes.

Step RESUME_REX_TEST runs and completes.

Step START_JOURNAL_FILE runs and completes.

Step PRINT_SWUPGRADE_REPORT runs and completes. This step prints the start and stop time for each step in the software upgrade.

Step STOP_RECORD runs and completes.

Step UPGRADE_COMPLETE begins.

Starting step UPGRADE_COMPLETE.

Process complete. You may now QUIT out of the SWUPGRADE increment.
Finished step UPGRADE_COMPLETE.

SWUPGRADE Process complete - all steps have been executed.

>**QUIT**

CI:

- 5 Type **QUIT** and press the Enter key.
- 6 The Call Agent software upgrade is complete.

DUMP_OFFICE_IMAGE

SITE — At the ACTIVECM window

- 1 Nortel recommends making a backup of the new load.

If the **AUTODUMP MANUAL** command is used, the ITOC is updated to reference the newly dumped load. Otherwise, use the SBF command within ITOCCI to set the boot file to the new load.

Once the dump is complete, use the **ITOCCL;LBF CM** to verify that the boot file is set to the new load.

The procedure for backing up a call processing application image is listed in procedure [Dump call processing application image](#) under heading [Backup image on page 77](#).

Appendix A Revert and Abort

This section includes the following procedures:

- [Revert and Abort](#)
- [Revert and Abort for offices with Message Controller cards](#)

Perform these procedures only if it is necessary to abort (CANCEL) the SWUPGRADE.

Revert and Abort

Perform this procedure only if it is necessary to abort (CANCEL) the SWUPGRADE.

SDE — At the ACTIVECM window

1 Type the following commands to abort the upgrade:

> **SWUPGRADE**

> **CANCEL**

Two confirmations are required to continue.

> **Y** (enter twice)

Example

The following is an example of the messages generated when the CANCEL command is entered at the ACTIVECM window and confirmed twice.

```
*****
**                               WARNING!!                               **
**                               **                                       **
** The CANCEL command cancels all work done **
** by SWUPGRADE so far. Once cancelled **
** SWUPGRADE has to be re-started. **
** To halt temporarily, use the PAUSE **
** command. Type: **
**     HELP PAUSE **
** for more information. **
** ** **
** Do you wish to CANCEL the SWUPGRADE? **
*****
Please confirm ("YES", "Y", "NO", or "N"):
>YES
```

```
*****
**                               WARNING!!                               **
**                               **                                       **
** CANCEL will rollback all completed steps. **
** The switch is not in sync. **
** Do you want to sync the switch during **
** the rollback? **
*****
Please confirm ("YES", "Y", "NO", or "N"):
> YES
```

End of example

2**ATTENTION****Watch the output messages on the TRACE DEVICE!**

The TRACE DEVICE will output messages informing the operator what steps are being rolled back (see below). Upon getting the messages:

The SWUPGRADE process has paused. Enter GO or type GO to resume CANCEL

The operator must follow the instructions printed to the TRACE DEVICE and type "GO" and press return on the ACTIVECM window until getting the message:

*SWUPGRADE CANCEL is completed.
You may now QUIT out of the SWUPGRADE increment.*

3

After the SWACT, log in to the old load by typing the following in the ACTIVECM window. If using a terminal window as the trace device, repeat this step at a second terminal window.

```
> telnet <cs_2000_core_mgr_ip_addr>
```

and logging in as "cmuser." This action towards the connection to the login prompt on the call processing application. Log in with a username and password:

```
> <username> <password>
```

or

```
> <username>
```

```
> <password>
```

IMPORTANT! Immediately after logging in to the old load and before continuing the CANCEL, type the following:

```
> TABXFR;CANCEL
```

```
**WARNING: This command cancels the data move.  
Once cancelled it cannot be restarted without  
rebooting the new BCS image. If a temporary halt  
is desired please use the HALT or STOPXFR  
commands. Do you wish to CANCEL the data move?
```

Please confirm ("YES", "Y", "NO", or "N"):

```
> Y
```

```
> QUIT
```

- 4 Ensure the trace device is still set:
> SWUPGRADE;DISP VAR TRACE_DEVICE
If the tracing is not set to a device, or if it is set to the wrong device, set the trace device as follows:
> SET TRACE_DEVICE <device_name>
device_name
is a value like TELNSVR00445. Use the QUSER command to determine the correct device to use.
- 5 Continue the CANCEL to conclusion:
> SWUPGRADE;GO
- 6 Enter the following when SWUPGRADE CANCEL is complete:
> QUIT ALL

Example session of SWUPGRADE CANCEL

WARNING: The rollback of software upgrade steps is about to start.
Messages sent to 1 user.

Executing the step RESTART_OLD_LOAD.
The step RESTART_OLD_LOAD is completed.

Executing the step STATUSCHECK.
Checking Nodes Status
Checking DS1 Carriers Status
Checking MS Interface Cards Status
Checking LIU Status
Checking MS FBUS Status
Checking Integrated Node Maintenance
STATUSCHECK successful.
The step STATUSCHECK is completed.

Executing the roll back for step recover_dirp_and_billing.

Configure the DIRP billing subsystems for revert SWACT to the old load.

Note: For details for completing the following refer to "PRESWACT DIRP and billing" procedure.

- a. ACT Take down billing tapes and format new standby volumes in DIRP. Leave these demounted, they will become the active volumes after SWACT.
Disk volumes will rotate and recover automatically after SWACT.

Example session of SWUPGRADE CANCEL

```

***** FINAL SWACT CONFIRMATION *****
Do you wish to proceed with the ABORTSWACT CC warm swact?
Execution is not complete.
The SWUPGRADE process has paused. Enter GO.

Executing the step SWACT.
After the completion of the CC warm swact, please log
both the TRACE user and the ACT user
onto the new active side and enter SWUPGRADE;GO.
All Pre-SWACT checks completed. Starting Warm SWACT now.
***** The cursor will not be returned *****
***** unless a critical failure occurs. *****
***** Now monitoring Warm SWACT messages.*****

Pre-initialization done

Communication established

Exchange of data with the mate done

Transfer of data done (FASPECT)

Data estimation done

Store allocated on active CC

Store allocated on inactive CC

AMA processing completed

SWACT Inactive Procs running, this may take a few minutes
Before_callp_stopped procs completed

Call processing in PM stopped

Call processing I/O in CC stopped

Call data extracted

Data transfer completed

>
Connection closed by foreign host.
username@host:~$
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%% Telnet to the CS 2000 Core Manager and log in as user cmusr %%
%% The CS 2000 Core Manager forwards the connection to the %%
%% old PCL. Log in with <username> <password> %%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

Example session of SWUPGRADE CANCEL

```

*****
**                                                                 **
**      WARNING...WARNING...WARNING...WARNING.                  **
**                                                                 **
**                                                                 **
**      .....In LINEMODE,To Enter into BREAK.....             **
**                                                                 **
**      Press ^B, Type the Command and Press <Enter>            **
**                                                                 **
**      Example: ^Bhx <Enter>                                     **
**                                                                 **
**                                                                 **
*****
Telnet LINEMODE.

Enter username and password
MIB variable CharOptionAllowed must be set first to allow CHAR MODE.
><username> <password>
MIKEM Logged in on 2005/10/21 at 11:11:14.
*****
**                                                                 **
**      This is a private database.                               **
**      All activity is subject to monitoring.                   **
**      Any UNAUTHORIZED access or use is PROHIBITED, and      **
**      may result in PROSECUTION.                               **
**                                                                 **
*****
*****
**                                                                 **
**      WARNING: SOFTWARE UPGRADE IS IN PROGRESS                **
**      -----                                                **
**                                                                 **
**      Please refrain from using SERVORD or TABLE EDITOR or   **
**      CI commands that may interfere with the process.        **
**                                                                 **
**      Under no circumstances is SYNC to be done !!!          **
**                                                                 **
*****
2005/10/06 14:32 swupgrade rollback doc
This device is selected for TRACEing

Executing the step DISPLAY_DATE
This device is selected for TRACEing
Variable TRACE_DEVICE has been set to TELNSVR00002.

Starting step DISPLAY_DATE.
Date: 2005/10/21, Time: 11:11:33
The step DISPLAY_DATE is completed

```

Example session of SWUPGRADE CANCEL

```
Resetting the default tabxfr platform.
Tabxfr platform has been reset to XACORE.

Executing the step START_POSTSWACT

REACTIVATE_TRIGASGN          executing
REACTIVATE_TRIGASGN          complete

DIRP_RECOVERY                executing
DIRP_RECOVERY                complete

DIRP_AUDIT                   executing
DIRP_AUDIT                   complete

HARDWARE_CHECK               executing
HARDWARE_CHECK               complete

...

BEGIN_TESTING                 executing
BEGIN_TESTING                 complete
Enter Postswact after office testing has been completed
The step START_POSTSWACT is completed

Executing the step CHECK_LOGS_1
New logs on ACTIVE unit since 2005/10/21 11:00:04:
  TRAP      : 0
  SWERR     : 1
Use command DISPLAY LOG <log name> <n or ALL> [Act or Inact]
to see the content of a log.
Execution completed.
The SWUPGRADE process has paused. Enter GO.
Executing the rollback for step PRESWACT_DIRP_AND_BILLING.

Please follow the step Recover billing from the ONP MOP
procedure Revert to old load to perform the rollback
of the step PRESWACT_DIRP_AND_BILLING.
Execution completed.
The SWUPGRADE process has paused. Enter GO.

Executing the step RESTORE_PARMS
The step RESTORE_PARMS is completed.

Executing the step PERFORM_TEST_CALLS.
  AMAB has been added to the LOGS variable for
  automatic monitoring during the execution of the
  test calls for possible AMA test call failures.
```

Example session of SWUPGRADE CANCEL

```
If not already done, please perform test calls.
Execution is not complete.
The SWUPGRADE process has paused. Enter GO.

Executing the step PERFORM_TEST_CALLS.
AMAB has been removed from the LOGS variable.
The step PERFORM_TEST_CALLS is completed.
Reload the original New Side Call Agent load at the SAM21 EM GUI
by using the following manual procedure:
  1) At Active COREMTC MAP (ccamtc coremtc), query the Inact blade IP
address:
    a) Use QueryIP command to determine IP address of mate blade.
  2) At SAM21 EM GUI, open Card View for Inact Call Agent Card:
    a) Under the Provisioning Tab, determine IP address of the card.
    b) Ensure IP address in GUI matches inactive card IP address.
  3) Under the States Tab, Lock the card
  4) Under the Provisioning Tab, change the boot file:
    a) Click Modify.
    b) Restore the boot file name to the original load file.
    c) Click Save.
  5) Under the States Tab, Unlock the card
    a) Monitor the boot progress in the History pane.
  6) At Active COREMTC MAP, monitor Inact load initialization:
    a) Inact status begins with "/booting"
    b) Wait until the status becomes "/waiting"
  7) At Inactive COREMTC map (ccamtc coremtc), Validate newly booted load:
    a) Telnet/Login to the Inact Blade
    b) Under the Sys level, QryLD must indicate the original load version
Type GO to continue the SWUPGRADE when complete
Execution is not complete.
The SWUPGRADE process has paused. Enter GO.

Executing the step SYNC_SWITCH.
SWUPGRADE has now reached the SYNC_SWITCH step.
Are you ready to SYNC the switch?
Execution is not complete.
The SWUPGRADE process has paused. Enter GO.

Executing the step SYNC_SWITCH.
The step SYNC_SWITCH is completed.

Executing the step FINISH_POSTSWACT

XA_UNSPPLIT                                executing
XA_UNSPPLIT                                complete
...
Executing the step RESET_DEVICES
The step RESET_DEVICES is completed.
```

Example session of SWUPGRADE CANCEL

If any abort actions are required for step READ_BULLETINS,
please perform them now.

Execution completed.

The SWUPGRADE process has paused. Enter GO.

Executing the ABORT_PRESWACT.

REACTIVATE_DCT executing

REACTIVATE_DCT complete

REACTIVATE_TRIGASGN executing

REACTIVATE_TRIGASGN complete

NBD_ABORT_PRESWACT executing

NBD_ABORT_PRESWACT complete

RESET_OFFICE_TUPLES executing

WARNING: Guaranteed_Terminal_CPU_Share already restored.

WARNING: Auxcp_Cpu_Share already restored.

RESET_OFFICE_TUPLES complete

ENABLE_AUTOIMAGE executing

ENABLE_AUTOIMAGE complete

ENABLE_PES_AUDIT executing

ENABLE_PES_AUDIT complete

RESUME_ATT executing

RESUME_ATT complete

RESET_SIS_ROUTING_DATA executing

RESET_SIS_ROUTING_DATA complete

CLEANUP_VR_MATE_DATA executing

CLEANUP_VR_MATE_DATA complete

ABORT_PRESWACT has completed.

Execution completed.

Executing the step STOP_RECORD

The step STOP_RECORD is completed.

The rollback of SWUPGRADE steps is completed.

SWUPGRADE CANCEL is completed.

You may now QUIT out of the SWUPGRADE increment.

>

%%%%%%%%%%%%%%%%%%%%%%%%

%% > QUIT ALL %%

%%%%%%%%%%%%%%%%%%%%%%%%

End of example.

Revert and Abort for offices with Message Controller cards

This procedure is only for offices configured with Message Controller (MC) cards. Perform the procedure only if it is necessary to abort (CANCEL) the SWUPGRADE.

SDE — At the ACTIVECM window

1 Type the following commands to abort the upgrade:

```
> SWUPGRADE
> CANCEL
```

Two confirmations are required to continue.

```
> Y (enter twice)
```

Example:

The following is an example of the messages generated when the CANCEL command is entered at the ACTIVECM window and confirmed twice.

```
*****
**                               **
**                               **
** The CANCEL command cancels all work done
** by SWUPGRADE so far. Once cancelled
** SWUPGRADE has to be re-started.
** To halt temporarily, use the PAUSE
** command. Type:
**     HELP PAUSE
** for more information.
**
** Do you wish to CANCEL the SWUPGRADE?
*****
Please confirm ("YES", "Y", "NO", or "N"):
>YES

*****
**                               **
**                               **
** CANCEL will rollback all completed steps.
** The switch is not in sync.
** Do you want to sync the switch during
** the rollback?
*****
Please confirm ("YES", "Y", "NO", or "N"):
> YES
```

End of example

2**ATTENTION****Watch the output messages on the TRACE DEVICE!**

The TRACE DEVICE will output messages informing the operator what steps are being rolled back (see below). Upon getting the messages:

```
The SWUPGRADE process has paused. Enter GO or
type GO to resume CANCEL
```

The operator must follow the instructions printed to the TRACE DEVICE and type "GO" and press return on the ACTIVECM window until getting the message:

```
SWUPGRADE CANCEL is completed.
You may now QUIT out of the SWUPGRADE
increment.
```

3 After the SWACT, log in to the old load by typing the following in the ACTIVECM window. If using a terminal window as the trace device, repeat this step at a second terminal window.

```
> telnet <cs_2000_core_mgr_ip_addr>
```

and logging in as "cmusr." This action forwards the connection to the login prompt on the call processing application. Log in with a username and password:

```
> <username> <password>
```

or

```
> <username>
```

```
> <password>
```

IMPORTANT! Immediately after logging in to the old load and before continuing the CANCEL, type the following:

```
> TABXFR;CANCEL
```

```
**WARNING: This command cancels the data move.
Once cancelled it cannot be restarted without
rebooting the new BCS image. If a temporary halt
is desired please use the HALT or STOPXFR
commands. Do you wish to CANCEL the data move?
```

Please confirm ("YES", "Y", "NO", or "N"):

```
> Y
```

```
> QUIT
```

- 4 Continue the CANCEL to conclusion:
> **SWUPGRADE;GO**
- 5 Enter the following when SWUPGRADE CANCEL is complete:
> **QUIT ALL**

Example session of SWUPGRADE CANCEL

Messages sent to 1 user.

Executing the step RESTART_OLD_LOAD.
The step RESTART_OLD_LOAD is completed.

Executing the step STATUSCHECK.
Checking Nodes Status
Checking DS1 Carriers Status
Checking MS Interface Cards Status
Checking LIU Status
Checking MS FBUS Status
Checking Integrated Node Maintenance
STATUSCHECK successful.
The step STATUSCHECK is completed.

Executing the roll back for step recover_dirp_and_billing.

Configure the DIRP billing subsystems for revert SWACT to the old load.

Note: For details for completing the following refer to "PRESWACT DIRP and billing" procedure.

- a. ACT Take down billing tapes and format new standby volumes in DIRP. Leave these demounted, they will become the active volumes after SWACT.
Disk volumes will rotate and recover automatically after SWACT.
Parallel volumes on tape (or DPP/BMC) can be recovered manually after SWACT.
- b. INACT Ensure datafill is correct on the inactive side for table DIRPPPOOL.
- c. INACT if DIRP_REC file is present on the inactive SFDEV, ensure each entry in DIRP_REC is correct for the revert SWACT.
Note: In DIRP_REC the parallel volume assignments for DIRPPPOOL should be set to nil (\$) for all pools.

Execution completed.

The SWUPGRADE process has paused. Enter GO.

>go

Example session of SWUPGRADE CANCEL

```
WARNING: SWUPGRADE is about to execute the ABORTSWACT step.  
Do you wish to proceed?
```

```
Execution completed.  
The SWUPGRADE process has paused. Enter GO.  
>go
```

```
Executing the step PRELOAD_EXECS.  
Successfully fetched: KSETEX  
Successfully fetched: DTCEX  
Successfully fetched: POTSEX  
PRELOAD_EXECS                complete
```

```
Executing the step SWACT.  
Confirm that the Inactive CA Application is NOT JAMmed,  
-or- RELEASE the JAM and confirm when complete:  
At the Active COREMTC MAP (ccamtc coremtc); CAMtc Level:  
  1) RELJAM - Release the Jam on the Inactive application  
Type GO to confirm, and to continue the SWUPGRADE  
Execution is not complete.  
The SWUPGRADE process has paused. Enter GO.  
>go
```

```
Executing the step SWACT.  
Beginning SWACT checks:  
All the SWACT checks have finished successfully.
```

```
***** FINAL SWACT CONFIRMATION *****  
Do you wish to proceed with the ABORTSWACT CC warm swact?  
Execution is not complete.  
The SWUPGRADE process has paused. Enter GO.  
>go
```

```
Executing the step SWACT.  
After the completion of the CC warm swact, please log  
both the TRACE user and the ACT user  
onto the new active side and enter SWUPGRADE;GO.  
All Pre-SWACT checks completed. Starting Warm SWACT now.  
***** The cursor will not be returned *****  
***** unless a critical failure occurs. *****  
***** Now monitoring Warm SWACT messages.*****
```

```
Pre-initialization done
```

```
Communication established
```

```
Exchange of data with the mate done
```

Example session of SWUPGRADE CANCEL

```
Transfer of data done (FASPECT)

Data estimation done

Store allocated on active CC

Store allocated on inactive CC

AMA processing completed

    SWACT Inactive Procs running, this may take a few minutes

Before_callp_stopped procs completed

Call processing in PM stopped

Call processing I/O in CC stopped

Call data extracted

Data transfer completed

>
Connection closed by foreign host.

