297-8991-307

DMS-100 Family

Software Delivery

XA-Core Cutover Procedures

CSP20 Standard 06.03 December 2004

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XA-Core Cutover Procedures

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Contents

About this document

This document covers the cutover that occurs when converting an in-service DMS SuperNode (SN) or SuperNode SE (SNSE) from computing module (CM) to XA-Core. This document is global and is for use by customers of Nortel Networks in all parts of the world.

This document does not cover upgrading the XA-Core software from release to release, for example, from CSP15 to CSP16. For information on this topic, see *One Night Process Software Delivery Procedures*, 297-8991-303.

This document does not cover converting a SuperNode SE CM/SLM to a SuperNode XA-Core. For information on this topic, see *ONP SNSE to SuperNode/ENET Conversion*, 297-8991-304.

Software baseline

This document supports the types of cutover listed in the following table.

Software	Type of cutover			
	Extension cab. using restart cutover	**Extension cab. using norestart cutover**	**Shelf replacement using restart cutover**	**Shelf replacement using norestart cutover**
release CSP10 for the CM and release CSP104 for the MS and XA-Core	SN, SNSE	SN	SN	SN
release CSP12 for the CM, MS and XA-Core	SN, SNSE	SN, SNSE	SN	SN
release CSP13 and subsequent CSP releases for the CM, MS, and XA-Core	SN, SNSE	SN, SNSE	SN, SNSE	SN, SNSE

Note: See "Cutover overview" on page 1-2 for definitions of the following terms used in the preceding table: extension cabinet cutover, shelf replacement cutover, norestart cutover, and restart cutover.

Version and issue

Four digits separated by a period indicate the version and issue of the document (for example, 01.01).

The first two digits indicate the version number. This number increases when Nortel releases the document again to support a new software release.

Example
The first release of a document is 01.01. In the next software release cycle, that document's first release is 02.01.

The second two digits indicate the issue number. This number increases when Nortel releases the document again in the same software release cycle.

Example
The first release of a document is 01.01. Within a given software release cycle, that document's next release is 01.02.

There can be more than one version of this document. To determine which version applies to your office, check the release information in the *DMS-100*

Family Guide to Northern Telecom Publications, 297-1001-001 (North American market) or 297-9051-001 (International market). The same document also shows the organization of your product's documentation.

Elements of document

Chapter 1, "Introduction," gives an overview of the software upgrade process for the cutover of a SuperNode or SuperNode SE switch to XA-Core.

Chapter 2, "Site preparation procedures," details the software procedures to prepare for the cutover of a SuperNode or SuperNode SE switch to XA-Core.

Chapter 3, "Night of cutover procedures," details the software procedures to perform the cutover of a SuperNode or SuperNode SE switch to XA-Core.

Appendix A, "Checklist for shelf replacement cutover," contains the checklists for the software upgrade procedures for a shelf replacement cutover.

Appendix B, "Checklist for extension cabinet cutover," contains the checklists for the software upgrade procedures for an extension cabinet cutover.

Appendix C, "Abort procedures," details additional procedures you can need for the upgrade.

Appendix D, "Additional procedures," contains additional information on the procedures in this document.

Conventions

Terminology

SuperNode refers to either SuperNode or SuperNode SE.

CM core and *CM* refer to the SuperNode computing module.

Appl refers to the Applicator.

Site refers to the operating company site personnel.

Instl refers to the Installer.

Cabinet XA-Core refers to either the XA-Core cabinet installed during an Extension Cabinet cutover, or the portable XA-Core used in a shelf replacement cutover.

Shelf XA-Core refers to the XA-Core shelf installed in the SuperNode cabinet in a shelf replacement upgrade.

MAP refers to operating company's MAP terminal used to control either the CM or the portable XA-Core.

XA-RTIF refers to the laptop tool used to control the cabinet XA-Core.

With an uppercase c, *Cutover* refers to RestartCutover and NoRestartCutover. With a lowercase c, *cutover* refers the to process of upgrading the hardware and software of a SuperNode switch to XA-Core.

MAP terminal

This example shows the format used in this document to represent commands, parameters and responses on a MAP or XA-RTIF terminal:

Procedure 1 Procedure name

Procedure station (MAP /XA_RTIF)

1 Description text

```
> COMMAND_NAME variable_name <optional_variable>
```

italic text gives information about the variable(s)

```
Response on terminal
```

These procedures follow the conventions below:

- **>**: input prompt on the MAP and XA_RTIF terminals that indicates you can enter a command. Any text before **>** indicates [?]. When you enter a command, enter only the text after **>**.
- **COMMAND_NAME**: uppercase text in bold indicates a command name. There can be more than one command name per command line. Enter the command name as shown.
- **variable**: lowercase text in bold indicates a required variable. A space separates each variable in the command line. Text in angle brackets indicates an optional variable. Italic text below the command provides information and options for the variable(s), if needed.
- `Response`: text in a different type indicates the terminal's response to a command. The response can be immediate, or appear when the command is complete.

References

The list below shows documents referred to in, or related to, this document:

- *DMS-100 Family Guide to Northern Telecom Publications*, 297-1001-001 (North American market) or 297-9051-001 (International market)
- *UCS DMS-250 One Night Process Procedures Guide*, 297-2621-303
- *DMS-100 Translations Guide*, 297-8001-350 (North American market) or 297-9051-350 (International market)
- *Routine Maintenance Procedures*, 297-8001-546 (North American market) or 297-9051-546 (International market)
- *Peripheral Module Software Release Document*, PMRELDOC, 297-8981-599 (North American market) or 297-9051-599 (International market)
- *One Night Process Software Delivery Procedures*, 297-8991-303
- *ONP SNSE to SuperNode/ENET Conversion*, 297-8991-304
- *SuperNode SE CM/SLM to XA-Core Extension Cabinet Upgrade Planning*, Installation Method 02-6101
- *SuperNode CM/SLM to XA-Core Shelf Replacement Upgrade Planning*, Installation Method 02-6102
- *SuperNode SE CM/SLM to XA-Core Shelf Cabinet Replacement Planning*, Installation Method 02-6103
- *SuperNode CM/SLM to XA-Core Extension Cabinet Upgrade Planning*, Installation Method 02-6104
- *SuperNode CM/SLM to XA-Core Cutover*, Installation Method 78-6134
- *SuperNode SE CM/SLM to XA-Core Cutover*, Installation Method 78-6135

Giving feedback

You can send comments and suggestions about this document through the Nortel SR/PRS process. Direct any query to System: CUSTDOC. The Software Delivery Performance group must approve any change made to this document.

1 Introduction

What's new in XA-Core Cutover Procedures for (I)SN09

Feature changes

There are no feature changes.

Other changes

Between (I)SN08 and (I)SN09, the following changes were made to this document:

- The "Publication history" section was deleted from the document.
- This section, "What's new for in XA-Core Cutover Procedures for (I)SN09", was added to this chapter.

The procedures in this document support the software upgrades for a SuperNode to XA-Core cutover. Refer to the appropriate Installation Method for details about the hardware upgrade procedures. (See "References" in the "About this document" section.) While the hardware and software conversion procedures are in separate documents, they are concurrent. The Applicator and the Installer must work hand in hand during the cutover.

Use this document when you have correctly ordered and scheduled the XA-Core Upgrade Job. You must have the correct XA-Core software in the Software Vault.