**** telnet to Core
telnet 10.40.54.72
Telnet escape character is '^G'.
Trying 10.40.54.72...
Connected to 10.40.54.72.
Escape character is '^G'.
Trying to complete connection. Please wait...

*****
**                                                                 **
**      WARNING...WARNING...WARNING...WARNING.                  **
**                                                                 **
**                                                                 **
**      .....In LINEMODE, To Enter into BREAK.....             **
**                                                                 **
** Press ^B, Type the Command and Press <Enter>                  **
**                                                                 **
** Example: ^Bhx <Enter>                                          **
**                                                                 **
**                                                                 **
*****
Telnet LINEMODE.
```

Example session of SWUPGRADE CANCEL

```

Enter username and password
>mikem admin (<--example username and password)
MIKEM Logged in on 2005/03/16 at 18:56:49.
*****
**                                                                 **
**           This is a private database.                          **
**   All activity is subject to monitoring.                        **
** Any UNAUTHORIZED access or use is PROHIBITED, and            **
**           may result in PROSECUTION.                            **
**                                                                 **
*****
*****
**                                                                 **
**           WARNING: SOFTWARE UPGRADE IS IN PROGRESS             **
**           -----                                             **
**                                                                 **
** Please refrain from using SERVORD or TABLE EDITOR or         **
** CI commands that may interfere with the process.              **
**                                                                 **
**           Under no circumstances is SYNC to be done !!!        **
**                                                                 **
*****
2005/03/16 12:45 psnncsh08bb 3pc_tdm
>TABXFR;CANCEL
*****
**                                                                 **
**           WARNING!!                                           **
**                                                                 **
** This command cancels the data move. Once cancelled it         **
** cannot be restarted without rebooting the new BCS image.     **
** If a temporary halt is desired, please use the HALT          **
** or STOPXFR command.                                           **
**                                                                 **
** Do you wish to cancel the data move?                           **
**                                                                 **
*****
Please confirm ("YES", "Y", "NO", or "N"):
>Y
>QUIT

>swupgrade
SWUPGRADE:
>go

This device is selected for TRACEing
Variable TRACE_DEVICE has been set to TELNSVR00001.
It is recommended that this value NOT be changed.
Variable TRACE_USER has been reset to the SWUPGRADE user: MIKEM

```

Example session of SWUPGRADE CANCEL

```
Starting DISPLAY_DATE.
Date: 2005/03/16, Time: 18:56:53
The step DISPLAY_DATE is completed.

Resetting the default tabxfer platform.
Tabxfr platform has been reset to STANDARD.

Executing the step START_POSTSWACT

REACTIVATE_TRIGASGN          executing
REACTIVATE_TRIGASGN          complete

DIRPOOL2_CONSOLE             executing
DIRPOOL2_CONSOLE             complete

DIRP_RECOVERY                 executing
DIRP_RECOVERY                 complete

DIRP_AUDIT                    executing
DIRP_AUDIT                    complete

.....

BEGIN_TESTING                 executing
BEGIN_TESTING                 complete

Enter Postswact after office testing has been completed
The step START_POSTSWACT is completed

Executing the step CHECK_LOGS_1
New logs on ACTIVE unit since 2005/03/16 18:22:47:
  TRAP      : 0
  SWERR     : 0
Use command DISPLAY LOG <log name> <n or ALL> [Act or Inact]
to see the content of a log.
The step CHECK_LOGS_1 is completed.
Executing the rollback for step PRESWACT_DIRP_AND_BILLING.

Please follow the step Recover billing from the ONP MOP
procedure Revert to old load to perform the rollback
of the step PRESWACT_DIRP_AND_BILLING.
Execution completed.
The SWUPGRADE process has paused. Enter GO.
>go

Executing the step RESTORE_PARMS
The step RESTORE_PARMS is completed.
```

Example session of SWUPGRADE CANCEL

Executing the step PERFORM-TEST_CALLS.

AMAB has been added to the LOGS variable for automatic monitoring during the execution of the test calls for possible AMA test call failures.

If not already done, please perform test calls.

Execution is not complete.

The SWUPGRADE process has paused. Enter GO.

>go

Executing the step PERFORM_TEST_CALLS.

AMAB has been removed from the LOGS variable.

The step PERFORM_TEST_CALLS is completed.

Reload the original New Side Call Agent load at the SAM21 EM GUI by using the following manual procedure:

- 1) At Active COREMTC MAP (ccamtc coremtc), query the Inact blade IP address:
 - a) Use QueryIP command to determine IP address of mate blade.
- 2) At SAM21 EM GUI, open Card View for Inact Call Agent Card:
 - a) Under the Provisioning Tab, determine IP address of the card.
 - b) Ensure IP address in GUI matches inactive card IP address.
- 3) Under the States Tab, Lock the card.
- 4) Under the Provisioning Tab, change the boot file:
 - a) Click Modify.
 - b) Restore the boot file name to the original load file.
 - c) Click Save.
- 5) Under the States Tab, Unlock the card.
 - a) Monitor the boot progress in the History pane.
- 6) At Active COREMTC MAP, monitor Inact load initialization:
 - a) Inact status begins with "/booting"
 - b) Wait until the status becomes "/waiting"
- 7) At Inactive COREMTC map (ccamtc coremtc), Validate newly booted load:
 - a) Telnet/Login to the Inact Blade.
 - b) Under the Sys level, QryLD must indicate the original load version.

Type GO to continue the SWUPGRADE when complete.

Execution is not complete.

The SWUPGRADE process has paused. Enter GO.

>go

Executing the step SYNC_SWITCH.

Confirm that the Inactive CA Application is NOT JAMmed,

-or- RELEASE the JAM and confirm when complete:

At the Active COREMTC MAP (ccamtc coremtc); CAMtc Level:

- 1) RELJAM - Release the Jam on the Inactive application.

Type GO to confirm, and to continue the SWUPGRADE.

Execution is not complete.

The SWUPGRADE process has paused. Enter GO.

>go

Example session of SWUPGRADE CANCEL

Executing the step SYNC_SWITCH.
SWUPGRADE has now reached the SYNC_SWITCH step.
Are you ready to SYNC the switch?
Execution is not complete.
The SWUPGRADE process has paused. Enter GO.
>go

Executing the step SYNC_SWITCH.
Step Footprint transfer is 0% complete.
Step Footprint transfer is 10% complete.
Step Footprint transfer is 20% complete.
Step Footprint transfer is 30% complete.
.....
Step Footprint transfer is 100% complete.
Step Memory Sync is 0% complete.
Step Memory Sync is 10% complete.
Step Memory Sync is 20% complete.
Step Memory Sync is 30% complete.
.....
Step Memory Sync is 100% complete.
The step SYNC_SWITCH is completed.

Starting step RELOAD_MC1_BLADE.
Reload the original MC load on MC 1 at the SAM21 EM GUI.
by using the following manual procedure:

- 1) At the MAPCI;MTC;MS map level, verify that MS 0 is the master MS.
- 2) If MS 0 is not the master, perform a SWMAST. If performed, soak 10 minutes.
- 3) At SAM21 EM GUI, open Card View for MC 1.
 - a) Under the Provisioning Tab, determine IP address of the card.
 - b) Ensure IP address in GUI matches IP address of MC 1.
- 4) Under the States Tab, Lock the card.
 - a) Wait for the lock icon to appear.
- 5) Under the Provisioning Tab, change the boot file:
 - a) Click Modify.
 - b) Restore the boot file name to the original MC load file.
 - c) Click Save.
- 6) Under the States Tab, Unlock the card.
 - a) Wait for the lock icon to disappear.
- 7) At Active CCAMTC Map; MC Level, Validate newly booted load.
 - a) QryLd command for MC must indicate original MC load version.
- 8) Soak for 10 minutes, monitoring logs.

Type GO to continue the SWUPGRADE when above steps are successfully completed.

Execution is not complete.
The SWUPGRADE process has paused. Enter GO.
>go

Example session of SWUPGRADE CANCEL

Starting step RELOAD_MC0_BLADE.

Reload the original MC load on MC 0 at the SAM21 EM GUI.

by using the following manual procedure:

- 1) At the MAPCI;MTC;MS map level, verify that MS 1 is the master MS.
- 2) If MS 1 is not the master, perform a SWMAST. If performed, soak 10 minutes.
- 3) At SAM21 EM GUI, open Card View for MC 0.
 - a) Under the Provisioning Tab, determine IP address of the card.
 - b) Ensure IP address in GUI matches IP address of MC 0.
- 4) Under the States Tab, Lock the card.
 - a) Wait for the lock icon to appear.
- 5) Under the Provisioning Tab, change the boot file:
 - a) Click Modify.
 - b) Restore the boot file name to the original MC load file.
 - c) Click Save.
- 6) Under the States Tab, Unlock the card.
 - a) Wait for the lock icon to disappear.
- 7) At Active CCAMTC Map; MC Level, Validate newly booted load.
 - a) QryLd command for MC must indicate original MC load version.
- 8) Soak for 10 minutes, monitoring logs.

Type GO to continue the SWUPGRADE when above steps are successfully completed.

Execution is not complete.

The SWUPGRADE process has paused. Enter GO.

>go

Executing the step FINISH_POSTSWACT

```

CCA_SYNC                executing
CCA_SYNC                complete

ENABLE_PATCH_AUDIT_POSTSWACT  executing
ENABLE_PATCH_AUDIT_POSTSWACT  complete

POST_MS_CHECK           executing
Load in MS 0 = MS-U22BD
Load in MS 1 = MS-U22BD
Passed POST_MS_CHECK for active CM load: 22BB
POST_MS_CHECK           complete

RESET_OFFICE_TUPLES     executing
WARNING: Guaranteed_Terminal_CPU_Share already restored.
RESET_OFFICE_TUPLES     complete

.....

DELETE_DPT_LNODES      complete 03/16/05 19:00:01 00:00:00:000
CLEANUP_VR_MATE_DATE   complete 03/16/05 19:00:01 00:00:00:004

```


Example session of SWUPGRADE CANCEL

```
CLEANUP_VR_MATE_DATA          executing
CLEANUP_VR_MATE_DATA          complete
ABORT_PRESWACT has completed.
Execution completed.

Executing the step STOP_RECORD
The step STOP_RECORD is completed.

The rollback of SWUPGRADE steps is completed.

SWUPGRADE CANCEL is completed.
You may now QUIT out of the SWUPGRADE increment.
>quit
CI:
>
```

End of example

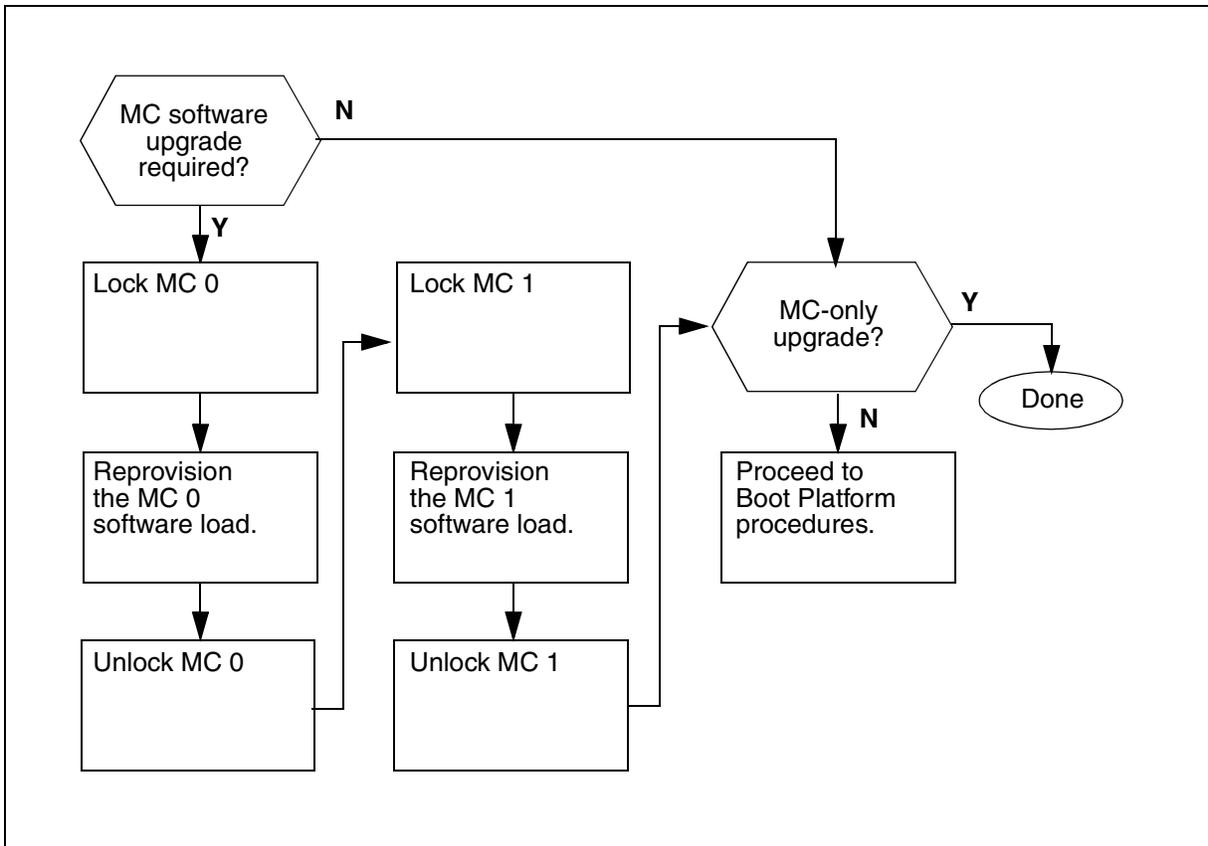
Appendix B Manual procedures

The procedures in this appendix do not apply to the automatic software upgrade (SWUPGRADE) process.

Upgrade Message Controller software

Perform the procedures in this section to upgrade the software on the Message Controllers. The units are upgraded one at a time to maintain service.

Upgrade Message Controller software



Load Message Controller 0

ATTENTION

Perform this step only if the CS 2000 - Compact is configured with Message Controller cards.

At the MAP

- 1 At the MAPCI;MTC;MS level, ensure that MS 1 is the master MS.

MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
.
MS		Message Switch	Clock	Shelf	0	Inter-MS Link	0	1
0 Quit	MS 0	.	Slave	.	F	.	.	.
2	MS 1	.	M Free	.	F	.	.	.
3								
4								
5								
6 Tst_								
7 Bsy_								
8 RTS_								

- 2 If MS 1 is not the master MS, perform a **SWMAST**. If SWMAST is performed, then soak 10 minutes before continuing.

At the active Call Agent Manager

- 3 At the MCMtc level, verify that both Message Controllers are in service (.) prior to Locking Message Controller 0 in the next step.

CallAgent	SYS	CON	APPL	MC	Unit: 0
.
MCMtc	Blade:	Eth0:	Eth1:	Atm0:	Atm1:
0 Quit	MC0	. Act	. Inact	open	open
2	MC1	. Act	. Inact	open	open
3					

- Exit the Call Agent Manager interface and determine the IP address of Message Controller 0:

```
>0 ALL  
[mtc@hostname mtc]$ grep mc0 /etc/hosts
```

The grep command returns the address of Message Controller 0.

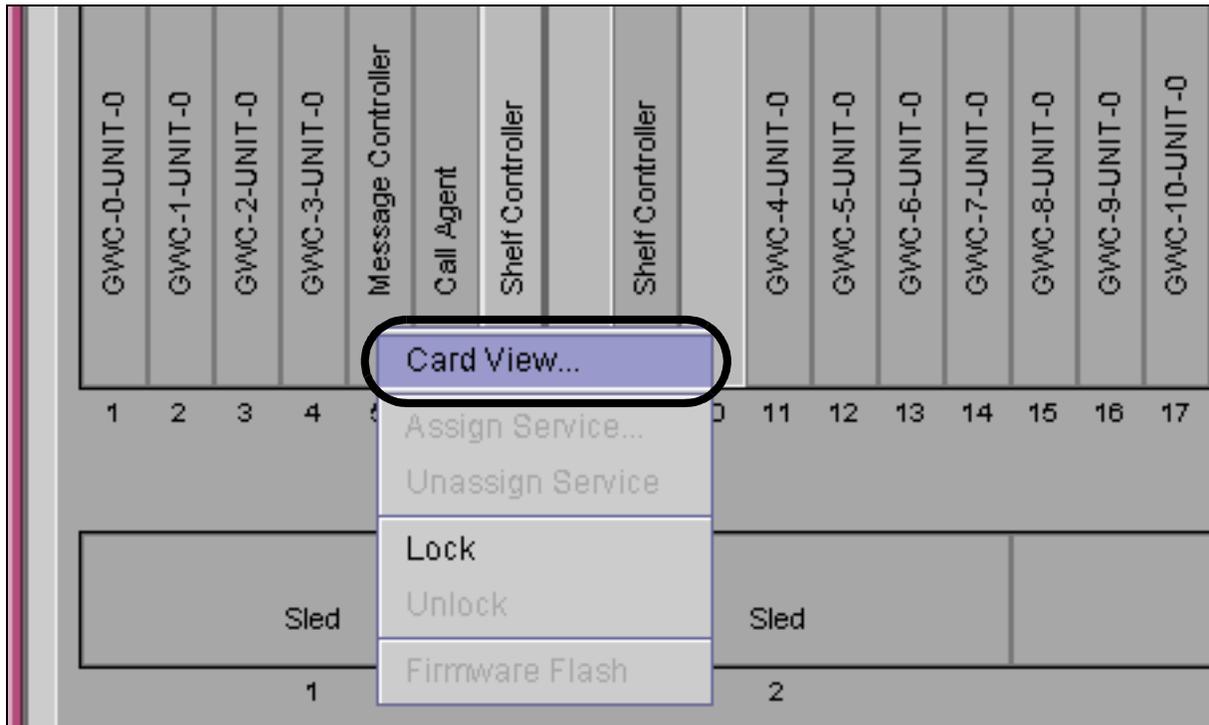
```
10.40.54.60 mc0
```

- Start the Call Agent Manager interface again:

```
[mtc@hostname mtc]$ ccamtc mcmtc
```

At the CS 2000 SAM21 Manager client

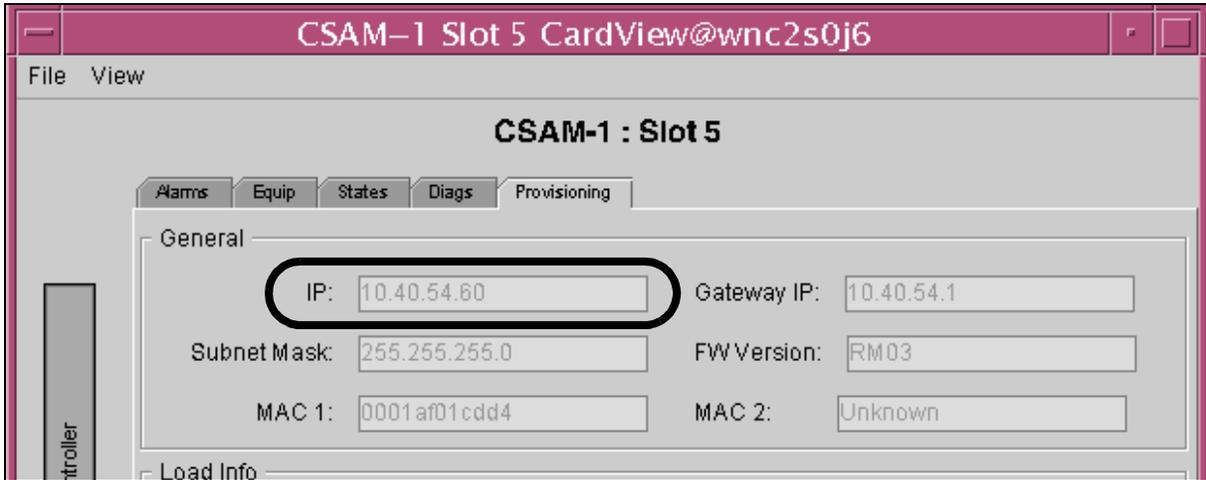
- From the Shelf View, right click on the card and select Card View.



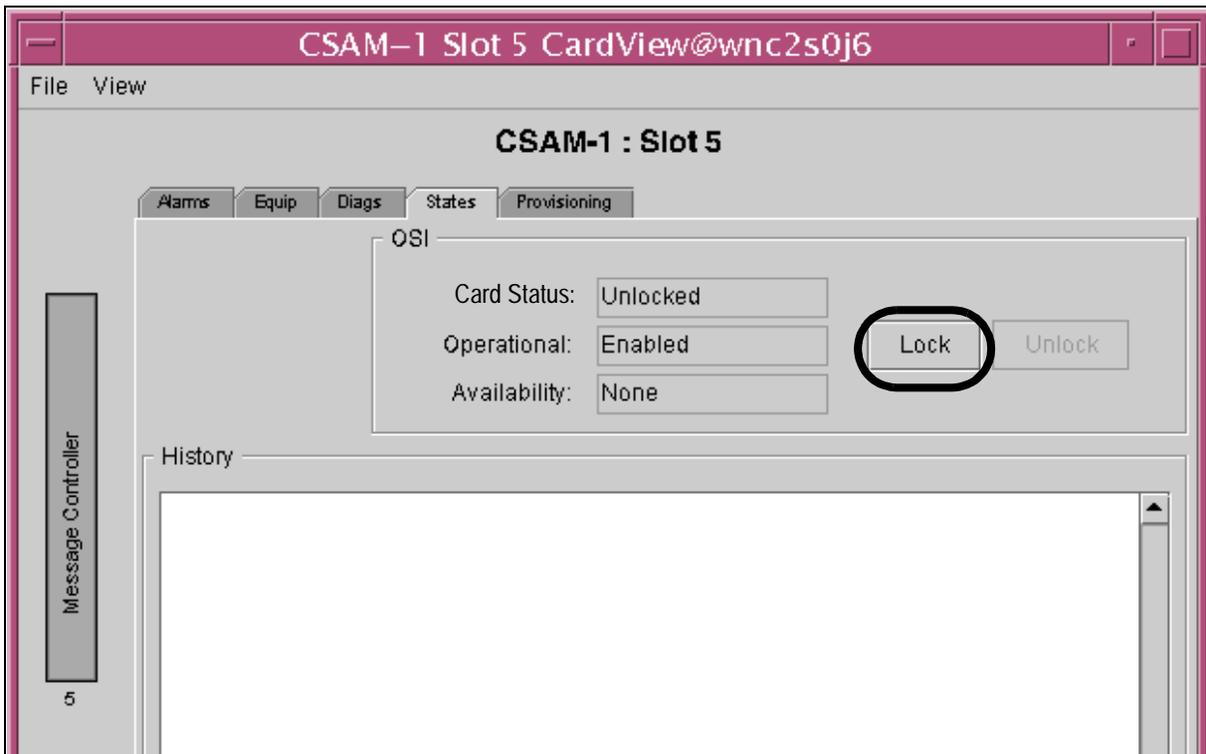
The Card View window opens.

- Select the Provisioning tab on the Card View window.
Ensure that the IP address specified in the IP field matches the IP address of Message Controller 0. If the values do not match,

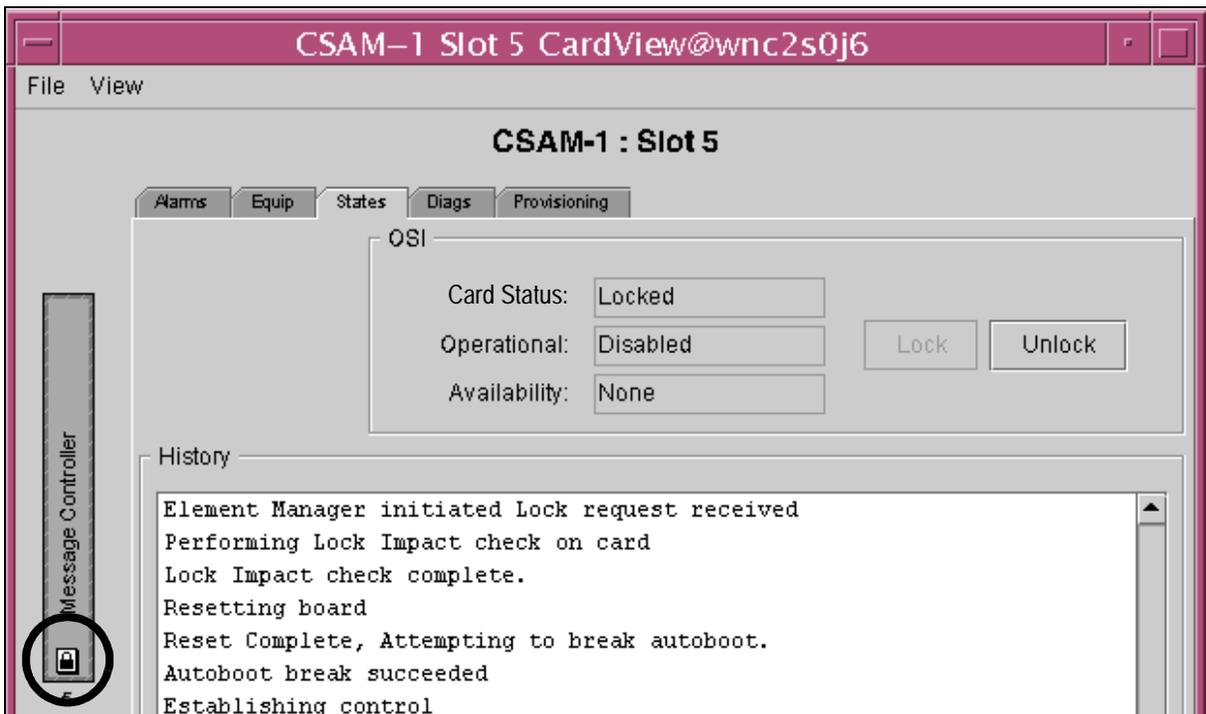
open a different Shelf View from the CS 2000 SAM21 Manager and check the Message Controller provisioning for that shelf.



- 8 Click on the States tab.
Click on the Lock button.



A lock warning dialog window opens. Confirm the lock warning.

9 Wait for the lock icon to appear on the card icon.

At the Call Agent Manager, a major ATM alarm is raised, the Message Controller enters the Remote Busy (R) state and is reported as out of service.

- 10 Click on the Provisioning tab, change the Load value to the new software load name, and click Save.

CSAM-1 Slot 5 CardView@wnc2s0j6

File View

CSAM-1 : Slot 5

Alarms Equip Diags States **Provisioning**

General

IP: 10.40.54.60 Gateway IP: 10.40.54.1

Subnet Mask: 255.255.255.0 FW Version: RM03

MAC 1: 0001af01cdd4 MAC 2: Unknown

Load Info

Server IP: 10.40.54.1

Path: /swd/3pc

Load: **ncgl_mc_image_7.15.1.0**

FW Flash Enable

Message Controller Data

Unit 0 Unit 1

Call Agent Links

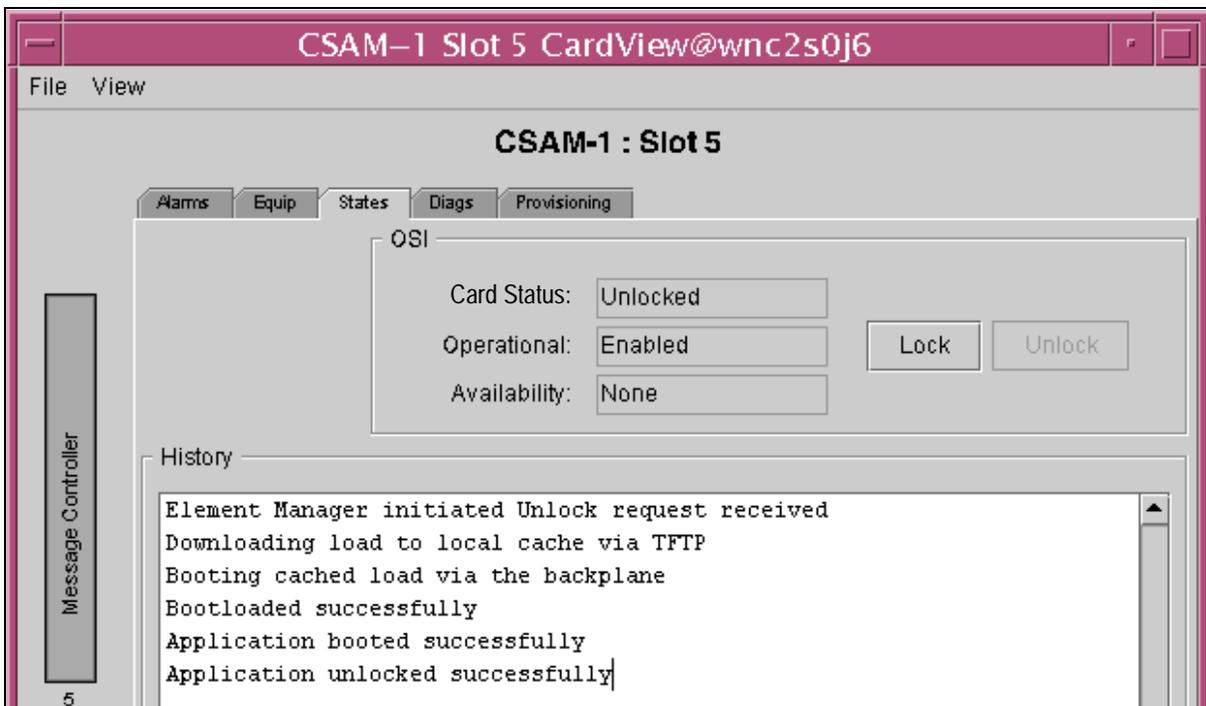
Call Agent 0 IP: 10.40.54.67

Call Agent 1 IP: 10.40.54.70

Modify **Save** Clear Cancel Details...

Message Controller
5

- 11 Click on the States tab and click the Unlock button.
Wait for the lock icon to disappear.



At the Call Agent Manager, the card enters the in service state (.), and the major ATM alarm clears. The Message Controller may raise a major MCTbl alarm while the Message Controller synchronizes to the NTP server.

At the active Call Agent Manager

- 12 Query the software load for Message Controller 0 and ensure that the new load is reported:

```
>QryLd 0
```

```
CallAgent      SYS      CON      APPL      MC      Unit: 0
.              .        .        .        .        .

MCMtc          Blade:   Eth0:     Eth1:     Atm0:     Atm1:
0 Quit         MC0      .         . Act     . Inact   open      open
2              MC1      .         . Act     . Inact   open      open
3
4
5 QryLd
6 QryHits
7 ClrHits
8 Trnsl
9
10
11
12
13 LogQuery
14 Alarm
15
16              MC Load report retrieved on Thu Jun 19 13:48:45 2004:
17 Help
18 Refresh     Ramdisk:  ncgl_mc_image_7.15.1.0
   mtc
Time 13:48 >
```

Soak the load for 10 minutes while monitoring log reports.

Load Message Controller 1

ATTENTION

Perform this step only if the CS 2000 - Compact is configured with Message Controller cards.

At the MAP

- 1 At the MAPCI;MTC;MS level, ensure that MS 0 is the master MS.

MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
.
MS			Message Switch	Clock	Shelf	0	Inter-MS Link	0 1
0 Quit	MS 0	.	M Free			F		..
2	MS 1	.	Slave			F		..
3								
4								
5								
6 Tst_								
7 Bsy_								
8 RTS_								
9								
10 LoadMS_								

- 2 If MS 1 is not the master MS, perform a **SWMAST**. If SWMAST is performed, then soak 10 minutes before continuing.

At the active Call Agent Manager

- 3 At the MCMtc level, verify that both Message Controllers are in service (.) prior to Locking Message Controller 1 in the next step.

CallAgent	SYS	CON	APPL	MC	Unit: 0
.	
MCMtc	Blade:	Eth0:	Eth1:	Atm0:	Atm1:
0 Quit	MC0	. Act	. Inact	open	open
2	MC1	. Act	. Inact	open	open
3					

- Exit the Call Agent Manager interface and determine the IP address of Message Controller 1:

```
>0 ALL  
[mtc@hostname mtc]$ grep mc1 /etc/hosts
```

The grep command returns the address of Message Controller 1.

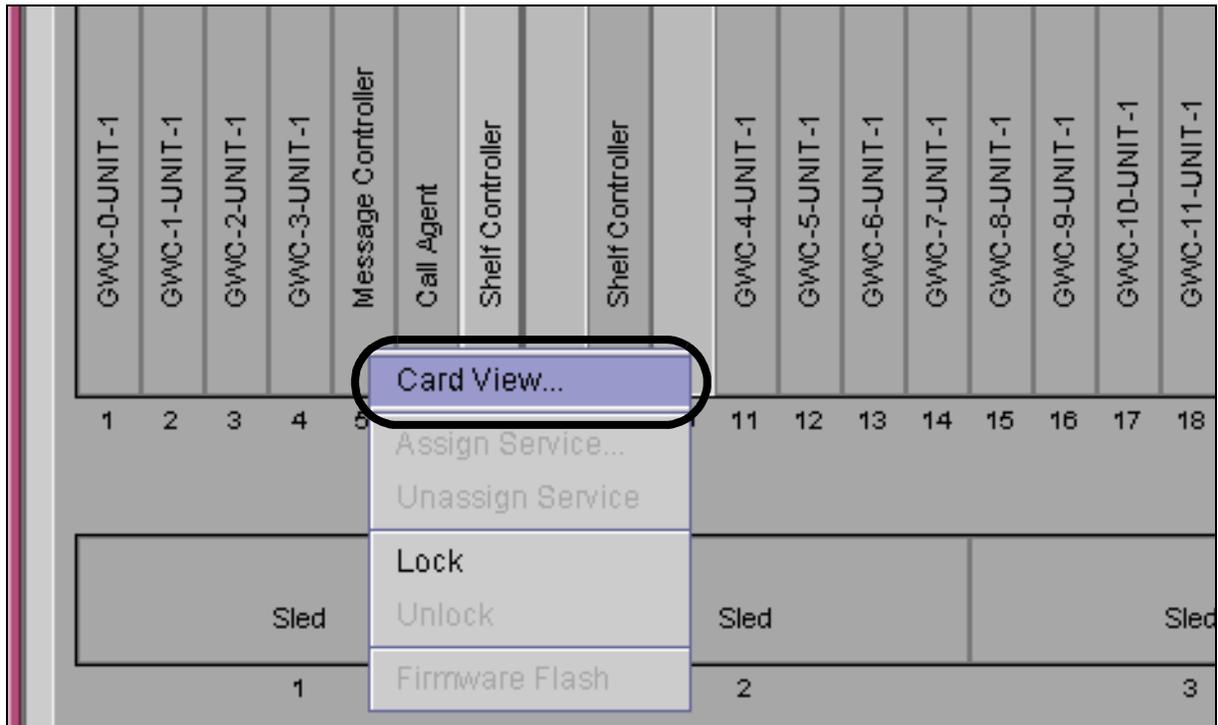
```
10.40.54.61 mc1
```

- Start the Call Agent Manager interface again:

```
[mtc@hostname mtc]$ ccamtc mcmtc
```

At the CS 2000 SAM21 Manager client

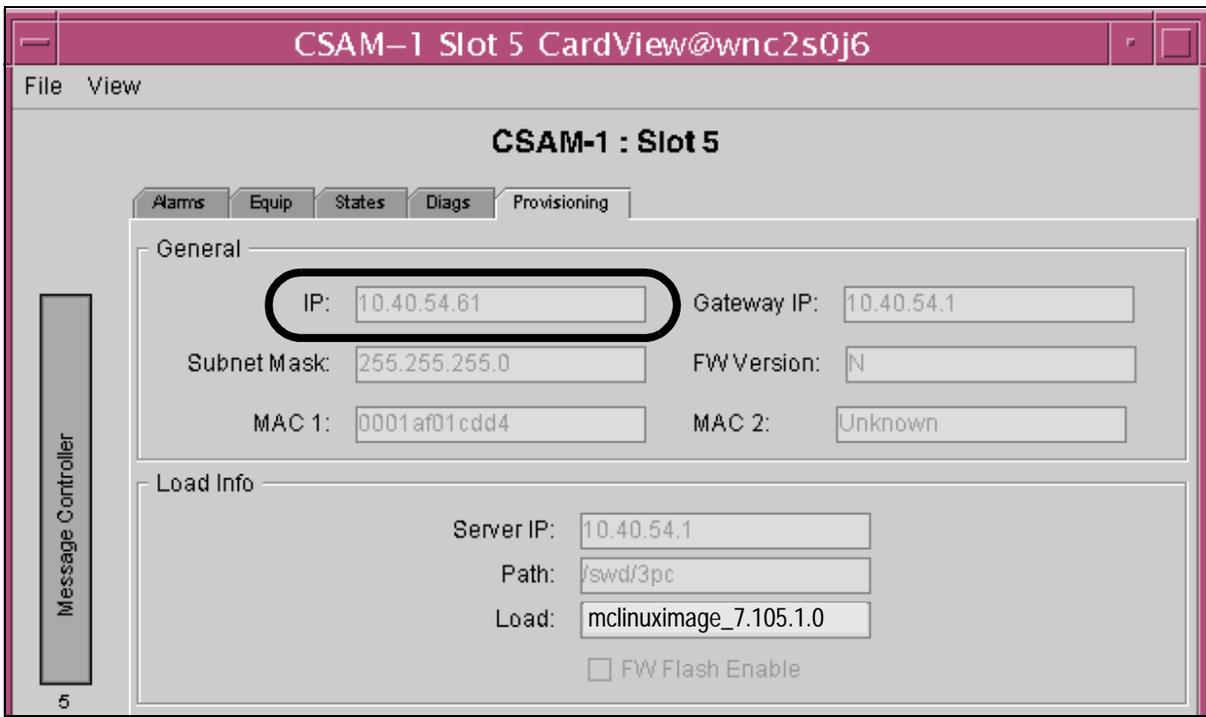
- From the Shelf View, right click on the card and select Card View.



The Card View window opens.

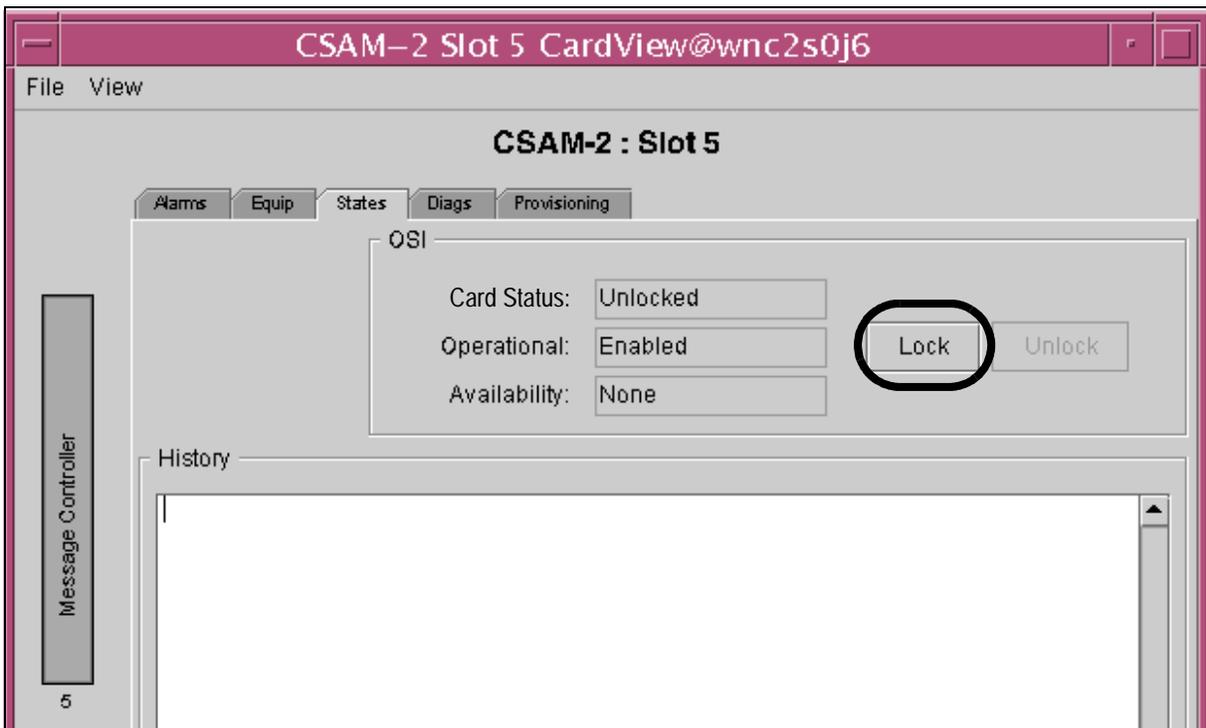
- Select the Provisioning tab on the Card View window.
Ensure that the IP address specified in the IP field matches the IP address of Message Controller 1. If the values do not match,

open a different Shelf View from the CS 2000 SAM21 Manager and check the Message Controller provisioning for that shelf.

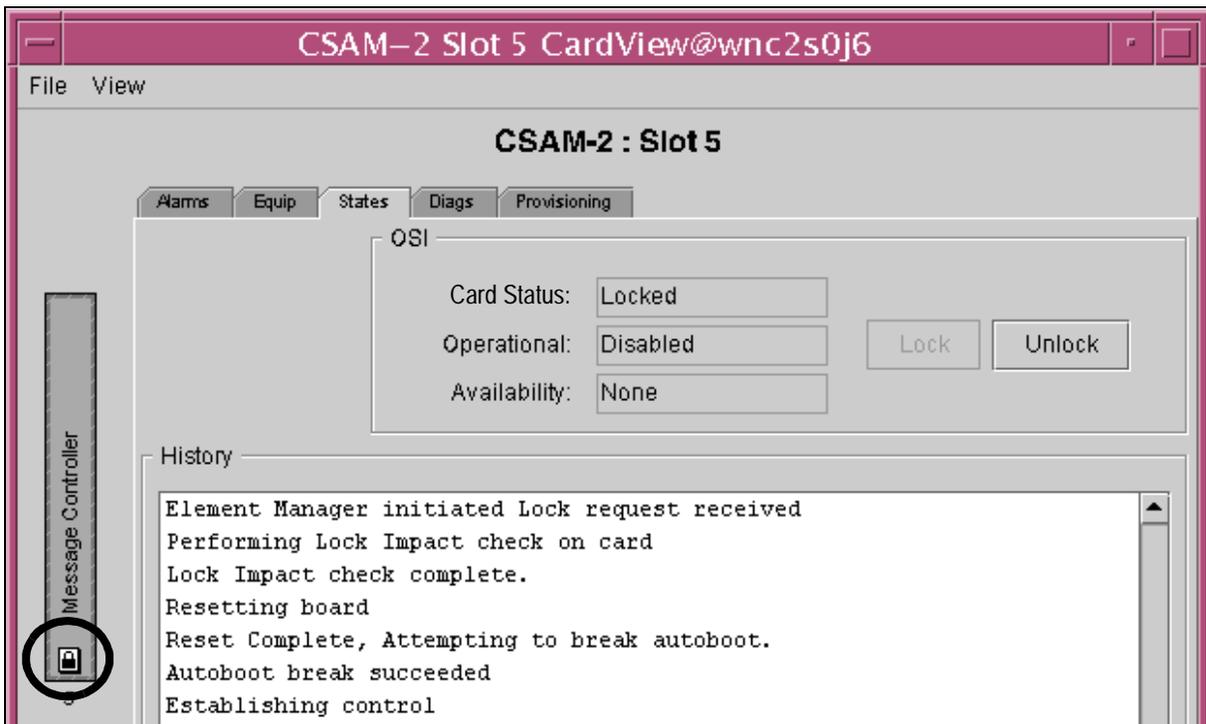


8 Click on the States tab.

Click on the Lock button.



A lock warning dialog window opens. Confirm the lock warning.

9 Wait for the lock icon to appear on the card icon.

At the Call Agent Manager, a major ATM alarm is raised, the Message Controller enters the Remote Busy (R) state and is reported as out of service.

- 10 Click on the Provisioning tab, click on Modify, change the Load value to the new software load name, and click Save.

The screenshot shows the web interface for CSAM-2 Slot 5. The title bar reads "CSAM-2 Slot 5 CardView@wnc2s0j6". The interface has a menu bar with "File" and "View". Below the menu bar, the title "CSAM-2 : Slot 5" is displayed. There are four tabs: "Alarms", "Equip", "States", "Diags", and "Provisioning". The "Provisioning" tab is selected.

The "General" section contains the following fields:

IP:	10.40.54.61	Gateway IP:	10.40.54.1
Subnet Mask:	255.255.255.0	FW Version:	N
MAC 1:	0001af01cdd4	MAC 2:	Unknown

The "Load Info" section contains the following fields:

Server IP:	10.40.54.1
Path:	/swd/3pc
Load:	ncgl_mc_image_7.15.1.0
<input type="checkbox"/> FWFlash Enable	

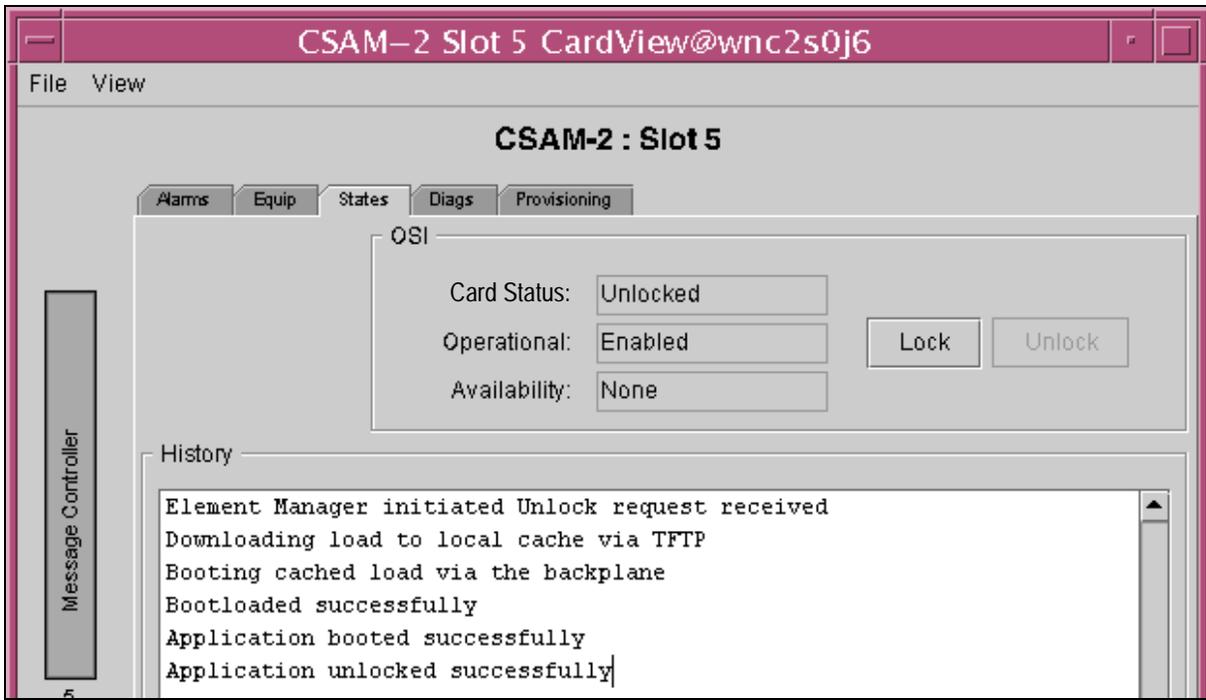
The "Message Controller Data" section contains two radio buttons: "Unit 0" and "Unit 1". "Unit 1" is selected.

The "Call Agent Links" section contains the following fields:

Call Agent 0 IP:	10.40.54.67
Call Agent 1 IP:	10.40.54.70

At the bottom of the interface, there are five buttons: "Modify", "Save", "Clear", "Cancel", and "Details...". The "Save" button is highlighted with a red circle.

- 11 Click on the States tab and click the Unlock button.
Wait for the lock icon to disappear.



At the Call Agent Manager, the card enters the in service state (.), and the major ATM alarm clears. The Message Controller may raise a major MCTbl alarm while the Message Controller synchronizes to the NTP server.

At the active Call Agent Manager

- 12 Query the software load for Message Controller 1 and ensure that the new load is reported:

```
>QryLd 1
```

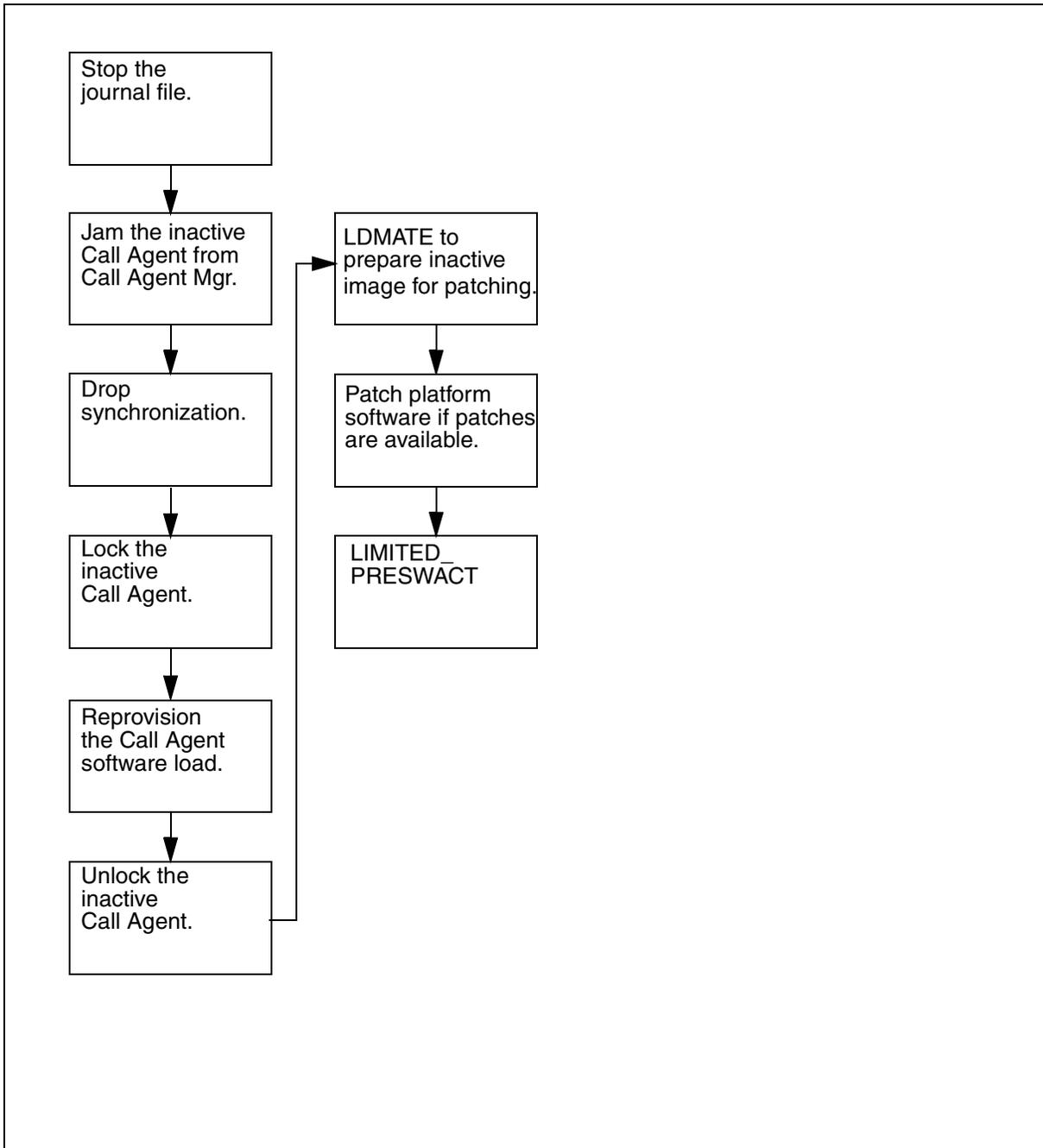
```
CallAgent      SYS      CON      APPL      MC      Unit: 0
.              .        .        .        .
MCMtc          Blade:   Eth0:     Eth1:     Atm0:    Atm1:
0 Quit         MC0     .        . Act    . Inact  open    open
2              MC1     .        . Act    . Inact  open    open
3
4
5 QryLd
6 QryHits
7 ClrHits
8 Trnsl
9
10
11
12
13 LogQuery
14 Alarm
15
16             MC Load report retrieved on Thu Jun 19 14:15:54 2004:
17 Help
18 Refresh     Ramdisk: ncgl_mc_image_7.15.1.0
   mtc
Time 13:48 >
```

Soak the load for 10 minutes while monitoring log reports.

Boot new platform software

Perform the procedures in this section as a part of a platform only MR upgrade.

Boot new platform software



Stop the journal file

At the MAP

- 1 Enter the device independent recording package (DIRP) level and query journal file activity:
> **MAPCI;MTC;IOD;DIRP;QUERY JF ALL**
- 2 Stop all journal file activity:
> **JF STOP**
- 3 Close the active journal file and confirm the prompt:
> **CLOSE JF ACTIVE**
> **YES**
- 4 Query the journal file again to verify rotation of the storage:
> **QUERY JF ALL**
- 5

ATTENTION

SERVORD activity, OSSgate activity, and table changes are not permitted.

Inform all operating company personnel that data changes such as SERVORD, OSSgate, and table changes must be halted until after the upgrade is completed. Data changes made during the software upgrade can cause ONP process problems and may result in lost data on the restored side.

This procedure is complete.

Jam the inactive Call Agent

At the active Call Agent Manager

1 Issue the Jam command:

```
> CoreMtc
> CAMtc
> Jam
```

```
CallAgent      SYS      CON      APPL      Unit: 0
JInact        .        .        .

CAMtc
0 Quit        Unit0 Act    no    . Inact . Act    . .    insync .
2 Jam        Unit1 Inact  yes   . Inact . Act    . .    insync .
3 RelJam
4 REXtst
5 SwAct
6
7
8
9
10
11
12
13 LogQuery
14 Alarm
15 QueryIP
16           Jam:      Jam the inactive unit, to prevent it taking activity.
17 Help      Parms: [FORCE]
18 Refresh   FORCE      - bypass system stability checks
   mtc
Time 10:38 >
```

A JInact alarm appears in the alarm banner under CallAgent.

2 This procedure is complete.

Drop application image synchronization

At the active Call Agent Manager

1 Enter the DpSync command:

```
> CoreMtc
> Appl
> DpSync
```

```
CallAgent      SYS      CON      APPL      Unit: 0
  JInact        .        .        simplx
                M
Appl
0 Quit          Unit0 Act   no   . Inact . Act   .   NA nosync .
2 ImgTst       Unit1 Inact yes  . Act  . Inact .   NA nosync /restart
3 Sync
4 DpSync
5
6
7
8
9
10
11
12
13 LogQuery
14 Alarm
15 QueryIP      DpSync:   Drop application synchronization.
16              Parms: [RestartType]
17 Help          Restart   - ( WARM | COLD | RELOAD | NORESTART )
18 Refresh      (default) - COLD
   mtc
Time 12:25
```

2 This procedure is complete.

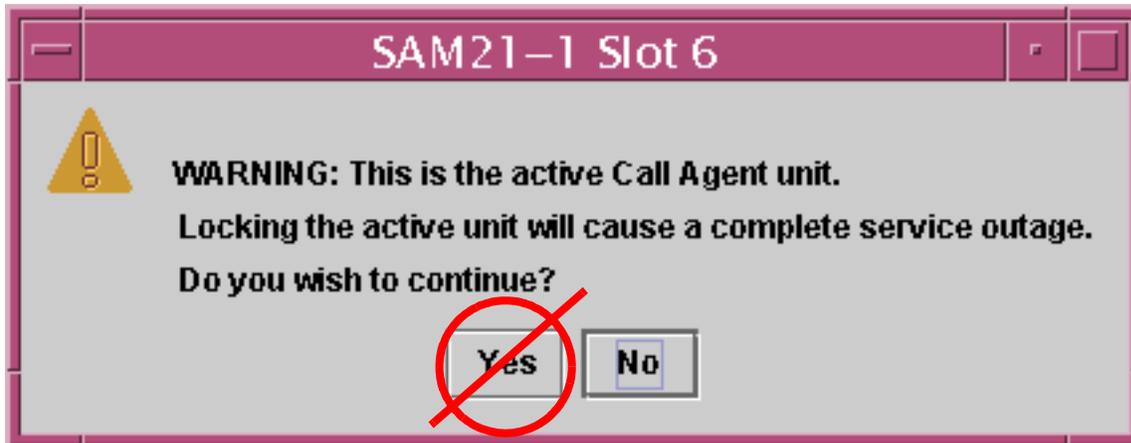
Call Agent Lock



CAUTION
Possible service interruption
Do not lock the active Call Agent.

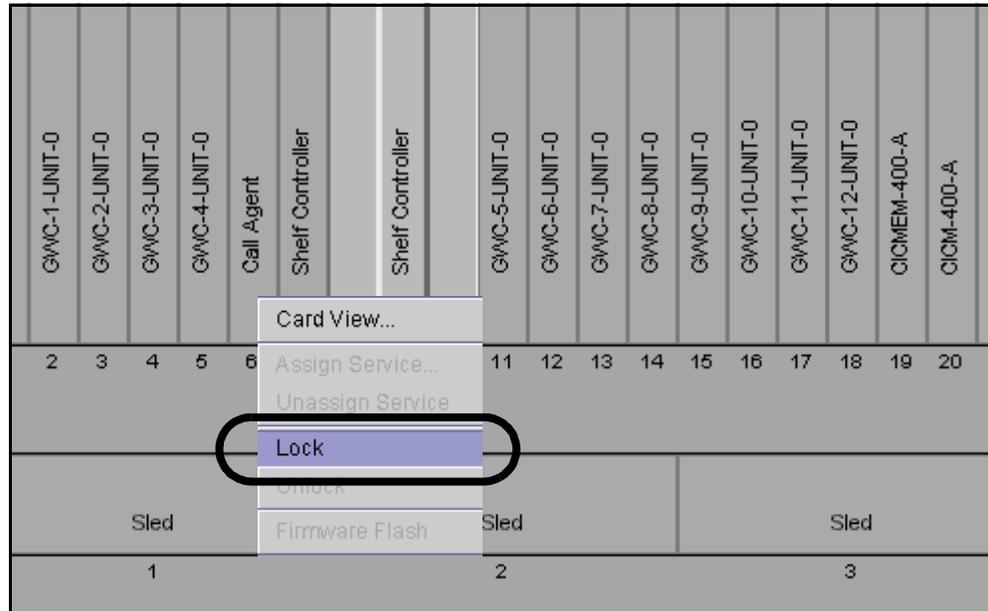
The CS 2000 SAM21 Manager client responds to an active Call Agent lock with the prompt shown in figure [Call Agent lock warning](#). Do not click Yes. The inactive Call Agent is located in the other CS 2000 SAM21 Manager shelf and a lock request does not provide a prompt when the Call Agent is inactive.

Call Agent lock warning



At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Lock from the context menu.



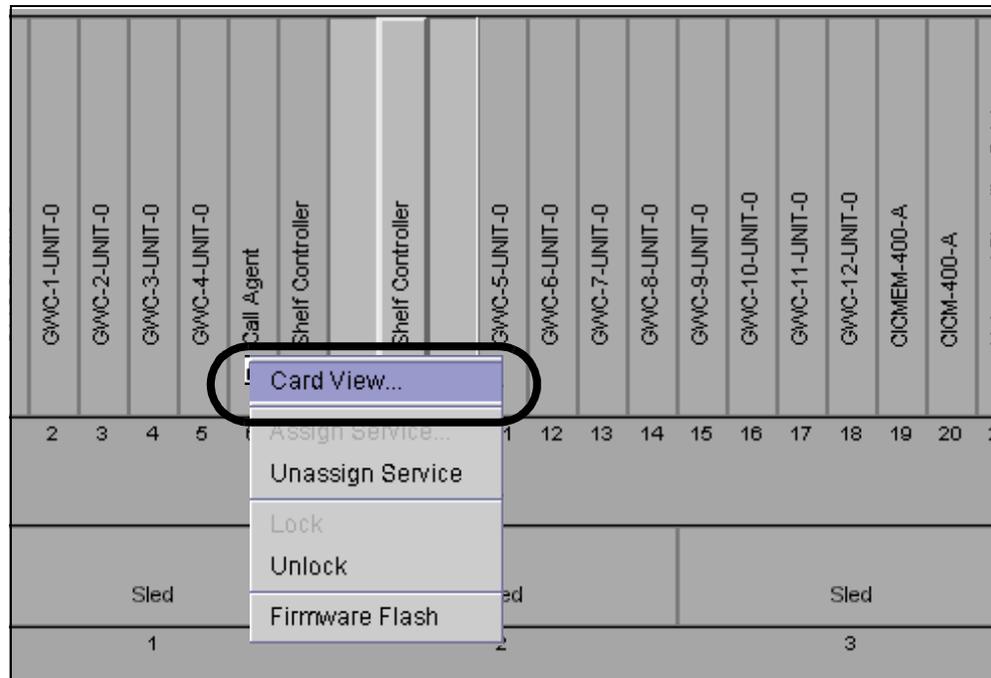
Note: Lock is also available from the States tab of the Card View window.

- 2 Do not confirm a lock warning. The warning is only available for the active Call Agent. Wait for the lock icon to appear on the selected card.
- 3 This procedure is complete.

Reprovision Call Agent platform load

At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Card View from the context menu to open the Card View window.



- 2 Click the Provisioning tab from the Card View window.

OTT4 CA-1 Slot 6

Alarms Equip States Diagnostics **Provisioning**

General

IP: 10.72.17.22 Gateway IP: 10.72.16.1

Subnet Mask: 255.255.240.0 FW Version: RM03-2.4

MAC Address: 0001AF12AFA0 MAC 2: 0001AF12AF9F

NTP

Primary NTP: 47.135.43.193 Secondary NTP: 47.135.43.196

Load Info

Server IP: 47.135.43.193

Path: /3pc

Load: nctl_cca_image_7.02.1.0 Get Load Files

FW Flash Enable

Network File System Message Controller Geographical Survivable

Geographical CS 2000 Compact

Enable

Backup Path:

GEO UNIT 0 IP: 10.72.0.12 Mask: 255.255.255.248

GEO UNIT 1 IP: 10.72.0.20 Mask: 255.255.255.248

Modify Save Clear Cancel Details... Help

- 3 Click the Modify button.
- 4 Click the Get Load Files button.
- 5 Select the load from the drop-down list.
- 6 Select Save.

- 7 Enter the appropriate new load file name in the load field. The following examples show revised loadname formats for SN09.
- `ncgl_cca_765_image.8.20.1.0` (**765** is added for loads based on the MCPN**765** processor card)
 - `ncgl_cca_905_image.8.20.1.0` (**905** is added for loads based on the MCPN**905**-270 processor card, introduced in SN09)

The following example display assumes a software load based on the MCPN765 processor card.

OTT4 CA-1 Slot 6 CardView@ucars01x3c.ca.nortel.com (CM CLI: BNR_LAB_LOAD)

File View

OTT4 CA-1 : Slot 6

Alarms Equip States Diags Provisioning

General

IP: 10.72.17.22 Gateway IP: 10.72.16.1

Subnet Mask: 255.255.240.0 FW Version: RM03-2.4

MAC Address: 0001AF12AFA0 MAC 2: 0001AF12AF9F

NTP

Primary NTP: 47.135.43.193 Secondary NTP: 47.135.43.196

Load Info

Server IP: 47.135.43.193

Path: /3pc

Load: **ncgl_cca_765_image_8.20.1.0** Get Load Files

FW Flash Enable

Network File System Message Controller Geographical Survivable

Geographical CS 2000 Compact

Enable

Backup Path:

GEO UNIT 0 IP: 10.72.0.12 Mask: 255.255.255.248

GEO UNIT 1 IP: 10.72.0.20 Mask: 255.255.255.248

Modify Save Clear Cancel Details... Help

Note 1: To verify the card type, click the Equip tab. The panel displays the appropriate card (MCPN765 or MCPN905-270) and memory size.

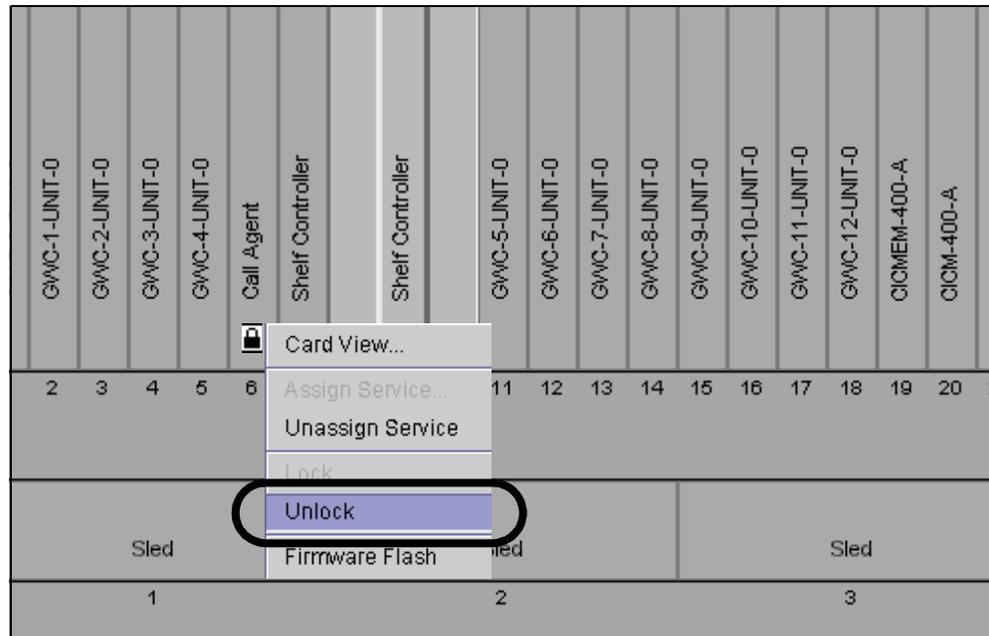
Note 2: Click the firmware flash enable (FW Flash Enable) checkbox if the *SAM21 Platform Base Release Notes* indicate a firmware upgrade is available. However, there is no consequence if the checkbox is enabled and firmware is not available. If a firmware flash upgrade is available, verify that “Firmware flash: succeeded” is reported in the History area of the States tab during the Unlock.

- 8 Click the Save button.
- 9 This procedure is complete.

Call Agent Unlock

At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Unlock from the context menu.



Note: Unlock is also available from the States tab of the Card View window.

The card resets, downloads software, and reboots.

- 2 Wait for the lock icon to disappear.
Note: Do not perform any patching activities on the Call Agent until ten minutes have passed.
- 3 This procedure is complete.

LDMATE (Load inactive)

This procedure is used for a platform only MR upgrade. Use the LDMATE command to load the currently running and active call processing application onto the inactive Call Agent.

At the active Call Agent Manager

1

ATTENTION

Wait for the synchronization flag to change to `/waiting` before proceeding.



CAUTION

Possible data loss

When performing the LDMATE command, ensure that the image dump taken during procedure [Dump call processing application image on page 75](#) is the image that is loaded.

Loading any other image may result in a data loss.

Verify that the call processing application is set to `/waiting`:

```
CoreMtc          Jam:   Link0:  Link1:  Blnk:  FC:  Appl:
0 Quit          Unit0 Inact yes   . Act   . Inact .   S   nosync /waiting
2 CAMtc        Unit1 Act  no    . Act   . Inact .   S   nosync
```

SDE — At the ACTIVECM window

2 Make the call processing application file available by listing the image volume:

```
> SCANF <volume_name>
```

volume_name

is the name of the volume that contains the image dump.
For example, SD00IMAGE.

- 3 Load the image that was dumped during [step 3](#), page [75](#) onto the inactive Call Agent:

```
> LDMATE <filename>
```

filename
is the name of the call processing application image that was dumped earlier

Example

```
> LDMATE S040210210503_CM
```
- 4 Monitor the progress at the MAP and Call Agent Manager windows. At the Call Agent Manager, the synchronization flag for the inactive Call Agent should change from `/booting` to `/restart`.
- 5 This procedure is complete.

Patch platform software

At the inactive Call Agent Manager

- 1 At the CoreMtc level, ensure that this unit is the inactive unit.

CallAgent	SYS	CON	APPL							Unit: 1
JInact	.	.	simplx							
			M							
CoreMtc		Jam:	Link0:	Link1:	BLnk:	FC:	Appl:			
0 Quit	Unit0	Act	no	. Inact	. Act	.	. nosync	.		
2 CAMtc	Unit1	Inact	no	. Inact	. Act	.	. nosync	.		

Unit 1 is the unit number, and Unit 1 is Inactive. For this example, patch from Unit 0.

- 2 Enter the Transfer level and display the list of available patches.
> **Transfer**

*The Call Agent Manager enters the **Transfer** level and the list of available patches is retrieved and displayed.*

```
CallAgent      SYS      CON      APPL      Unit: 0
JInact        .        .        simplx
              M
Transfer      Current Load : 7.15.1.0
0 Quit        Source      : /3pc/patch
2 Select
3 Fetch      # Patch Description      Version
4 Source     1 ncgl_cca_patch      7.15.1.5
5           2 ncgl_cca_patch      7.15.1.4
6
7
8
9
10
11 Up
12 Down
13 LogQuery
14 Alarm
15           Filesets on the source: 1 to 2 of 2
16
17 Help
18 Refresh
   mtc
Time 10:52 >
```

- 3** If no patches are listed, verify that the selected source, /3pc/patch in the example, is correct. If the source is correct and no patches are available, this procedure is complete.
- 4** For each patch to be transferred, select the patch by number and transfer the patch to the inactive unit.
 - > **Select <num>**
 - > **Fetch INA**
- 5** Enter the Patch level.
 - > **Patch**

The Call Agent Manager enters the **Patch** level and the patches are listed as **NEW**.

```
CallAgent      SYS      CON      APPL      Unit: 0
JInact         .        .        simplx
              M
Patch          Current Load : 7.15.1.0
0 Quit         Filter      : ALL
2 Select
3 Apply        # Patch Description      Version      Status
4 Delete       1 Patch description      7.15.1.5    NEW
5 Commit       2 Patch description      7.15.1.4    NEW
```

- 6 For each patch file, select the patch, apply the patch to the inactive unit, select it again, and commit it.

```
> Select <num>
> Apply INA FORCE
> Select <num>
> Commit INA
```

Each patch is applied and committed to the inactive Call Agent unit. The Status for each patch changes from NEW to COMMITTED.

- 7 The application of patches is complete.

Perform LIMITED_PRESWACT

This procedure is used for a platform only MR upgrade. For an ONP, Nortel supports the SWUPGRADE process.

LIMITED_PRESWACT executes a series of steps required before the office switch of activity (SWACT). If a step fails to complete, LIMITED_PRESWACT stops and gives additional information. Whenever LIMITED_PRESWACT stops, use the information given to investigate and correct the problem. All LIMITED_PRESWACT steps must be completed before SWACT.

At the MAP

- 1 Execute LIMITED_PRESWACT:

```
> BCSUPDATE; LIMITED_PRESWACT
```

The LIMITED_PRESWACT command presents a warning:

```
Limited_Preswact should not be used for
BCSUPGRADE SWACTs. Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
```

- 2 Confirm the warning with a **Y**.

A series of steps execute and complete. LIMITED_PRESWACT stops at step MATE_RESTART_RELOAD:

```
MATE_RESTART_RELOAD                executing
There are users still logged on the Inactive. Do
you wish to continue?
MATE_RESTART_RELOAD                not complete
ACT - Error: Restart aborted. Type
LIMITED_PRESWACT to continue
Investigate and correct if needed.
```

- 3 Reenter LIMITED_PRESWACT to continue:

```
> LIMITED_PRESWACT
```

Another warning is printed:

```
MATE_RESTART_RELOAD                executing
There are users still logged on the Inactive. Do
you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
```

- 4 Confirm the warning with a **Y**.

The inactive unit indicates /restart at the Call Agent Manager. Several more steps execute and complete at the MAP. Successful completion is indicated as follows:

```
Total execution time for all complete procedures  
00:07:31.362
```

```
All LIMITED_PRESWACT steps completed  
successfully.
```

- 5 This procedure is complete.

Release jam on the inactive Call Agent

At the active Call Agent Manager

1 Enter the RelJam command:

```
> CoreMtc
> CAMtc
> RelJam
```

```
CallAgent      SYS      CON      APPL      Unit: 0
.              .        .        simplx
              M
CAMtc          Jam:   Link0:  Link1:  BLnk:  FC:  Appl:
0 Quit        Unit0  Act    no    . Inact . Act  .   .  nosync .
2 Jam         Unit1  Inact  no    . Inact . Act  .   .  nosync .
3 RelJam
4 REXtst
5 SwAct
6
7
8
9
10
11
12
13 LogQuery
14 Alarm
15 QueryIP
16
17 Help
18 Refresh    RelJam:  Release jam on the inactive unit.
    mtc
Time 10:38 >
```

2 This procedure is complete.

Execute NORESTARTSWACT

**CAUTION****Possible loss of service**

NORESTARTSWACT does not check if the inactive Call Agent is unjammed. If the inactive Call Agent is jammed and a NORESTARTSWACT is requested, service is affected. Verify that the inactive Call Agent is not jammed.

**CAUTION****Possible loss of service**

Use the Call Agent Manager to verify that the inactive Call Agent does not have any critical alarms. A critical alarm causes the NORESTARTSWACT to fail. Check the GUIs for CCA, SAM21 EM and Ethernet Routing Switch 8600, and clear any alarms for those devices before proceeding with NORESTARTSWACT.

At the MAP

- 1 Check status:

> **BCSUPDATE; SWACTCI; STATUSCHECK**

Success is indicated as follows:

```
SWACTCI:  
Checking Nodes Status  
STATUSCHECK successful
```

- 2 Execute the NORESTARTSWACT:

> **NORESTARTSWACT**

Note 1: Only simple two-port and echo calls that are in a stable talking state (that is, not in a transition state such as dialing) survive a CC WarmSWACT. Survival means that the call is kept up until the next signaling message is received (usually, for example, a terminate message, but on any other message as well, such as an attempt to use the conference feature).

Note 2: Attendant Consoles will be in night service after the SWACT if the INSV field is set to Y in table ATTCONS (Attendant Consoles).

Progress is printed and the process stops to verify that the inactive Call Agent is not jammed:

```
Beginning SWACT checks:
All the SWACT checks have finished successfully.
The VR_PRESWACT_TRANSFER step completed
successfully.
All INSV and ISTB series 1 PMs will have execs
loaded after the SWACT.
Device Checking Status:
NOMATCH option is set to OFF <default setting>.
Device matching during CC WARM SWACT Enabled.
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
>
```

- 3 Confirm the warning with a **Y** if the only alarm is an APPL simplx.

The final progress follows. Activity also switches at the Call Agent Manager.