ATTENTION

Make sure you understand the content of this document before you begin the cutover process.

About the software delivery process

The software upgrade procedures detailed in this document are based on the one night process described in *One Night Process Software Delivery Procedures*, 297-8991-303.

The software delivery process uses a new set of software upgrade tools to support the cutover. These tools are part of the software load base for the Office. You must load these tools before any scheduled upgrade. Remove these tools when the upgrade is complete.

Cutover overview

There are two types of SuperNode to XA-Core cutovers:

- Extension Cabinet cutover: this type of cutover replaces the SuperNode's CM/SLM with an XA-Core located in its own cabinet. An Extension Cabinet cutover results in one Cutover down time.
- Shelf Replacement cutover: this type of cutover replaces the CM/SLM shelves in the SuperNode cabinet with an XA-Core shelf. A Shelf Replacement cutover results in two Cutover down times. The first down time is for the Cutover from the CM/SLM to a portable XA-Core. The second down time is for the Cutover from the portable XA-Core to the XA-Core shelf.

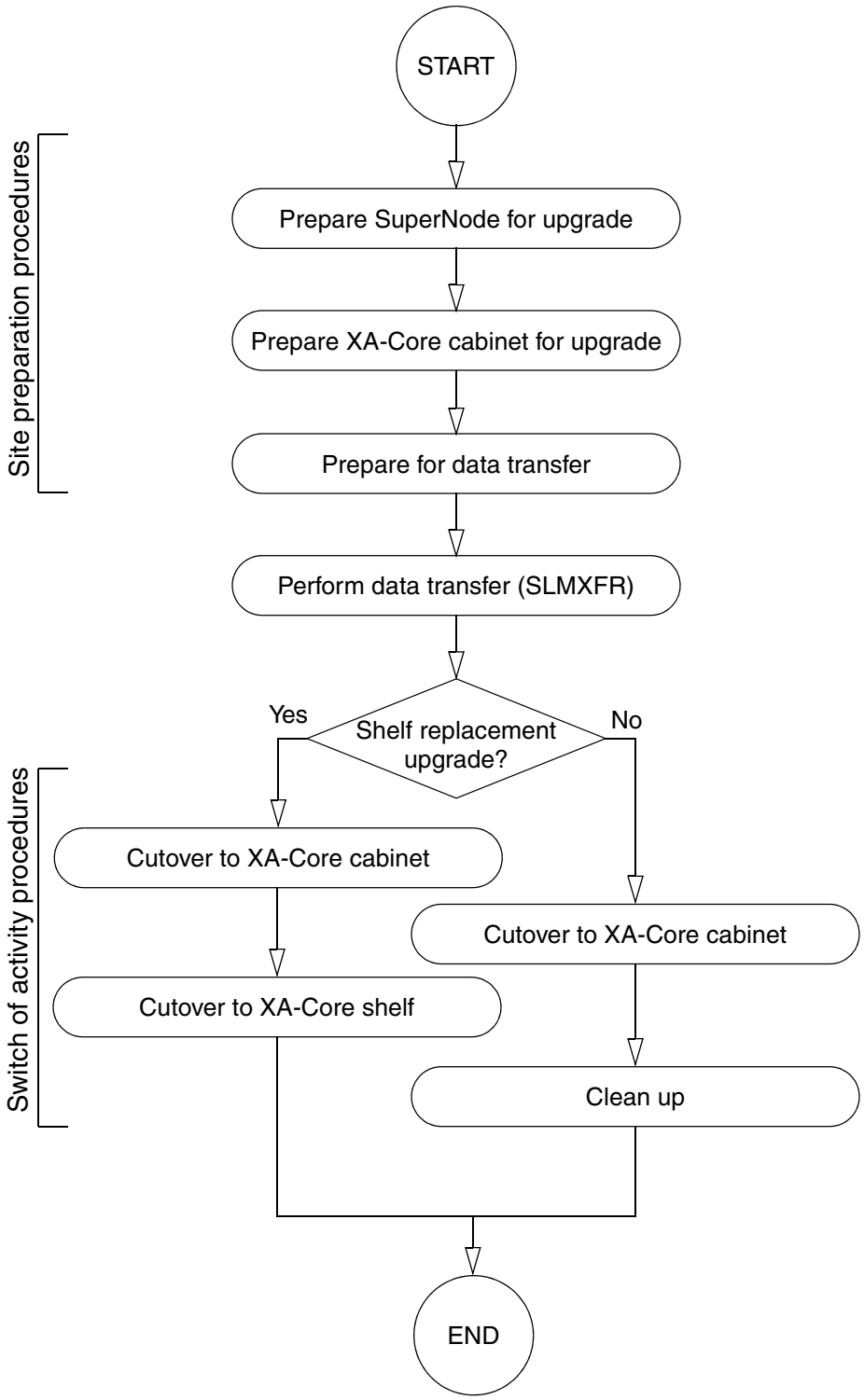
There are two types of Cutover procedures:

- NoRestartCutover: a switch of activity with a service interruption of less than 30 seconds (equivalent to a warm restart).
- RestartCutover: a switch of activity with a service interruption of about two to four minutes, with stable 2-port calls maintained (equivalent to a cold restart).

> ***Note:*** Use RestartCutover only if the switch does not support NoRestartCutover.

Use the following flowchart to determine the procedures you must use for each type of cutover:

SuperNode to XA-Core cutover overview



Required equipment from the customer

The customer must supply three foreign exchange directory numbers:

- two dial-up ports for the SuperNode
- one reliable voice line for the Applicator

Note: These directory numbers *must* be foreign exchange numbers to make sure the Applicator does not lose contact during Cutover.

Using the checklists

You must complete the site preparation and Switch of activity procedures in the order indicated in the appropriate checklist (see Appendix A, "Checklist for shelf replacement cutover" or Appendix B, "Checklist for extension cabinet cutover").

Site preparation overview

The preparation for a SuperNode to XA-Core cutover begins with the first delivery of tapes and documentation to the Office site. The site preparation phase ends with the final checks on the night of cutover.

Use the appropriate checklists (see "Using the checklists" on page 1-4) to review the order of the site preparation procedures. You must start each procedure by the time indicated in the checklist. Some of the SuperNode and Cabinet XA-Core preparation procedures can be done in parallel (see your *Upgrade Planning* Installation Method for information).

Make sure that you understand all the site preparation procedures (see Chapter 2) before starting this phase. If you do not complete these procedures by the final Office review, the cutover process will be put on hold.

The site preparation process consists of the following phases:

1. Prepare the SuperNode for the upgrade.
2. Prepare the XA-Core Cabinet for the upgrade.

Switch of activity overview

Use the appropriate checklists (see "Using the checklists" on page 1-4) to review the order of the Switch of activity procedures. You must start each procedure by the time indicated in the appropriate checklist.

The Switch of activity phase also includes steps to make sure that DIRP billing (and other subsystems) devices are ready for Cutover. Normally, billing is managed as a DIRP subsystem.

The cutover to XA-Core replaces the SLM disk and quarter-inch cartridge tape devices with SCSI disk and XA-Core digital audio tape (XADAT) devices. If

you need active DIRP billing on any of the new SCSI devices, make sure that the correct transfer takes places during Cutover.

The Switch of activity process consists of the following phases:

1. Cutover to the XA-Core cabinet.
2. Cutover to the XA-Core shelf (if doing a shelf replacement cutover).
3. Clean up after an extension cabinet Cutover.

Perform steps 1 and 2 only when doing a Shelf Replacement cutover. Perform steps 1 and 3 only when doing an extension cabinet cutover.

This page is left blank intentionally.

2 Site preparation procedures

Introduction

During this phase, **Site** (with the help of **Instl**) prepares the switch for the cutover to XA-Core. This preparation begins when the first shipment of upgrade tapes and documentation arrives on site. This shipment contains:

- an XA-Core image without datafill on XA-Core DAT (XADAT) medium
- PM Loads and ISN Loads (includes the MS load) on XADAT
- NONRES Tools on XADAT
- NONRES on SLM
- *Software Delivery XA-Core Cutover Procedures* (this document)
- *Peripheral Module Software Release Document*, 297-8981-599 (North American market) or 297-9051-599 (International market)

If the software upgrade requires a new shipment of upgrade tapes, **Site** must discard or label again the previous shipment's tapes. **Site** must make sure that the upgrade tapes used for the cutover are the most current version. Failure to use the most current version of upgrade tapes can cause problems during the cutover. For any questions or concerns about new shipments of upgrade tapes, talk to your Nortel regional customer representative.

ATTENTION

Applying the following types of patches within 30 days of the scheduled software upgrade is a gating issue to the cutover.

Activable (ACT) patch (applied and activated), *Limited* (LTD) status patch, and *Verification* (VO) status patch.

If you apply any of the above patches to the office within 30 days of the night of cutover: contact immediately your Nortel regional customer representative or call the Software Delivery Hotline for your area.

Prepare SuperNode for upgrade

In this section ACT refers to the active CM and INACT refers to the inactive CM.

Procedure 2-1 Site performs initial test plan

Office

1 Before starting any work on the Office, **Site** must perform the test plan defined during the planning stage (see your *Upgrade Planning* Installation Method for more information). This test plan will be repeated during the cutover process, and the results compared to those of this test.

Procedure 2-2 Upgrade Office software to baseline

MAP terminal

1 **Site**: Check that the Office is at the correct software baseline. (See "Software baseline" in the "About this document" section.) If needed, upgrade the Office software.

See your *Upgrade Planning* Installation Method for more information on this procedure.

Note: The office peripherals are loaded through the SuperNode CM/SLM as part of the Baseline ONP.

Procedure 2-3 Check upgrade tapes

MAP terminal

1 You must have the latest XPM/MS loads and the current office image on both an SLM disk and an SLM quarter-inch cartridge.

You must have the NONRES tools and the TAS NONRES tape from the latest ONP.

2 **Site**: Check the new software load tapes received from Nortel.

Note: This procedure does not apply to the TAS NONRES tape (Nortel technical support uses that tape to provide access to some non-resident software tools).

a INSERT (or for a 9-track tape, MOUNT) and LIST each tape.

Example:

```
>DISKUT

>IT S00T

>LF S00T
```

If a tape lists without any errors. it is good. If there are errors on a tape, list that tape on another device to determine which of the tape or the device is at fault.

b If you find any problems, notify immediately your Nortel regional customer representative to request a new shipment.

c Keep the cutover tapes on-site.

Note: A volume can have more files listed by command LISTVOLS than by command LISTFL in the MAP disk utility. the difference in the number of files between the commands is because of directory files not displayed by command LISTFL.

3 **Site**: Perform routine maintenance on any DDU used for primary billing collection (such as AMA, SMDR, OCC, CDR) to make sure that the disk is functioning correctly. If there are excessive bad blocks, format the disk again.

Procedure 2-4 Load peripheral module (PM) patches

MAP terminal

1 **Site**: Begin loading and patching the PMs with the new PM software (see *Peripheral Module Software Release Document*).

Note: The PMUPGRADE tool is available to automate many of the tasks of a PM update. Refer to “Overview of automated update process” in *Peripheral Module Software Release Document*.

Procedure 2-5 Upgrade MS

MAP terminal

1 **Instl**: See your *Upgrade Planning* Installation Method for information on upgrading the MS hardware.

Procedure 2-6 Check disk space

ATTENTION

Make sure there is enough disk space for office images during the upgrade.

If necessary, erase the old image files and/or re-allocate the SLM disk volume. For help with DISKUT, contact your next level of support.

MAP terminal

1 **Site/ACT**: Make sure there is enough space on the SLM disk volume to put another office image. If needed, go into DISKUT to list the volume, ERASE the oldest image, and quit out of DISKUT.

Procedure 2-7 Save image

MAP terminal

1 **Site/ACT**: Before beginning the front-end testing (processor tests), dump an office image to an available SLM disk volume. Backup this image to an SLM tape cartridge.

Note: Before performing this step ensure that the cleanup of all unnecessary files is performed.

At the CI level:

```
> DUMP filename device_name ACTIVE UPDATE NODE CM
```

You can also use other commands such as AUTODUMP MANUAL to dump an office image (see *Routine Maintenance Procedures*).

2 **Site/ACT**:Perform a backup of the SLM tape before continuing with the next procedure.

Procedure 2-8 Set up logs

ATTENTION

Nortel recommends that you monitor the following system logs during the site preparation phase to ensure front-end stability: *MS*, *SLM*, *CM*, and *MM*.

This procedure checks that these logs are not suppressed and are routed to an active log device for monitoring.

ATTENTION

You *must* resolve any stability issue identified by any of the logs above during the site preparation phase.

MAP terminal

1 **Site/ACT**: Set up the logs:

```
> LOGUTIL
```

```
> LISTREPS SPECIAL
```

If any of the above logs are suppressed, resume these logs:

```
> RESUME log
```

*where **log** can be CM, MS, SLM, or MM.*

If any of the logs has a threshold value, unthreshold the log:

```
> THRESHOLD 0 log
```

*where **log** can be CM, MS, SLM, or MM.*

2 **Site/ACT**: Route the logs to a printer device:

```
> LISTROUTE DEVICE printer
```

Route any of the above logs that are not routed:

```
> ADDREP printer log
```

3 **Site/ACT**: Start the printer device:

```
> STOPDEV printer
> STARTDEV printer
> LEAVE
```

Procedure 2-9 Test processors

ATTENTION

To ensure front-end stability, **Site** must complete the following tests before **Appl** initiates contact for the pre-application checks.

MAP terminal

1 **Site**: Make sure that the CPUs are in SYNC, and that the inactive CM is *not* jammed.

2 **ACT**: Match the memory from the Memory level of the MAP:

```
> MAPCI;MTC;CM;MEMORY;MATCH ALL
> QUIT
```

3 **ACT**: Drop SYNC from the CM level of the MAP:

```
> DPSYNC
```

Confirm:

```
> YES
```

4 **INACT**: Wait for the inactive CPU to return to a flashing `A1`.

5 Test the CM stability with each of the following restarts on the *inactive* Reset Terminal only.

a **INACT**:

```
RTIF> \RESTART WARM
```

Confirm:

```
RTIF> yes
```

Wait for a flashing `A1`.

b **INACT**:

```
RTIF> \RESTART COLD
```

Confirm:

```
RTIF> yes
```

Wait for a flashing `A1`..

c **INACT**:

```
RTIF> \RESTART RELOAD
```

Confirm:

```
RTIF> YES
```

Wait for a flashing `A1`.