```
Please confirm ("YES", "Y", "NO", or "N"):
>Y
```

```
All Pre-SWACT checks completed. Starting Warm
SWACT now.
```

```
***** The cursor will not be returned *****
***** unless a critical failure occurs. *****
***** Now monitoring Warm SWACT messages.*****
```

```
Pre-initialization done
Communication established
Exchange of data with the mate done
Transfer of data done (FASPECT)
Data estimation done
```

- 4 The telnet sessions to the active and inactive call processing applications are lost. Reestablish the connection. Refer to the [Interface setup](#) in this Upgrades document for procedures.

- 5 This procedure is complete.

ATTENTION

ABORT PROCEDURE

Reversion to the previous software release is possible until procedure [Lock the inactive Call Agent](#). If this is a PCL upgrade with the SWUPGRADE tool, reversion is started with the CANCEL command. If this is a platform only MR upgrade, refer to [ABORTSWACT on page 233](#).

Jam the inactive Call Agent

At the active Call Agent Manager

1 Enter the Jam command:

```
> CoreMtc
> CAMtc
> Jam
```

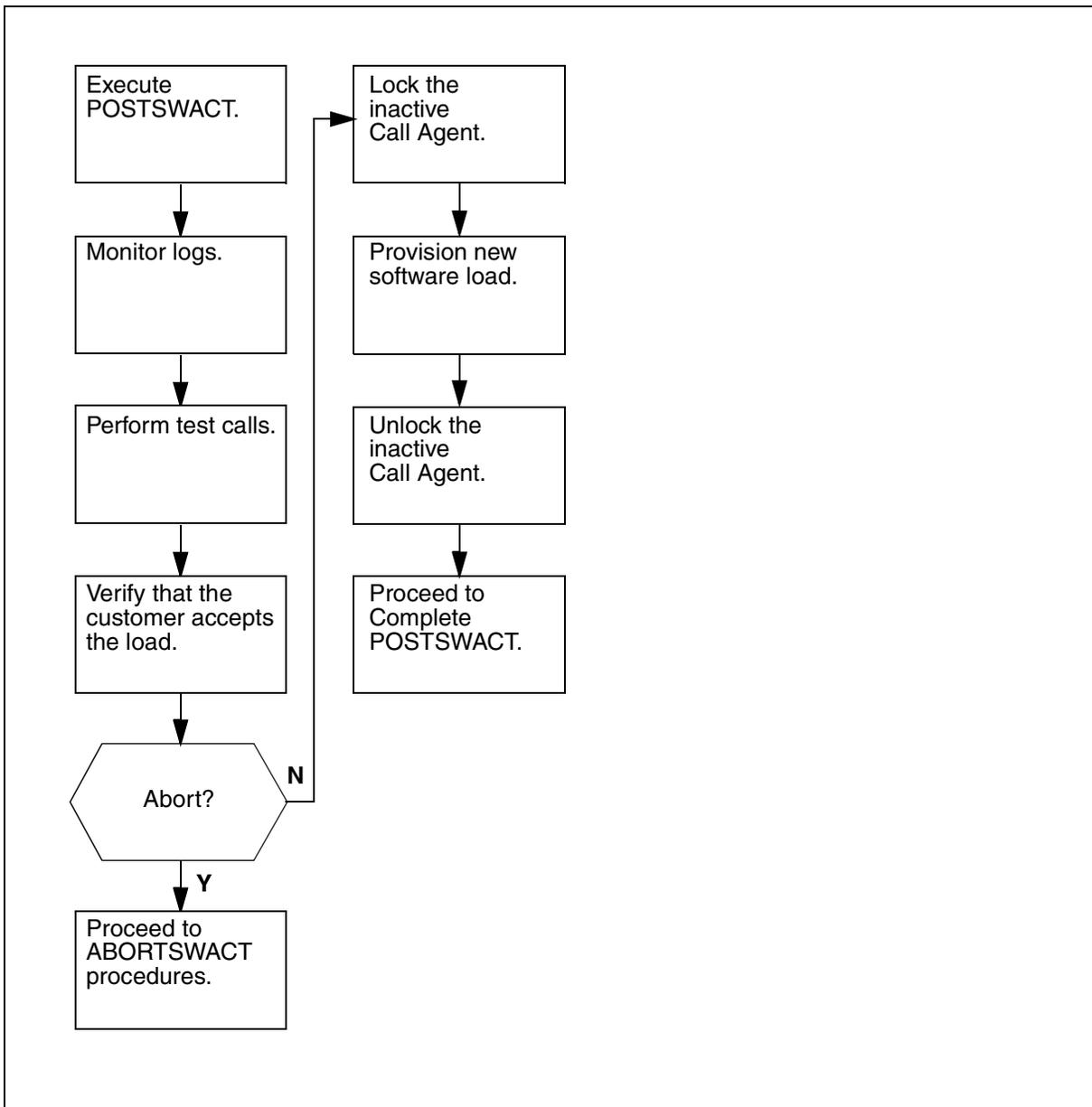
```
CallAgent      SYS      CON      APPL      Unit: 1
JInact         .        .        simplx
M
CAMtc
0 Quit         Unit0  Inact  yes  . Inact . Act  .  .  nosync .
2 Jam          Unit1  Act   no   . Inact . Act  .  .  nosync .
3 RelJam
4 REXtst
5 SwAct
6
7
8
9
10
11
12
13 LogQuery
14 Alarm
15 QueryIP
16             Jam:      Jam the inactive unit, to prevent it taking activity.
17 Help        Parns: [FORCE]
18 Refresh     FORCE      - bypass system stability checks
   mtc
Time 10:38 >
```

2 This procedure is complete.

Start POSTSWACT

Perform the procedures in this section to verify the stability of the new platform software load.

Start POSTSWACT procedure



Execute POSTSWACT

At the MAP

1 Execute POSTSWACT:

> **BCSUPDATE; POSTSWACT**

POSTSWACT begins, steps execute, and complete.

POSTSWACT stops at step BEGIN_TESTING:

```
REACTIVATE_TRIGASGN           executing
REACTIVATE_TRIGASGN           complete

DIRP_RECOVERY                 executing
DIRP_RECOVERY                 complete
...
BEGIN_TESTING                 executing
BEGIN_TESTING                 complete
Enter Postswact after office testing has been
completed
```

2 Proceed to [Monitor logs on page 219](#) and [Test calls and acceptance on page 221](#) before reentering the **POSTSWACT** command on page [229](#).

Monitor logs

At the inactive MAP

- 1 Log in to the mate image, refer to [How to log in to the mate image](#).
- 2 Review previous log reports:
> **LOGUTIL;OPEN SWCT;BACK ALL**
- 3 Set the terminal to receive logs:
> **LOGUTIL;START;QUIT**
or
> **STARTDEV <device>**
device
is a different terminal device
- 4 Let logs run for 30 minutes and then run LOGCHECK:
> **LOGUTIL;STOP;QUIT**
> **BCSUPDATE;LOGCHECK;QUIT**
- 5 When LOGCHECK completes. Set the terminal to receive logs again.
- 6 This procedure is complete.

How to log in to the mate image

At the MAP

- 1 Use MATELINK, MATIO, and MATELOG to log in.
> **MATELINK RTS**
> **MATEIO**
> **MATELOG ME; SLEEP <nn> MINS**
nn
is the number of minutes to sleep. Allow at least 30 minutes.

2

ATTENTION

While logged into the inactive call processing application, the system prompt changes to `Mate>`.

Log in to the inactive call processing application with a username and password.

- 3** This procedure is complete.

Test calls and acceptance

At the MAP

- 1 Make sure all emergency services are functioning.
- 2 Refer to the Test Call Scripts and perform the required test calls.
- 3 Confirm that the customer accepts the new load.
- 4 This procedure is complete.

Determine the next action.

If	Do
abort is required	proceed to ABORTSWACT on page 233
abort is not required	set the boot file pointer, as described below, and then proceed to Lock the inactive Call Agent on page 222

Take an image dump.

Set the boot file pointer to the new software load if this was not done when the software was transferred to storage.

At the MAP

- 1 Dump the new call processing application image.
 - > **AUTODUMP MANUAL**
 - or*
 - > **DUMP MANUAL image_name disk_vol ACTIVE UPDATE**
- 2 Enter the ITOCCI level.
 - > **ITOCCI**
- 3 Set the boot file pointer to the new software load.
 - > **SA CM image_name**
 - image_name**
is the name of the new call processing application image from step [1](#)
- 4 This procedure is complete.

Lock the inactive Call Agent

ATTENTION

Verify that the customer accepts the new load.

ABORTSWACT is no longer available after this procedure. ABORTSWACT is the preferred method to revert a platform only upgrade. Reversion is still possible after this procedure, but requires assistance from Nortel support personnel.



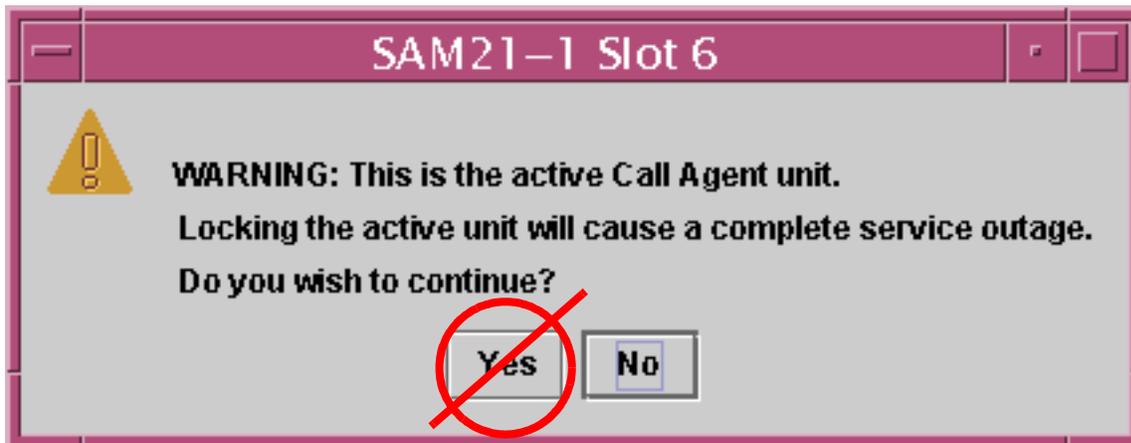
CAUTION

Possible service interruption

Do not lock the active Call Agent.

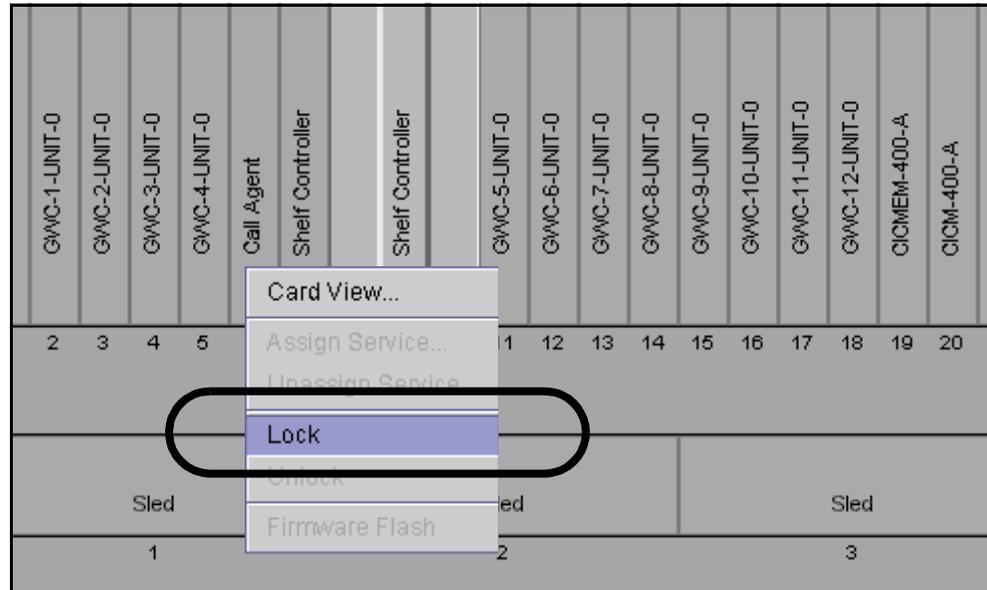
The CS 2000 SAM21 Manager client responds to an active Call Agent lock with the prompt shown in figure [Call Agent lock warning](#). Do not click Yes. The inactive Call Agent is located in the other SAM21 shelf and a lock request does not provide a prompt when the Call Agent is inactive.

Call Agent lock warning



At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Lock from the context menu.



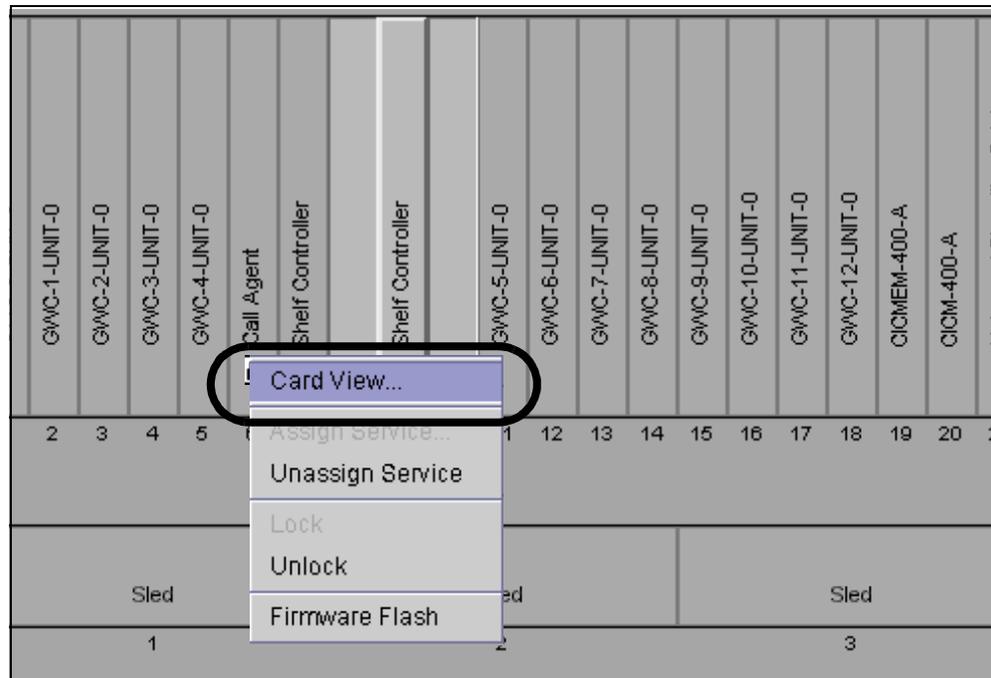
Note: Lock is also available from the States tab of the Card View window.

- 2 Wait for the lock icon to appear on the selected card.
- 3 This procedure is complete.

Provision new software load

At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Card View from the context menu to open the Card View window.



- 2 Click the Provisioning tab from the Card View window.
- 3 Click the Modify button.
- 4 Click the Get Load Files button.
- 5 Select load from the drop-down list.
- 6 Select Save.

7 Enter the new load file name in the load field.

OTT4 CA-1 Slot 6 CardView@ucars01x3c.ca.nortel.com (CM CLI: BNR_LAB_LOAD)

File View

OTT4 CA-1 : Slot 6

Alarms | Equip | States | Diags | Provisioning

General

IP: 10.72.17.22 Gateway IP: 10.72.16.1

Subnet Mask: 255.255.240.0 FW Version: RM03-2.4

MAC Address: 0001AF12AFA0 MAC 2: 0001AF12AF9F

NTP

Primary NTP: 47.135.43.193 Secondary NTP: 47.135.43.196

Load Info

Server IP: 47.135.43.193

Path: /3pc

Load: **ncgl_cca_image_7.15.1.0** Get Load Files

FW Flash Enable

Network File System | Message Controller | Geographical Survivable

Geographical CS 2000 Compact

Enable

Backup Path:

GEO UNIT 0 IP: 10.72.0.12 Mask: 255.255.255.248

GEO UNIT 1 IP: 10.72.0.20 Mask: 255.255.255.248

Modify Save Clear Cancel Details... Help

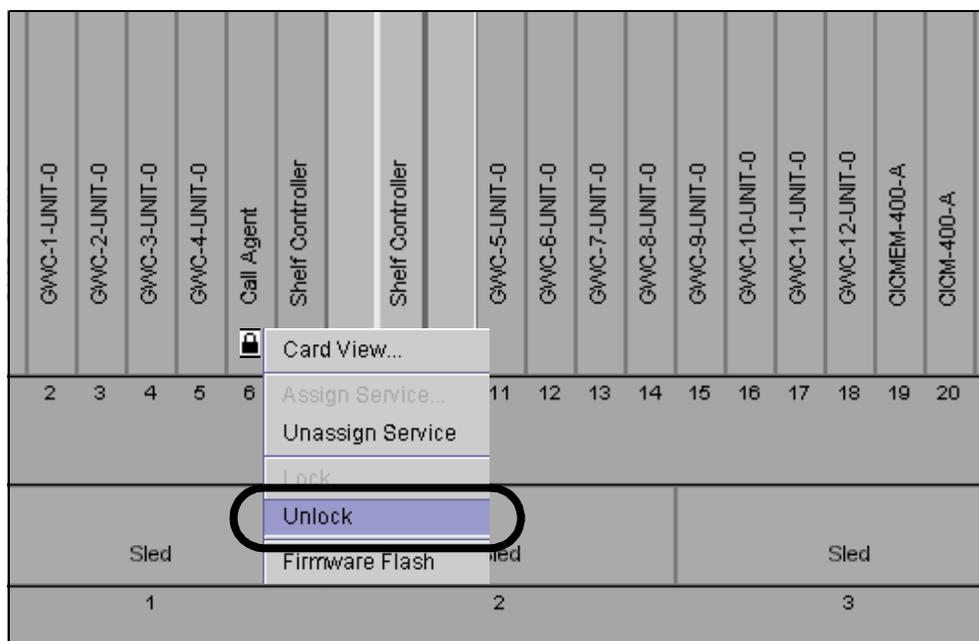
Note: Click the firmware flash enable (FW Flash Enable) checkbox if the *SAM21 Platform Base Release Notes*, *SAM2006* indicate a firmware upgrade is available. However, there is no consequence if the checkbox is enabled and firmware is not available. If a firmware flash upgrade is available, verify that “Firmware flash: succeeded” is reported in the History area of the States tab.

- 8 Click the Save button.
- 9 This procedure is complete.

Unlock the inactive Call Agent

At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Unlock from the context menu.



Note: Unlock is also available from the States tab of the Card View window.

The card resets, downloads software, and reboots.

- 2 Wait for the lock icon to disappear.

At the active Call Agent Manager

- 3 Verify that the call processing application loads successfully and waits for synchronization.