6 **ACT**: Test the memory cards from the Memory level of the MAP:

```
> MEMORY;TST ALL LONG
```

This test tests each memory card and lasts up to 15 minutes.

Confirm:

```
> YES
```

```
> QUIT
```

7 After completion of the tests, check the CM logs to see if any CM112 logs were reported during the test. If there were problems, solve these problems, then repeat step 6.

8 **ACT**: SYNC the CPUs from the CM level of the MAP:

```
> SYNC
```

9 After the display shows `Synchronization Successful`, check that there are no faults displayed at the CM or Memory levels of the MAP.

10 **ACT**: Switch activity of the CPUs from the CM level:

```
> SWACT
```

11 **INACT**: Repeat steps 1 through 10 on the newly inactive CPU.

12 Check that the CPUs are in SYNC.

13 **ACT**: Match the memory from the Memory level of the MAP:

```
> MEMORY;MATCH ALL
```

```
> QUIT
```

14 **ACT**: Perform a full REX test from the CM level:

```
> REXTST FULL
```

Confirm:

```
> YES
```

The states of the CPU SYNC, the Message Controller (MC), and the Subsystem Clock (SSC) change. The SuperNode remains out of SYNC for at least 60 minutes.

15 **ACT**: After completion of the REX test, check the test results:

```
> QUERYCM REXRESULT
```

If the CPUs is not back in SYNC, or there are REX alarms at the CM level or on the main MAP display header, contact the site supervisor to resolve the problems, then repeat steps 14 and 15.

16 **ACT**: Perform an image test from the CMMNT level of the MAP:

```
> CMMNT
> IMAGE
> QUIT
```

17 After completion of the test, check for CM logs for a pass or fail message. If the test failed, clear the problem, then repeat step 16.

18 **ACT**: Busy the Slave MS from the MS level of the MAP:

```
> MS;BSY x
```

*where **x** refers to the Slave MS (look under the Clock field).*

19 **ACT**: Test the MS from the MS level:

```
> TST x
```

20 After completion of the test, the results are displayed. If the test failed, resolve the problems, then repeat step 19.

21 **ACT**: Return the busied MS to service:

```
> RTS x
```

22 Wait 5 minutes to make sure that the clocks are stable, and to allow the hardware audit to run. Both MS should be in-service.

23 **ACT**: Switch the MS clock mastership:

```
> SWMAST
```

24 Wait an additional 10 minutes to allow the MS clocks to completely stabilize.

25 Test the other MS by repeating steps 18 through 22.

26 **ACT**:

```
> QUIT ALL
```

27 Continue to monitor the front-end stability logs (CM, MS, SLM, and MM logs) until the scheduled start of Cutover.

Procedure 2-10 Clean storefile

ATTENTION

Do not erase the patches and process files downloaded for the upgrade.

These files must remain where they are.

MAP terminal

1 **Site/ACT**: Clean up the storefile (SFDEV) to maximize the space for upgrade work.

Copy old from-side patches in SFDEV to another storage device.

Erase all the *nonessential* files and patches in SFDEV.

Note: You can copy important Telco/site-created files to a scratch tape and manually restore these files to SFDEV after the upgrade.

Procedure 2-11 Check table OCGRP

MAP terminal

1 **Site**: Check the datafill of table OCGRP in TOPS offices. The datafill *must* be correct for TOPS networks. Wrong datafill of field BCSLEVEL can cause an outage. Refer to the procedures in *DMS-100 Translations Guide* for datafilling field BCSLEVEL in table OCGRP.

Table OCGRP is indexed by office, and associates each office with the voice link group and data link group that connect it. This table indicates if the connected office is a host or a remote. Field BCSLEVEL indicates the lowest BCS level of the two connected offices.

Before a software upgrade, table OCGRP must have the correct value in field BCSLEVEL, or TABXFR can fail as a result. For each tuple in table OCGRP of the Office, make sure that the value of field BCSLEVEL is correct and current. The correct value for field BCSLEVEL is the lowest value (BCS level) of the two connected offices associated by the tuple in table OCGRP.

2 **ACT**: Determine the BCS level in the office to be upgraded:

```
> TABLE OFCSTD;POS BCS_NUMBER;QUIT
```

Use this command in the “connected” offices to determine their BCS level. For each connected office, use the values indicated by the table OFCSTD tuple to determine the correct values for the BCSLEVEL fields in table OCGRP. If needed, change field BCSLEVEL to the lowest value (BCS level) of the two connected offices associated by the tuple in table OCGRP.

3 **ACT**: If needed, change the BCSLEVEL field (host or remote). Make sure that the value of BCSLEVEL is *equal to or less* than the BCS level of the connected office. *Serious problems can result if it has a greater value.*

```
> TABLE OCGRP

> POS office_name

> CHA BCSLEVEL host/remote_bcs_level
```

Confirm:

```
> YES
```

Note: The difference between the host and remote offices cannot exceed three (3) BCS levels. The BCSLEVEL *cannot* be changed to a value greater than the current BCS level of the office containing the table.

ATTENTION

Check and update table OCGRP again *after* the upgrade.

Procedure 2-12 Datafill table ACDGRP

MAP terminal

1 **Site/ACT**: Find all the “holes” in table ACDGRP and fill these “holes” with dummy tuples. If not, you may be unable to retrieve MIS reports from some ACDGRPs:

   a Enter the following:

   ```
   > OMSHOW ACDGRP ACTIVE
   ```

   b Look for non-consecutive keys. (Example: *0 2 3 5 6* has *1* and *4* missing.)

   c For any missing tuples, have translations personnel datafill dummy tuples in the key indexes to prevent wrong renumbering during the software update.

   d Also provide datafill in table DNROUTE for each matching dummy tuple added in table ACDGRP.

Procedure 2-13 Perform test plan

Office

1 **Site**: Execute the test plan defined in the Planning stages (see your *Upgrade Planning* Installation Method for more information). Do not continue with the cutover process until all portions of the test that can be done have completed successfully.

Procedure 2-14 Run precheck

ATTENTION

Nortel recommends that you perform this procedure at the end of the Site Preparation process, but *before* any pre-application checks.

The Precheck maintenance tool is available within the BCSUPDATE level of the DMS. The Precheck tool completes a series of steps which support the Site Preparation process.

MAP terminal

1 **Site/ACT**: Set-up and execute the Precheck DMS-resident tool.

a Login to the DMS using the userid and password set up for the upgrade. The Precheck tool checks that this userid and password have the required privileges to perform the upgrade.

b Enter the BCSUPDATE increment:

```
> BCSUPDATE
```

c RESET the program steps to status NEEDED:

```
> RESET
```

Confirm:

```
> YES
```

d Execute the Precheck steps:

```
> PRECHECK
```

i Make sure that all the precheck steps complete successfully. If a precheck step fails, investigate and correct the problem before continuing, or override the step and continue:

To override a step:

```
> OVERRIDE precheck_step
```

```
> YES
```

```
> PRECHECK
```

ii You can also execute individual Precheck steps (out of sequence) by using the RUNSTEP command within the BCSUPDATE increment:

```
> RUNSTEP precheck_step
```

```
> YES
```

e When Precheck completes, a status is displayed. You can display the status of the Precheck steps at any time:

Display the status:

```
> STATUS PRECHECK
```

Exit the BCSUPDATE increment:

```
> QUIT
```

Procedure 2-15 Run AUTOTABAUDIT

ATTENTION

TABAUDIT must be completed with no errors on all tables in the office before the upgrade. Any table errors identified by TABAUDIT must be corrected and TABAUDIT executed again on those tables.

Failure to correct table errors can cause problems during the upgrade and can jeopardize the software upgrade. Serious table errors should be referred to your local translations department. For additional support, contact your Nortel regional customer representative

MAP terminal

1 Review all TABAUDIT customer service bulletins and notices before trying to correct any table errors.The bulletins and notices will alert you to any known table errors identified by TABAUDIT. You can disregard known table errors as they do not require any corrective action.

2 **Site/ACT**: Set up for AUTOBAUDIT.

a Enter the automated level of the TABAUDIT increment to enable the automatic level commands:

```
> TABAUDIT

TABAUDIT:

> AUTO

AUTOTABAUDIT:
```

b Clear the *included* list of tables:

```
AUTOTABAUDIT:

> CLEAR INCLUDED
```

c Clear the *scheduled* list of timeframes:

```
AUTOTABAUDIT:

> CLEAR SCHEDULE ALL
```

d Define the list of tables to be verified:

```
AUTOTABAUDIT:

> INCLUDE ALL
```

This option includes all tables in the office.

Note: The *included* list of tables should include all the tables listed in table DART. The *excluded* list normally does not contain any tables.

3 **Site/ACT**: Define the scheduled TABAUDIT session.

Note: Do not schedule AUTOTABAUDIT to run during an office image dump. Schedule AUTOTABAUDIT sessions to start after the completion of AUTOIMAGE and to stop before the next AUTOIMAGE is scheduled to begin (see table IMGSCHED).

a AUTOTABAUDIT:

```
> TIMEFRAME start_time <start_date> stop_time
<stop_date>
```

where ***start_time*** *and* ***stop_time*** *use the format* hh:mm *(24-hour clock), and* ***start_date*** *and* ***stop_date*** *use the format* yyyy:mm:dd.

You can define up to eight different sessions. Timeframe definitions, however, must not overlap.

Note: A timeframe must be at least 30 minutes, and cannot exceed 6 hours. The date can be included as an option. The timeframe options include DAILY, WEEKLY, and MONTHLY sessions. For the monthly option, the 31st day of a month is not available.

b Display the current (scheduled) AUTOTABAUDIT session parameters:

```
AUTOTABAUDIT:

> STATUS
```

4 **Site/ACT**: Execute the scheduled AUTOTABAUDIT session:

```
AUTOTABAUDIT:

> EXECUTE
```

Note: The first response is a status. If this status is correct, enter **YES** at the prompt.

The scheduler starts AUTOTABAUDIT at the specified start time(s), and will stops testing at the specified stop time(s). Only the included tables are tested (in the order they are listed in table DART).

To stop AUTOTABAUDIT and reset the execution order of the tables back to the top of the included list:

```
AUTOTABAUDIT:

> TERMINATE
```

5 **Site/ACT**: Check the status of AUTOTABAUDIT after the scheduled stop time:

```
AUTOTABAUDIT:

> STATUS
```

Determine if AUTOTABAUDIT has completed checking all tables. If AUTOTABAUDIT has not completed (process failed, insufficient time, or other reasons), determine what steps are necessary to complete the process. You may have to repeat steps 1 through 3 above or to schedule multiple sessions to check all the tables in the office.

Note: All the tables checked in table DART by a scheduled session are recorded in a “SUMMARY$FILE” located in SFDEV. You can print this file to view the AUTOTABAUDIT process history.

6 **Site/ACT**: Obtain the error report when AUTOTABAUDIT is done:

```
AUTOTABAUDIT:

> REPORT ERRORS
```

Note: The REPORT ERRORS command generates a detailed report for each of the tables that have recorded errors. You can obtain different reports by using the various report subcommand options. To see the options type **HELP REPORT**.

7 **Site/ACT**: Review all the tables and correct the recorded errors.

Refer serious table errors to your local translations department. For additional support, contact your Nortel regional customer representative.

You can manually check table errors and get detailed information on why a tuple has failed:

a Access the table:

```
> TABLE table_name
```

b Access the tuple:

```
> POS tuple
```

c Enter the following:

```
> CHECK
```

d Note the failure message, then make the necessary correction.

e Repeat steps a through c to check that the correction worked.

8 **Site/ACT**: Update the corrections in the AUTOTABAUDIT (or TABAUDIT) increment.

Run TABAUDIT or AUTOTABAUDIT on any table that was changed or corrected to verify table changes and to update the report generated by the REPORT ERRORS command.

To run AUTOTABAUDIT, repeat steps 1 through 3 above.

To run TABAUDIT, see "Running manual TABAUDIT on specific tables".

Note: AUTOTABAUDIT (or TABAUDIT) must have *no* errors in *all* tables in the office before the upgrade. This condition is verified at the final office review.

Procedure 2-16 Load cutover software on CM

MAP terminal

1 **Instl**: See your *Upgrade Planning* Installation Method for information on loading the cutover software tools and initiating the XARETINIT tool set.

Prepare cabinet XA-Core for upgrade

Procedure 2-17 Install and commission cabinet XA-Core

Office

1 **Instl**: See your *Upgrade Planning* Installation Method for details on installing, powering up and commissioning the Cabinet XA-Core, as well as how to integrate the cutover devices and perform boot testing.

Procedure 2-18 Load cutover software on cabinet XA-Core

XA_RTIF terminal

1 **Instl**: See your *Upgrade Planning* Installation Method for information on loading the cutover software tools and initiating the XARETINIT tool set.

Procedure 2-19 Integrate cutover devices

Office

1 **Instl**: See your *Upgrade Planning* Installation Method for information on integrating the cutover devices and performing boot testing.

Procedure 2-20 Plan DIRP/billing media configuration

Billing Server

1 **Site** and **Instl**: Before beginning, identify DIRP/billing setup on the SuperNode and XA-Core, and agree on a strategy to configure DIRP/billing on the XA-Core.

Procedure 2-21 Run Precheck

MAP terminal

1 **Site**/ACT: Set-up and execute the Precheck DMS-resident tool.

2 Execute the Precheck steps:

```
> PRECHECK
```

3 Confirm:

```
> Y
```

4 RESET the program steps to status NEEDED.

```
> RESET
```

5 Enter the BCSUPDATE increment:

```
> BCSUPDATE
```

6 Login to the DMS using the userid and password set up for the upgrade. The Precheck tool checks that this userid and password have the required privileges to perform the upgrade.

7 Make sure that all the precheck steps complete successfully. If a precheck step fails, investigate and correct the problem before continuing, or override the step and continue.

8 To override a step enter:

```
> OVERRIDE precheck_step
```

```
> YES
```

```
> PRECHECK
```

9 You can also execute individual Precheck steps (out of sequence) by using the RUNSTEP command within the BCSUPDATE increment.

```
> RUNSTEP precheck_step
```

```
> YES
```

10 When Precheck completes, a status is displayed. You can display the status of the Precheck steps at any time:

```
> STATUS PRECHECK
```

Exit the BCSUPDATE increment:

```
> QUIT
```

Procedure 2-22 Transfer SLM files to cabinet XA-Core

MAP and XA_RTIF terminals

1 **Instl** and **Site**: See your *Upgrade Planning* Installation Method for information on transferring SLM files to the Cabinet XA-Core.