```
CoreMtc          Jam:   Link0:  Link1:  BLnk:  FC:  Appl:
0 Quit          Unit0 Inact yes   . Act   . Inact S   S   nosync /waiting
2 CAMtc        Unit1 Act  no    . Act   . Inact S   S   nosync
```

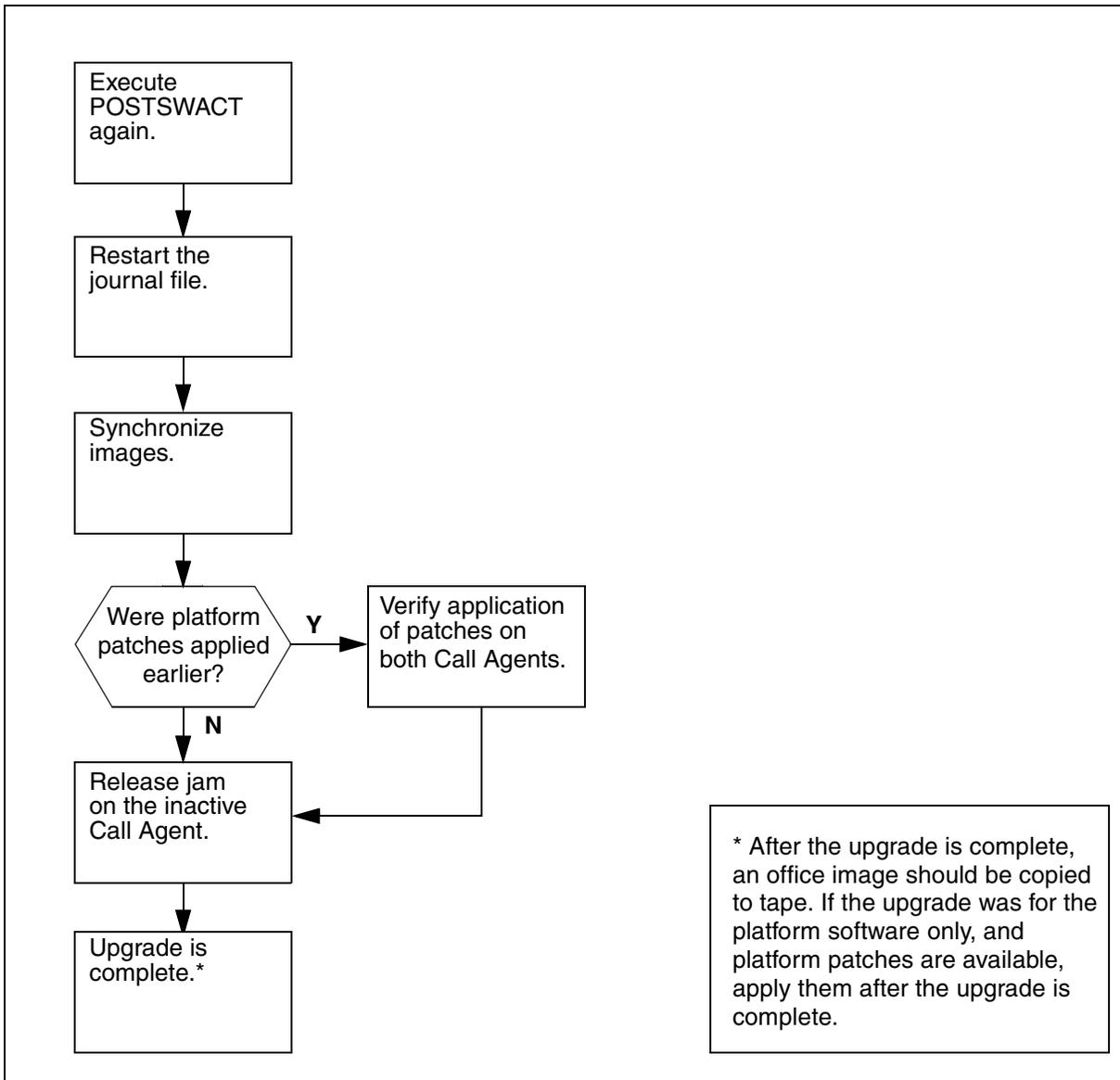
Note: The figure above is used only to show the waiting flag. Disregard the values for activity and jam state.

- 4 This procedure is complete.

Complete POSTSWACT

Perform the procedures in this section to commit the new load. If a revert was required, the procedures in this section complete the reversion.

Complete POSTSWACT procedure



Execute POSTSWACT again

At the MAP

- 1 Execute POSTSWACT:
 > **BCSUPDATE; POSTSWACT**
- 2 Confirm the prompt to XA_UNSPLOT:
 > **Y**
- 3 Clean up SFDEV by erasing any application-related files, such as FEATDATA, SITEINFO, and DIRP_INAC.

Have telephone operating company personnel perform the following procedure.

At the MAP

- 1 Verify passwords for users ADMIN and OPERATOR.
- 2 Reassign all current PROFILE information (LOGIN or RESTART) in SFDEV.
- 3 Reassign any temporary log ROUTING setup using LOGUTIL.
- 4 If table PADNDEV was altered, restore the original values.
- 5 This procedure is complete.

Restart journal file

At the MAP

- 1 Access the DIRP level of the MAP:
 > **MAPCI;MTC;IOD;DIRP**
- 2 Start the journal file:
 > **JF START**
- 3 This procedure is complete.

Verify platform patches

Perform this procedure only if platform patches were applied earlier to the first Call Agent.

At the active Call Agent Manager

- 1** If platform patches are available, platform patches may need to be applied to this Call Agent unit:
- 2** At the TRANSFER level (**ccamtc transfer**) a list of available patches is displayed. For each patch:
 - a** SELECT the patch by number
 - b** FETCH INA the patch to the INACTIVE unit
- 3** At the PATCH level, for each patch to be applied and committed:
 - a** SELECT the patch by number
 - b** DISADMIN the patch and follow any special instructions
 - c** APPLY INA the patch to the INACTIVE unit
 - d** SELECT the patch by number
 - e** COMMIT INA the patch to the INACTIVE unit
- 4** Verify that the reported load information is the same for both Call Agents.
- 5** This procedure is complete.

Release jam on the inactive Call Agent

At the active Call Agent Manager

1 Enter the RelJam command:

```
> CoreMtc
> CAMtc
> RelJam
```

```
CallAgent      SYS      CON      APPL      Unit: 1
.              .              .              .
CAMtc
0 Quit          Unit0  Inact  no      . Inact . Act   .   .   insync .
2 Jam           Unit1  Act    no      . Inact . Act   .   .   insync .
3 RelJam
4 REXtst
5 SwAct
6
7
8
9
10
11
12
13 LogQuery
14 Alarm
15 QueryIP
16
17 Help
18 Refresh      RelJam:   Release jam on the inactive unit.
   mtc
Time 10:38 >
```

2 This procedure is complete.

The upgrade is complete. Backup the image taken during procedure [Test calls and acceptance on page 221](#). For the details of how to make the backup, refer to section [Backup image on page 77](#).

ABORTSWACT

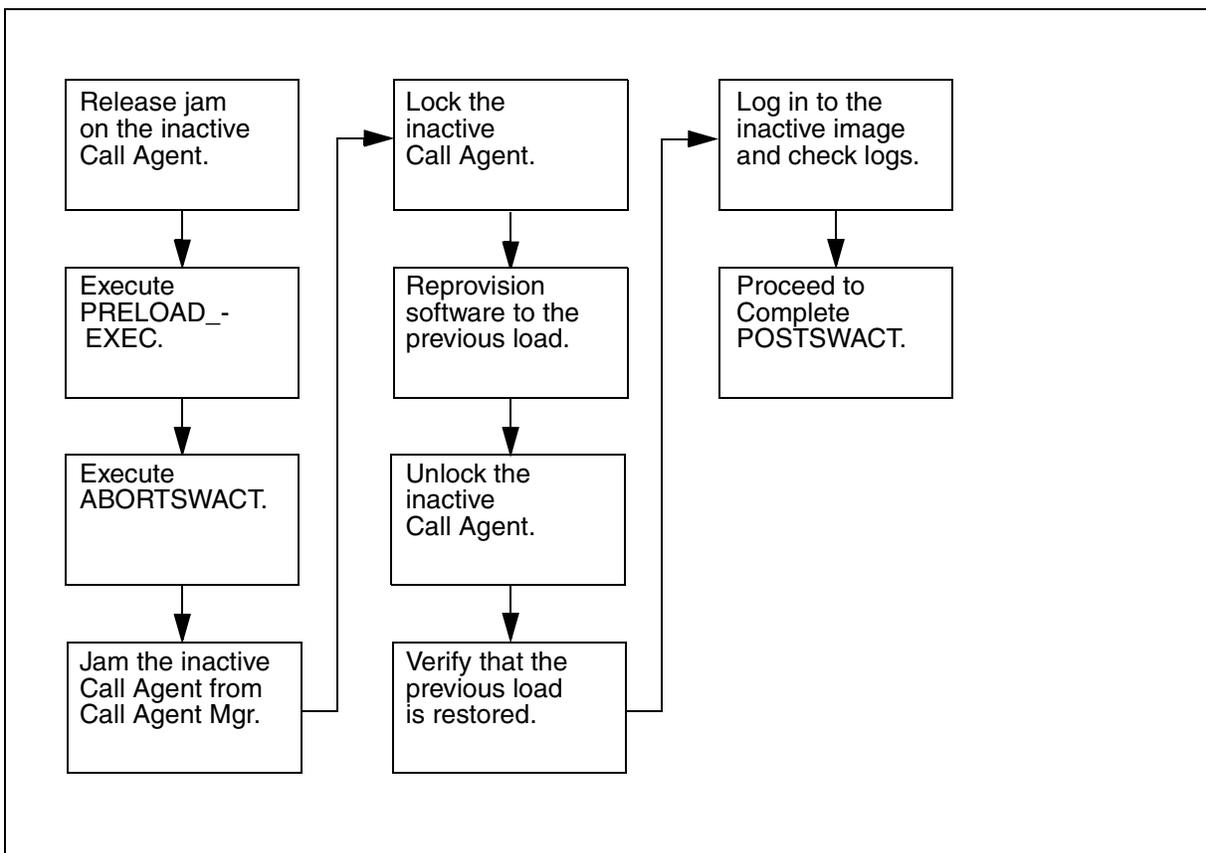
**CAUTION****Possible loss of service**

Reversion with ABORTSWACT is only available if the inactive Call Agent was not locked during “Start POSTSWACT.”

If the inactive Call Agent was unlocked, contact Nortel support personnel for assistance.

Only perform the procedures in this section if the software upgrade fails.

ABORTSWACT procedure



ABORT: Release jam on the inactive Call Agent

At the active Call Agent Manager

1 Enter the RelJam command:

```
> CoreMtc
> CAMtc
> RelJam
```

```
CallAgent      SYS      CON      APPL      Unit: 0
.              .        .        simplx
              M
CAMtc          Jam:   Link0:  Link1:  BLnk:  FC:  Appl:
0 Quit        Unit0  Act    no    . Inact . Act   .    .  nosync .
2 Jam        Unit1  Inact  no    . Inact . Act   .    .  nosync .
3 RelJam
4 REXtst
5 SwAct
6
7
8
9
10
11
12
13 LogQuery
14 Alarm
15 QueryIP
16
17 Help
18 Refresh    RelJam:  Release jam on the inactive unit.
   mtc
Time 10:38 >
```

2 This procedure is complete.

ABORT: Execute PRELOAD_EXECS and ABORTSWACT

At the MAP

- 1 Preload the PM executables:
 - > **BCSUPDATE;RUNSTEP PRELOAD_EXECS**
 - > **SWACTCI;ABORTSWACT**

At the active Call Agent Manager

- 2 Monitor the SWACT.
 - Verify that the synchronization flags begin with /restart, proceed to /loading, and then /waiting.
 - Verify that activity switches from active to inactive.

Before ABORTSWACT

CoreMtc		Jam:	Link0:	Link1:	BLnk:	FC:	Appl:
0 Quit	Unit0 Act	no	. Inact	. Act	.	.	insync .
2 CAMtc	Unit1 Inact	no	. Act	. Inact	.	.	insync .

After ABORTSWACT

CoreMtc		Jam:	Link0:	Link1:	BLnk:	FC:	Appl:
0 Quit	Unit0 Inact	no	. Inact	. Act	.	.	insync .
2 CAMtc	Unit1 Act	no	. Act	. Inact	.	.	insync .

- 3 The telnet sessions to the active and inactive call processing applications are lost. Re-establish the connection. Refer to the [Interface setup](#) in this Upgrades document for procedures.
- 4 This procedure is complete.

ABORT: Jam the inactive Call Agent

SDE — At the active maintenance window (CORE0 or CORE1)

- 1 Enter the CoreMtc level:
 > **CoreMtc**
- 2 Enter the CAMtc level:
 > **CAMtc**
- 3 Enter the Jam command:
 > **Jam**

```

CallAgent      SYS      CON      APPL      Unit: 0
  JInact        .        .        .

CAMtc
0 Quit         Unit0  Act     no      . Inact . Act   .   .   insync .
2 Jam          Unit1  Inact   yes     . Inact . Act   .   .   insync .
3 RelJam
4 REXtSt
5 SwAct
6
7
8
9
10
11
12
13 LogQuery
14 Alarm
15 QueryIP
16             Jam:      Jam the inactive unit, to prevent it taking activity.
17 Help        Parns: [FORCE]
18 Refresh     FORCE      - bypass system stability checks
   mtc
Time 10:38 >

```

- 4 This procedure is complete.

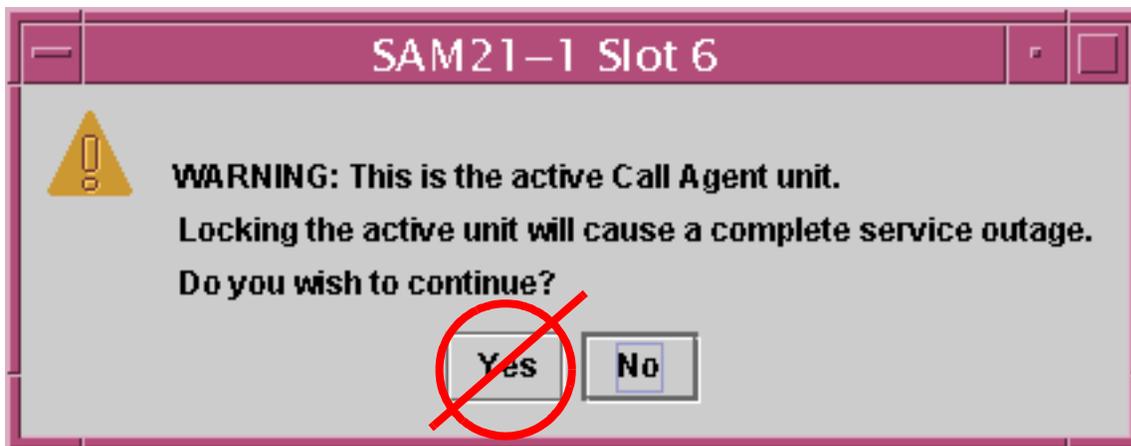
ABORT: Lock the inactive Call Agent



CAUTION
Possible service interruption
Do not lock the active Call Agent.

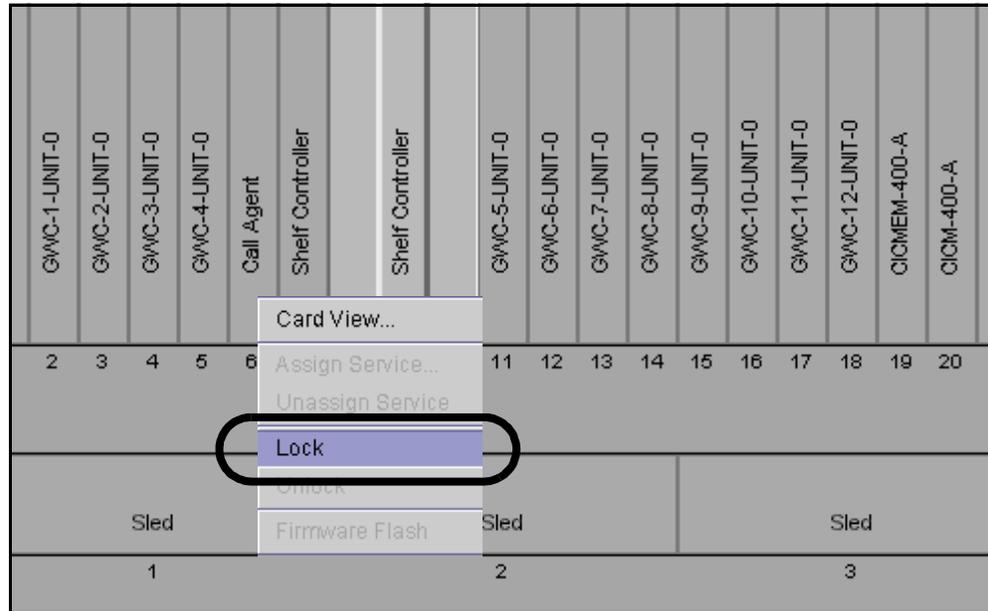
The CS 2000 SAM21 Manager client responds to an active Call Agent lock with the prompt shown in figure [Call Agent lock warning](#). Do not click Yes. The inactive Call Agent is located in the other SAM21 shelf and a lock request does not provide a prompt when the Call Agent is inactive.

Call Agent lock warning



At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Lock from the context menu.



Note: Lock is also available from the State tab of the Card View window.

- 2 Wait for the lock icon to appear on the selected card.
- 3 This procedure is complete.

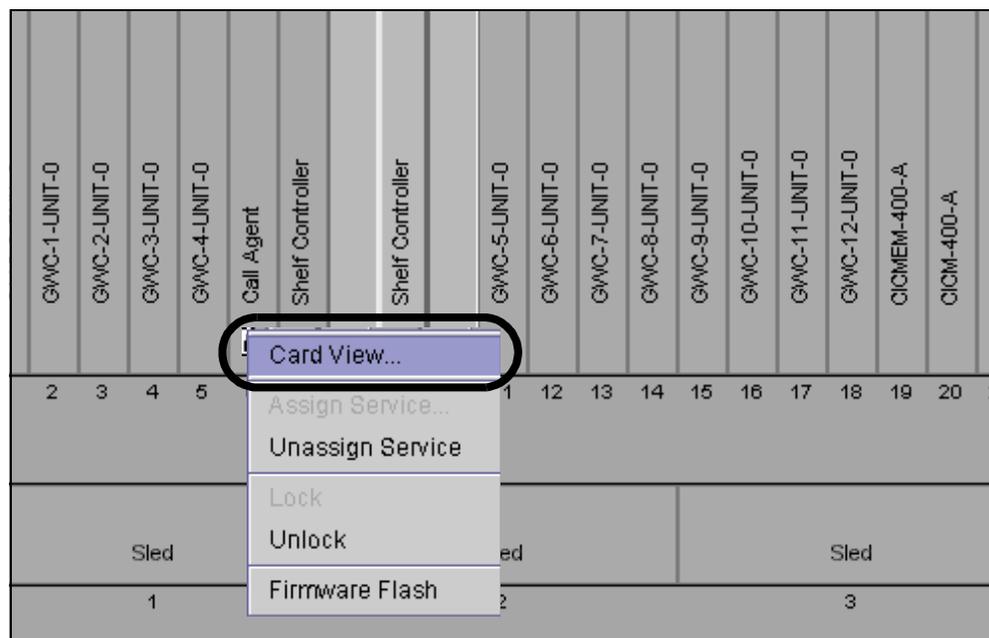
ABORT: Provision previous software load

ATTENTION

Enter the software load from the previous release.

At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Card View from the context menu to open the Card View window.



- 2 Click the Provisioning tab from the Card View window.
- 3 Click the Modify button.
- 4 Click the Get Load Files button.
- 5 Select the load from the drop-down list.
- 6 Select Save.

- 7 Enter the previous load file name in the load field.

OTT4 CA-1 Slot 6 CardView@ucars01x3c.ca.nortel.com (CM CLI: BNR_LAB_LOAD)

File View

OTT4 CA-1 : Slot 6

Alarms Equip States Diags Provisioning

General

IP: 10.72.17.22 Gateway IP: 10.72.16.1

Subnet Mask: 255.255.240.0 FW Version: RM03-2.4

MAC Address: 0001AF12AFA0 MAC 2: 0001AF12AF9F

NTP

Primary NTP: 47.135.43.193 Secondary NTP: 47.135.43.196

Load Info

Server IP: 47.135.43.193

Path: /3pc

Load: ncgl_cca_image_7.02.1.0

FW Flash Enable

Network File System Message Controller Geographical Survivable

Geographical CS 2000 Compact

Enable

Backup Path:

GEO UNIT 0 IP: 10.72.0.12 Mask: 255.255.255.248

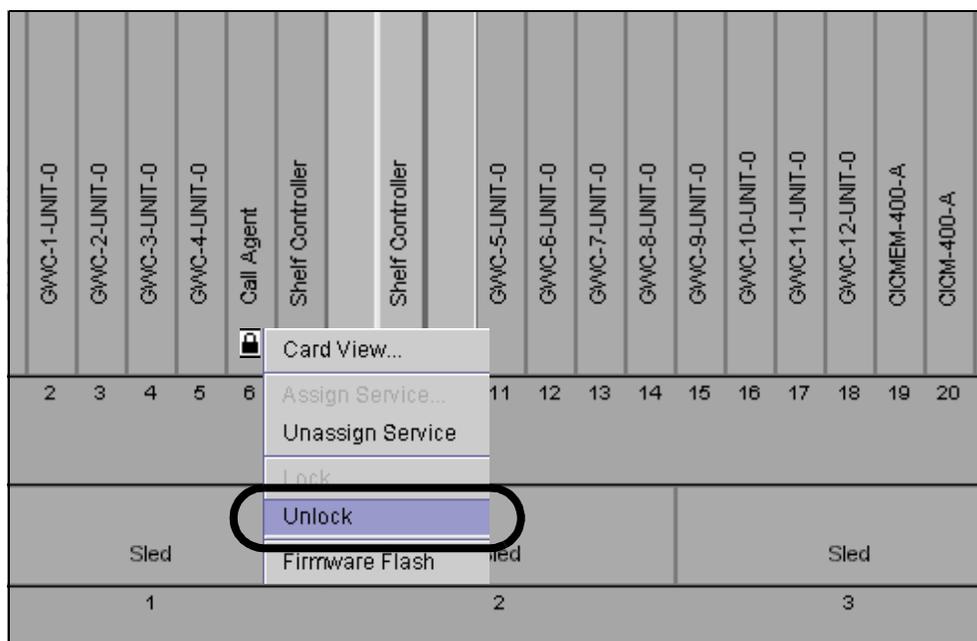
GEO UNIT 1 IP: 10.72.0.20 Mask: 255.255.255.248

- 8 Click the Save button.
- 9 This procedure is complete.

ABORT: Unlock the inactive Call Agent

At the CS 2000 SAM21 Manager client

- 1 From the Shelf View, right click on the card and select Unlock from the context menu.



Note: Unlock is also available from the States tab of the Card View window.

The card resets, downloads software, and reboots. If platform patches were applied to the inactive Call Agent earlier in this upgrade, then the same patches are applied and automatically committed on this Call Agent unit as the card boots. No action is required for platform patching.

- 2 Wait for the lock icon to disappear.
- 3 This procedure is complete.

Proceed to [Execute POSTSWACT on page 218](#).

Patching software

Platform and call processing application software is patchable. Platform patching does not patch the Linux kernel.

What's new in platform software patching

The web path to download Linux warranty patching has changed. Visit Nortel.com to retrieve the patches.

At the Nortel.com web site...

Select: Products (*top left under Products & Services pull-down menu*)

Select: Software (*under Popular Links*)

Select: Families (*top right under Find Products*)

Select: Succession

Select: Succession Communication Server 2000-Compact (*under Succession: General Availability*)

Select: Software

Platform patching

Patch files have the following identification scheme:

ncgl_cc_patch_r.w.c.v

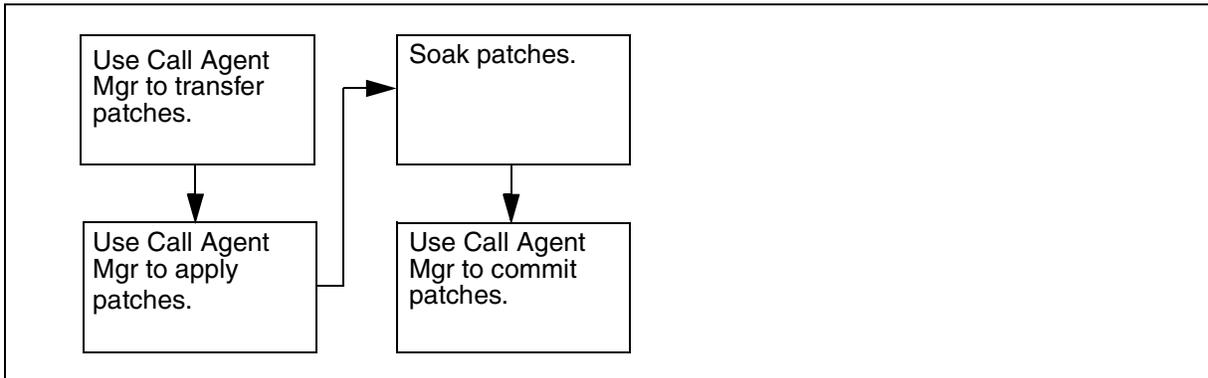
- **r** indicates the release. For example, 8.
- **w** indicates the week number of the load build. For example, 15.
- **c** indicates the compile. This value is equal to the fc value for an NCL or equal to (fc+i) for an MNCL. The patch is only applicable to a load that matches this number.
- **v** indicates the patch version.

Note: Patches are only applicable to NCLs and MNCLs with matching r, w, and c values as the patch file.

Patching of the platform software is done through the Call Agent Manager.

Refer to the following flowchart for an overview of the platform patching procedure.

Platform patching overview



Call processing application patching

Patching of the call processing application is done through Post-Release Software Manager (PRSM). This tool is available through the MAP.

Refer to *Post-Release Software Manager Reference Manual*, 297-8991-540, for information about patching the call processing application.

Transfer platform patch files

Verify that patch files are installed on the CS 2000 Core Manager or CBM before completing this procedure. Platform software patch files are stored in `/swd/3pc/patch` for the Call Agent.

For Linux warranty patching visit Nortel.com to retrieve the patches.

At the Nortel.com web site...

Select Products (*top left under Products & Services pull-down menu*)

Select: Software (*under Popular Links*)

Select: Families (*top right under Find Products*)

Select: Succession

Select: Succession Communication Server 2000-Compact (*under Succession: General Availability*)

Select: Software

This procedure requires root privilege.

At the Call Agent Manager

- 1 Enter the Transfer level:
 - > **Admin**
 - > **SWIM**
 - > **Transfer**