3 Night of cutover procedures

About night of cutover procedures

During this phase, **Appl** and **Instl** perform the actual cutover to the XA-Core.

The Applicator will need two FX dialup ports for these procedures: one for the active side processor (label it ACT), and one for the inactive side processor (label it INACT).

Note: Nortel Networks does *not* recommend the use of X25 terminals to perform the cutover.

ATTENTION

Before beginning the night of cutover procedures in this document, you must confirm that the installer has completed certain actions specified in the Installation Method (IM). The installer uses IM 78-6134 for SuperNode or IM 78-6135 for SuperNode SE.

Confirm that the installer has completed the actions specified in the appropriate IM, up to the point at which the IM tells the instructor to hand the office over to the applicator, telling the applicator that the instructor has finished setting up the TABXFR configuration.

Recording of the process

Appl must save the console sessions on file for both MAP terminals.

The operating company can decide to monitor the application process by recording it on printers (one for each FX dialup port). To start recording on printers, issue the following command for each printer:

> RECORD START FROM terminal_id ONTO printer

ATTENTION

Keep away from using too many slow devices to monitor an application (for example, RECORD START or TRACECI). Too many slow devices can slow the application and extend the out-of-sync time.

Because the Applicator records and monitors all application processes, limit any additional use of RECORD START.

Abort process

Resort to one of the following actions if problems develop during the XA-Core Cutover:

Note: Nortel Networks recommends that **Appl**, **Site** and **Instl** be familiar with these procedures before continuing with this section.

- If you must halt or interrupt the TABXFR process, use the HALT option (see Appendix C: Abort from data transfer prior to Cutover).
- If you must halt or interrupt the BCSUPDATE: PreSWACT process, see Appendix C: Abort from cutover configuration prior to Cutover.
- If you must do a controlled REVERT after a Cutover is complete, refer to Appendix C: Abort from data transfer prior to Cutover. The Installer should execute Installation Method 78-6134 or 78-6135.

Cutover to cabinet XA-Core

Preliminary phase procedures

Procedure 3-1 Remote login

88k MAP terminals

1 **Appl**: Contact the control center (if required) and the site on the voice phone and connect to both dialup ports.Verify one dialup port is on IOC 0 (or IOM 0) and the other is on IOC 1 (or IOM 1).

2 Login both users and, if applicable, set LOGINCONTROL.

a **<break>**

```
?LOGIN
Enter username and password
> <username> <password>
```

or

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

b Obtain IOC/IOM device and user information as follows.

```
> BCSUPDATE;DEVICE
> QUIT
> QUSER
```

c Site and Appl: The operating company is responsible for providing users and devices with properties sufficient to perform the ONP. The following are recommended settings for each user/device.

- *User Priority* is *4*

  User Stack Size is at least *7000*
- *User Privilege Class* is *ALL*
- *ComClass* is *ALL*
- *OpenForceout* is *N*.

  If not, note original status and enter:

  ```
  > LOGINCONTROL <device> OPENFORCEOUT FALSE
  ```
- *MaxIdleTime* is *Forever*.

  If not, note original status and enter:

  ```
  > LOGINCONTROL <device> MAXIDLETIME FOREVER
  ```

Repeat this step for the second terminal device.

Procedure 3-2 Check SuperNode logs

88k MAP terminal

1 **Appl**: Check system logs to verify processor stability. Use LOGCHECK or open logs manually (TRAP, INIT, SWER, CM, MS, SLM, MM, and CMSM).

```
> BCSUPDATE;LOGCHECK
> QUIT
```

Do *not* continue until *all* logs have been explained.

Procedure 3-3 Stop journal file

88k MAP terminal

1 **Site or App/ACT ROTATE and STOP the Journal File recording.**

a > MAPCI;MTC;IOD;DIRP;QUERY JF ALL

Check which JF volume is currently active.

b > CLOSE JF ACTIVE

> YES

QUERY again to verify rotation.

c > JF STOP

Verify stopped.

d > QUIT MAPCI

ATTENTION

Servord activity and table changes are not permitted during the cutover.

Inform all operating company personnel that data changes on the SuperNode such as Servord and table changes must be halted until after the cutover is completed. Data changes made during the software upgrade can cause process problems and may result in lost data on the XA-Core.

Procedure 3-4 Verify MS load

ATTENTION

If the Message Switch is not loaded correctly escalate immediately.

Incorrect MS loads will cause subsequent ONP processes to fail and will jeopardize the conversion to XA-Core.

88k MAP terminal

1 Appl: Verify the Message Switch is loaded correctly. Both MS units must be loaded with the MS load file provided with the final shipment of ONP tapes.

At CI:

```
> REMLOGIN MS 0
> IMAGENAME
```

Observe the load name listed and verify correct.

```
> REMLOGOUT
> REMLOGIN MS 1
> IMAGENAME
```

Observe the load name listed and verify correct.

```
> REMLOGOUT
```

Ensure both MS units are correct with the same load level and release.

Note: When loading the Message Switch, refer to Updating Switch procedure in NTP 297-8991-303.

Procedure 3-5 Login inactive

88k MAP and XA MAP terminals

1 Login to the inactive (mate) XA-Core processor.

2 Appl: On the 88k MAP terminal type:

```
> MATEIO
> MATELOG <device>
```

where <device> is the name of the device that will serve the XA-Core (XA MAP terminal).

3 If using regular dialup ports (not X.25), sleep the active prompt on the XA MAP terminal.

```
> SLEEP 240 MINS
```

Note: Active side can be awakened any time using <break>hx or <break>stop.

4 On the XA MAP terminal type:

```
Enter username and password
Mate> OPERATOR OPERATOR
```

or

```
Enter username
Mate> OPERATOR
Enter password
Mate> OPERATOR
```

Procedure 3-6 Set date and header message

XA MAP terminal

1 **Appl**: Set the current date and header message on the XA-Core:

```
Mate> SETDATE <dd mm yyyy>
Mate> SETLOGMSG '<text>'
```

where <text> becomes the office header on the new software load. Using the old header as the model, change the Office Order (COEO), Product Code (or PCL level), and application date. Ensure all symbols at the beginning and end of the header message remain the same (including spaces). The opening and closing single quotes of the text are essential.

Procedure 3-7 Check logs XA-Core

XA MAP terminal

1 Appl: Check XA-Core (mate) logs to verify processor stability. Use LOGCHECK or open logs manually (TRAP, INIT, SWER, XAC, MS, MM, and IOP).

```
Mate> BCSUPDATE;LOGCHECK
Mate> QUIT
```

Do not continue until all logs have been explained.

2 Clear any traps.

```
Mate> TRAPINFO CLEAR
Please confirm ("YES", "Y", "NO", OR "N")
Mate> Y
```

Procedure 3-8 Download application files

88k MAP terminal

1 Appl: Verify the file(s) to be downloaded is correct for this job. Reference the information in the market-specific application file(s) for this purpose.