```

CallAgent      SYS      CON      APPL      Unit: 0
.              .              .              .

Transfer      Current Load : 7.15.1.0
0 Quit        Source      : /3pc/patch
2 Select
3 Fetch      # Patch Description      Version
4 Source     1 ncgl_cca_patch      7.15.1.9
5           2 ncgl_cca_patch      7.15.1.8
6           3 ncgl_cca_patch      7.15.1.7
7           4 ncgl_cca_patch      7.15.1.6
8
9
10
11 Up
12 Down
13 LogQuery
14 Alarm      Filesets on the source: 1 to 4 of 4
15
16
17 Help
18 Refresh
   mtc
Time 13:06 >

```

Note 1: If patch files do not appear in the list, verify that the patch files are installed on the CS 2000 Core Manager or CBM in /swd/3pc/patch and have read permissions such as 777 or 755.

Note 2: If patch files are stored in a different directory, use the SOURCE command to change the source directory. The CS 2000 Core Manager or CBM prepends /swd to all values.

- 2 Use the Select command to select the patch file to transfer from the CS 2000 Core Manager or CBM:

> **Select num**

num

is the decimal value that indicates the fileset

- 3 Use the Fetch command to retrieve the selected patch file:

> **Fetch**

Note 1: If the FETCH command fails, verify that the patch files are installed and applied on the CS 2000 Core Manager or CBM and that the files have read permission set such as 777 or 755.

Note 2: The fetch command retrieves the patch file and stores it on the active and inactive Call Agent cards by default. ACTIVE and INACTIVE options enable storage to a specific Call Agent card.

Note 3: If the patch fileset already exists, the Call Agent prompts to determine if the existing file should be overwritten. Patch filesets can be overwritten.

```
Fileset already present. Overwrite?  
Please confirm ("YES", "Y", "NO", "N"):
```

- 4 This procedure is complete.

Apply platform software patch



CAUTION

Possible service interruption

Do not perform any patching activity within the first ten minutes following a Call Agent unlock.

At the Call Agent Manager

1 Enter the Patch level:

- > **Admin**
- > **SWIM**
- > **Patch**

```

CallAgent      SYS      CON      APPL      Unit: 0
.              .              .              .

Patch          Current Load : 7.15.1.0
0 Quit         Filter           : ALL
2 Select
3 Apply        # Patch Description      Version      Status
4 Delete      1 ncgl_cca_patch         7.15.1.9    NEW
5 Commit      2 ncgl_cca_patch         7.15.1.8    VALIDATED
6             3 ncgl_cca_patch         7.15.1.7    VALIDATED
7             4 ncgl_cca_patch         7.15.1.6    VALIDATED
8
9
10
11
12
13 LogQuery
14 Alarm
15
16
17 Help
18 Refresh
   mtc
Time 14:14 >

```

- 2 Use the Select command to select the patch file to apply:
 - > **Select <num>**
 - num**
is the integer value that indicates the patch
- 3 Use the Disadmin command to display any warnings or special application instructions. Perform any special application instructions:
 - > **Disadmin**
- 4 Reselect the patch and use the Validate command to verify that all dependencies are met:
 - > **Select <num>**
 - > **Validate**

If	Do
dependencies are met and the patch validates successfully	step 5
dependencies are not met and the validate fails	Fetch, select, and validate earlier patches before attempting to apply this patch. For example, if the current patch level is 5.26.1.10 and patch file 5.26.1.13 fails validation, attempt to validate and apply patches 5.26.1.11 and 5.26.1.12.

- 5 Reselect the patch and use the Apply command to apply the patch file:
 - > **Select <num>**
 - > **Apply**

If	Do
the patch applied successfully	step 6
the patch fails to apply	Refer to Troubleshooting .
the patch is an older version or requires special application instructions	Refer to Additional information .

6**ATTENTION**

At this point, the patch is applied and is part of the running load. Soak the patch according to telephone operating company procedure before committing the patch. Patches are automatically committed 10 minutes after application unless manually committed earlier.

Reselect and use the Commit command to write the change to persistent storage. The committed load boots the next time the card is reset or rebooted:

```
> Select <num>  
> Commit
```

Note: If the ACTIVE or INACTIVE options are used, committing a patch on one card raises a C_MisM alarm. Committing the same patch on the second card clears the alarm. No alarms are raised or cleared if this is the first patch being committed.

7 If additional patches need to be applied, repeat from [step 2](#). Otherwise, this procedure is complete.

Troubleshooting

The following table describes causes of possible problems, and what actions are required.

Problem	Possible cause	Action
SWACT while running patch commands	The patch could be the cause of the SWACT.	Patching does not continue and patches are rolled back on the formerly active Call Agent. Contact Nortel support personnel.
loss of mate communication while running patch commands	<ul style="list-style-type: none"> link failures at router link pulls abnormal software process termination 	<p>Patching completes for the Call Agent on which patching was executing and looks for patch mismatch between the Call Agent cards.</p> <p>If communication fails during inactive Call Agent patching, patching completes successfully because the active is already patched.</p>
patch files available to only one Call Agent	<ul style="list-style-type: none"> STORM failure failure to retrieve patch files and write them to storage 	Correct STORM failure. Use the TRANSFER command to retrieve the files again. Attempt patch application again.
patch levels out of synchronization between active and inactive Call Agent cards	A previous attempt to apply patches failed.	Contact Nortel support personnel for assistance with synchronizing the patch database files and determining the cause of failure.

Additional information

This section contains information about reverting to older patch levels and patch scenarios that require a platform upgrade.

Reverting patches

Uncommit a patch from the running load with the **UNCOMMIT** command. Unless specified with the **ACTIVE** or **INACTIVE** options, the patch is uncommitted from the active Call Agent and then from the inactive Call Agent.

Non-patchable versions

Non-patchable version patch files require a newer maintenance release than the currently running release.

Upgrade the platform software load first, then apply the patch file. Refer to the procedure “Upgrade strategy” in *Upgrading the Call Agent*, NN10065-461.

Special application instructions

If the patch file contains special application instructions, use the **DISADMIN** to display the instructions. Execute the required instructions.

PATCH level command reference

The following list of commands are available from the PATCH level.

SELECT

This command selects a patch file by integer value from the list of fetched patches for validation, display of administrative information, application, commit, or uncommit. For example, **SELECT 5**.

APPLY

This command applies a selected patch file to the running load. Unless specified with the **ACTIVE** or **INACTIVE** options, the selected patch is applied on the active Call Agent and then applied on the inactive Call Agent.

DELETE

This command deletes the selected patch file from storage. The patches cannot be in the **APPLIED** or **COMMITTED** state. Deleting patches in the **APPLIED** or **COMMITTED** state causes problems during booting and future attempts to remove the patches fail.

COMMIT

This command commits the selected patch file to the running load. The patch must be in the APPLIED state and when the card is reset or reboots, the patch is re-applied. This command accepts ACTIVE and INACTIVE options, though the options are expected to be used during platform and call processing application upgrades only.

UNCOMMIT

This command uncommits the selected patch file from the running load. The patch file remains in storage and remains applied, but will not be re-applied after reset or a reboot. If other applied patch files depend on the selected patch file, a warning message is generated. Uncommit is permitted, but the dependencies are broken. Nortel does not recommend uncommitting patches that break dependencies. Use the **REMOVE** command to un-apply a patch from the running load.

FILTER

This command alters the list of patch files to show only the patch files that are in a specified state. The list of available states is ALL, NEW, VALIDATED, APPLIED, COMMITTED, and REMOVED.

REMOVE

This command un-applies the selected patch file from the running load. The patch file must not be in the COMMITTED state. The removed patch files are not deleted from storage. If other applied patches depend on the selected patch file, removal is refused. Remove uncommit and remove the patches that depend on the selected patch file first.

VALIDATE

This command validates that the selected patch file can be successfully applied to the running load. This command accepts ACTIVE and INACTIVE options though the options are only useful if the two Call Agent cards are running different patch levels.

DISADMIN

This command displays administrative data about the selected patch file.

UP

This command scrolls up the list of patch files.

DOWN

This command scrolls down the list of patch files.

Upgrading firmware on the occasion of a software upgrade

Application

If firmware is available for the Call Agent card, it is delivered as part of the SAM21 Shelf Controller software load.

Interval

Perform this procedure when the *SAM21 Platform Release Notes* indicate that a firmware upgrade is available. This procedure is not a standard part of upgrading the Call Agent.

Common procedures

There are no common procedures.

Action

If the FW Flash enable checkbox is selected on the Provisioning panel of the Card View window at the CS 2000 SAM21 Manager client, firmware is automatically applied during an unlock request.

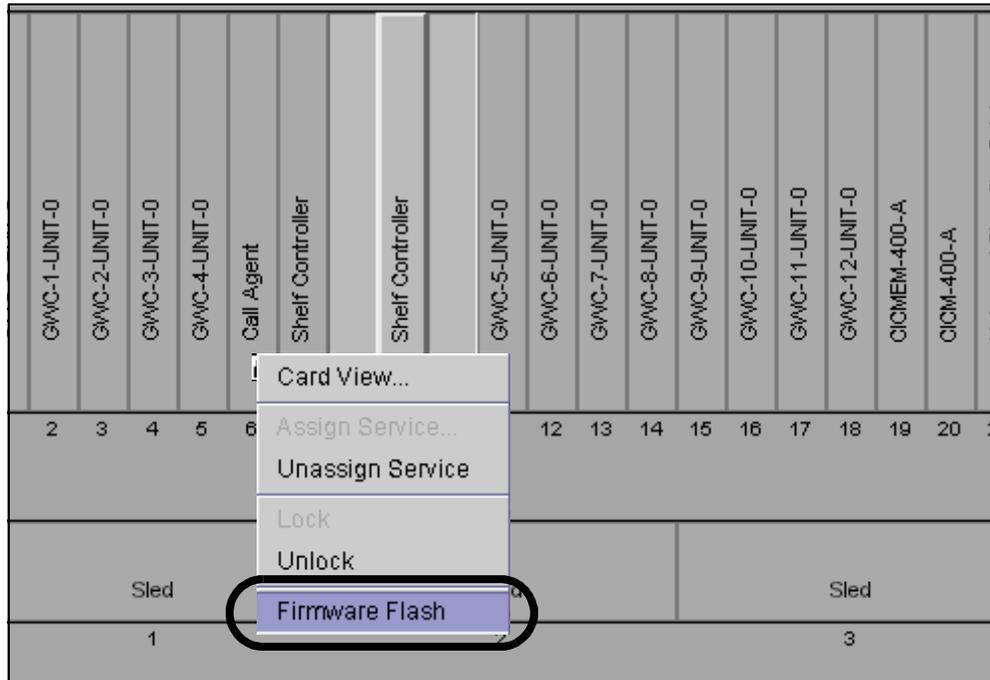
Provisioning tab of the Call Agent Card View window

The screenshot shows the provisioning interface for a Call Agent card. On the left is a vertical sidebar with the text 'Call Agent' and a small number '6'. The main area contains several configuration sections:

- Network Settings:** IP: 10.72.17.22, Subnet Mask: 255.255.240.0, MAC Address: 0001AF12AFA0, Gateway IP: 10.72.16.1, FW Version: RM03-2.4, MAC 2: 0001AF12AF9F.
- NTP:** Primary NTP: 47.135.43.193, Secondary NTP: 47.135.43.196.
- Load Info:** Server IP: 47.135.43.193, Path: /3pc, Load: ncgI_cca_image_7.02.1.0 (selected in a dropdown), and a 'Get Load Files' button.
- FW Flash Enable:** A checkbox labeled 'FW Flash Enable' is checked and highlighted with a red oval.
- Geographical CS 2000 Compact:** Includes tabs for 'Network File System', 'Message Controller', and 'Geographical Survivable'. The 'Enable' checkbox is checked.
- Backup Path:** GEO UNIT 0 IP: 10.72.0.12, Mask: 255.255.255.248.

Manual firmware upgrade is also available at the CS 2000 SAM21 Manger client by selecting Firmware Flash from the card context menu at the Shelf View window.

Manual firmware flash from Shelf View



Note: The Call Agent must be locked, and the FW Flash Enable checkbox on the Provisioning tab of the Card View window must be disabled to allow manual firmware flashing.