> ***Note:*** Based on Nortel Networks market requirements it may be necessary to download certain ONP application files (for example, FEATDATA) in order to complete the software upgrade. Which files to download and when they are downloaded will depend on the established process for each market. If required, download any market-specific application files(s) (such as FEATDATA) to the office. For certain markets this may already have been done during the Site Preparation phase.

2 Before downloading any file(s) search the active side storefile device (SFDEV) and ensure that no "old version" file(s) exists. An old version file is one that may have been left in storefile during a previous software upgrade.

```
> LISTSF ALL
```

If necessary erase any old version file(s) from SFDEV.

```
> ERASESF <old_version_file>
```

3 Download the file(s) to the 88k core SFDEV. After downloading is complete verify the file(s) is present.

```
> LISTSF ALL
```

4 Matecopy the needed file(s) to the XA-Core SFDEV.

Example:

```
> MATECOPY FEATDATA
```

Repeat for all needed files.

On the XA-Core, verify the file(s) is present.

```
Mate> LISTSF ALL
```

> ***Note:*** If the MATECOPY command fails, check the TABXFR status on the ACTIVE side (not INACTIVE). If the platform is set to anything other than STANDARD, change it to STANDARD and retry the MATECOPY command. If the command still fails, contact the Software Delivery hotline.

Example:

```
> TABXFR;STATUS
> SETUP XACORE
> QUIT ALL
```

Procedure 3-9 Table PADNDEV pointer

88k MAP terminal

1 Appl: Locate XA-Core patches that were downloaded before the ONP. The patches were downloaded to SFDEV or to another device.

Note: The purpose of this procedure is to set table PADNDEV for XA-Core patching. Table PADNDEV holds the name of the device(s) (up to three) that will be searched for patches during the mate-side patching process. The XA-Core side patches are patches that have been released for the new load since the undatafilled CM load was produced and shipped to the office. Normally, these patches are downloaded to the office before the scheduled cutover date.

2 Verify table PADNDEV is datafilled to point to the device(s) where XA-Core patches are found.

```
> TABLE PADNDEV;LIST ALL
```

If necessary make changes to table PADNDEV.

```
> QUIT
```

Note: If changes are made to PADNDEV, you can restore the original data after Cutover. In procedure "POSTSWACT" you will be reminded to restore table PADNDEV.

TABXFR procedures

This phase of the Cutover transfers the table data of the SNODE to the XA-Core using TABXFR. The SNODE processor remains IN-SYNC, and the MateCore link remains enabled.

Procedure 3-10 Bulletins before data transfer

88k MAP terminal

1 Appl: Verify and perform all applicable market-specific software delivery bulletins and workarounds before beginning the data transfer (TABXFR) process. Note that these may include Before LOADMATE, After LOADMATE, and Before MOVEBCS type bulletins.

Procedure 3-11 Office PARM verification

Office parameter (PARM) values for Cutovers are requested in advance and are based on the PCL and Processor Code specified for the load. The PARM information for each office will be found in market-specific application files. The PARM information files contain the values for any requested changes, new, and deleted parameters. Before starting the TABXFR process the office PARM information should be reviewed for accuracy. If a market-specific application file (such as FEATDATA) is to be used to set the office parameters during TABXFR, the file should be reviewed for correctness before starting the TABXFR process.

1 Office parameters on the XA-Core can be verified after TABXFR restores the engineering tables which contain the PARM changes. TABXFR will restore these tables early in the data transfer process. When verifying office PARMs on the XA-Core, the following rules will apply:

- Use the requested value found in the PARM information file. If there is no requested value use the reformatted value (the value restored by TABXFR).
- If there is no requested or reformatted value use the value found on the old software load (active side).
- If a PARM is new with no requested value use the default value.

Important: Office PARMS must be verified before the switch of activity (cutover) to the XA-Core.

Procedure 3-12 TABXFR setup

88k MAP and XA MAP terminals

1 Appl:Reset the BCSUPDATE increment.

```
> BCSUPDATE;RESET
> YES
> QUIT
```

2 If this was not done before, set up TRACECI to monitor the TABXFR process.

a From the 88k MAP (active) terminal perform a TRACECI.

```
> TRACECI DEVICE <device_name>
```

*where **<device_name>** is the name of the XA MAP (inactive) terminal.*

The XA MAP terminal displays:

```
This device is selected for TRACEing.
```

b From the XA MAP terminal initiate a test.

```
Mate> TRACECI TEST 'THIS IS A TEST'
```

The XA MAP terminal displays:

```
THIS IS A TEST
```

3 Set up and initialize the TABXFR platform used to perform the table transfers:

a Enter the TABXFR increment:

```
Mate> TABXFR
TABXFR:
```

b Set TABXFR to stop after one failure:

```
Mate> STOPIF 1
```

c Limit to 25 the number of failures allowed on a table:

```
Mate> LIMIT 25
```

d Set the type to XACORE.

```
Mate> SETUP XACORE

TABXFR type set to: XACORE.
```

Note: You can use the STATUS command at any time while in the TABXFR increment to display information about setup and status of the data transfer.

4 Perform this step to stop TABXFR after table ACTPATCH transfers for verification of the inactive ACT patch states, or omit this step and verify the inactive ACT patch states after TABXFR completes.

```
Mate> STOPXFR AFTER ACTPATCH

Mate> STATUS
```

5 Record Start to a printer to monitor the data transfer process.

Note: This step is left to operating company's discretion, and should be done only if the operating company wants to record the process on hardcopy.

Start recording using the following command for each dialup used by **Appl** (for a total of two printers):

```
> RECORD START FROM <XA MAP terminal> ONTO printer_name
```

The use of slow devices (such as Record Start) to monitor an application can slow down the application and extend the out-of-sync time. Avoid any unnecessary use of Record Start.

Procedure 3-13 Start TABXFR

88k MAP and XA MAP terminals

1 **Appl**: Start the data transfer:

a Start the data transfer using TABXFR as follows:

Mate> TABXFR;STATUS;STARTXFR;LOGOUT

Note: If X.25 do not logout.

TABXFR performs an automatic RESTART RELOAD after transferring each of the following tables: DATASIZE, NNASST (or CMSHELF), and TRKMEM. Following each restart, TABXFR will resume, starting from the next table listed in table DART.

Note: A list of empty headtables is sent to the XA-Core at the beginning of TABXFR. **The Applicator may** see empty sub tables not on the list being transferred. This is normal and is design intent.

b INACT if TABXFR was set to stop after table ACTPATCH (if upgrading from BASE04 and higher), verify all mate ACT patches did apply and activate properly. Make any necessary corrections before proceeding. Resume TABXFR by logging into the mate side and typing:

```
Mate> TABXFR

Mate> STOPXFR CLEAR AFTER ACTPATCH

Mate> STARTXFR;LOGOUT
```

c If a tuple does not restore properly on the XA-Core, TABXFR stops (depending on STOPIF and LIMIT) and identifies the headtable/subtable position in error.

For any failed table, resolve the tuple(s) in error by comparing the old and new tuples:

```
> DELTA table NOFILE
```

or

```
> DELTA table SUB subtable NOFILE
```

Note: `**** Table is recursive` means a tuple in this table is referenced by another table. You must transfer the recursive table before the original table can be successfully datafilled. Normally no action is needed to transfer a recursive-dependent table (TABXFR loops back as needed to datafill all referenced tuples).

d When it is necessary to access the inactive (mate) side to correct an error, verify there is a flashing 00`A1` on the inactive processor. Then login on the mate side and make the needed changes.

As an example:

> MATEIO

MATEIO setup successful

> MATELOG <device>

where <device> is the name of the XA MAP terminal.

Once the MATELOG command has completed the system will respond with the following prompt of the mate-side response on the XA MAP terminal.

Enter username and password

Mate>

Login on the mate side and perform any necessary work.

Reminder: It is important to note that all terminal responses from the mate and all commands to the mate must have the cursor preceded by the string: Mate>

e When finished working on the mate side, continue TABXFR and LOGOUT.

```
Mate> TABXFR;STARTXFR;LOGOUT
```

Note: Avoid unnecessary or extended login sessions on the mate side while TABXFR is running.

2 The following message indicates that TABXFR is complete:

```
INACT - data move completed
```

3 Check that the DIRP/billing media configuration for XA-Core is correct. Make sure that the DIRP tables and devices are ready on *both* cores.

Procedure 3-14 Print TABXFR reports

88k MAP and XA MAP terminal

1 Appl: Generate the final data transfer reports. This will include the table exception report.

a Only if RECORD START was not done previously, type the following.

```
> RECORD START FROM <terminal_id> ONTO <printer>
```

where <terminal_id> is the XA MAP terminal device, and <printer> refers to a printer used to collect the TABXFR information.

b On the XA MAP terminal generate the TABXFR report.

```
Mate> TABXFR;REPORT

Mate> QUIT
```

c To STOP recording to the printer, type the following.

```
> RECORD STOP FROM <terminal_id> ONTO <printer>
```

where <terminal_id> and <printer> are the devices used above.

Procedure 3-15 Check logs XA-Core

XA MAP terminal

1 **Appl**: Check XA-Core (mate) logs to verify processor stability. Use LOGCHECK or open logs manually (TRAP, INIT, SWER, XAC, MS, MM, and IOP).

```
Mate> BCSUPDATE;LOGCHECK
```

or list manually

```
Mate> QUIT
```

2 Print trap information for the XA-Core.

```
Mate> TRAPINFO
```

Determine the significance of any trap that might have occurred. To display the full trap information for each trap listed:

```
Mate> LOGUTIL

Mate> OPEN TRAP

Mate> TRAPINFO <trap_number>
```

Repeat for each trap.

3 To clear any traps.

```
Mate> TRAPINFO CLEAR
```

Please confirm ("YES", "Y", "NO", OR "N")

```
Mate> Y
```

4 Quit and log out.

```
Mate> QUIT ALL

Mate> LOGOUT
```

PreCutover procedures

In this phase of the Cutover, you transfer the dynamic office data to the XA-Core, and set the state of each peripheral to match that of the call-processing SNODE.

Appl:Instruct the Installer to place the switch in the Cutover configuration according to the Installation Method. This configuration provides the XA-Core with 2 CMIC links and will facilitate PreSWACT and Cutover to the XA-Core.

IMPORTANT:Wait for Installation personnel to confirm the Cutover configuration has been established before continuing.

Instl: In order to support PreCutover (and Cutover) activities establish the cutover configuration. This configuration consists of two core-to-MS links for each MS (one link from the SNODE CM to the MS, and one link from the XA-Core to the MS).

This section details steps required to prepare the office for Cutover to the XA-Core.

IMPORTANT Reminder to the operating company Site personnel should have by now verified their Test Calls Scripts. Any calling irregularities must be identified ahead-of-time to avoid unnecessary trouble-shooting after Cutover. If not already done-Site should now make the test calls that will be used to verify the new software load.

Procedure 3-16 BULLETINS before PreCutover

1 Appl: Verify and perform all applicable market-specific software delivery bulletins and workarounds before beginning the PreCutover procedure.

Procedure 3-17 Start PreSWACT

88k MAP terminal

1 Appl: Access the BCSUPDATE directory from the MAP level and start PreSWACT:

> BCSUPDATE

> PRESWACT

2 **Appl**: From the 88k or XA MAP terminal, correct any discrepancies identified by PreSWACT. Read the following notes while PreCutover is running.

Note 1: PreSWACT runs all steps required before the Cutover and flags them as completed when they pass. If a step fails to complete, PreSWACT will stop and give instructions. If this happens, follow the PreSWACT instructions to correct the problem (contact the site supervisor if necessary), and continue.

Example

```
TABLE_DELTA       executing
:
Table AMAOPTS ***Checksum incorrect, keys incorrect
:
TABLE_DELTA       not complete
ACT - Error: Inactive table data did not match.
Correct error condition. Enter Preswact to continue
```

For any table in error, investigate the problem by comparing the old and new tuples:

> DELTA table NOFILE

or

> DELTA table SUB subtable NOFILE

To continue, run PreSWACT again:

> PRESWACT

Note 2: PreSWACT step TABLE_DELTA can also display an information message without stopping. This message is not an error; rather, it is an indication that something is different between the old and new PCL. Note the information displayed, and at a convenient stopping point, compare the old and new loads to understand and validate the differences.

Example

TABLE_DELTA executing

:

Table ATTCONS ***Checksum incorrect, keys match

:

TABLE_DELTA complete

Note 3: PRESWACT steps STATUSUPDATE or STATUSCHECK may not complete due to the status of certain devices on the active or inactive side.

Example

```
STATUSUPDATE            executing

*** All devices on active side must be either ***
*** OK or OFFLINE before proceeding.          ***

The following devices are NOT OK and NOT OFFLINE:

Node Device
---- ------
LINK 2 on MPC 1
LINK 2 on MPC 5

STATUSUPDATE            not complete
```

In order to complete the steps successfully, it will be necessary to change the state of the device(s) identified to either IN-SERVICE (OK) or OFFLINE.

Note: The operating company is responsible for changing active side device states, and the Applicator is responsible for inactive side device states. If active side devices were changed (for example, OFFLINE), it will also be an operating company responsibility to restore these devices after the ONP is completed.

For the above example, to determine what IOC # and CARD # the MPC is on, enter the following command string:

```
> MAPCI NODISP;MTC;IOD;LISTDEV MPC
> QUIT ALL
```

Make corrections if required, then continue PRESWACT by typing:

> BCSUPDATE;PRESWACT

Note 4: A hardware conversion (such as LTC/LTCI) scheduled concurrently with the Cutover requires certain table changes, additions or deletions. PreSWACT step TABLE_DELTA detects any mismatch between the old and new data, and stops, indicating an error. If this happens, confirm that the table differences are caused by the conversion, resolve any differences, and continue PreSWACT.

Procedure 3-18 Check logs XA-Core

XA MAP terminal

1 **Appl**: Check XA-Core (mate) logs to verify processor stability. Use LOGCHECK or open logs manually (TRAP, INIT, SWER, XAC, MS, MM, and IOP).

```
Mate> BCSUPDATE;LOGCHECK
```

or list manually

```
Mate> QUIT
```

2 Print trap information for the XA-Core.

```
Mate> TRAPINFO
```

Determine the significance of any trap that might have occurred. To display the full trap information for each trap listed:

```
Mate> LOGUTIL

Mate> OPEN TRAP

Mate> TRAPINFO <trap_number>
```

Repeat for each trap.

3 To clear any traps.

```
Mate> TRAPINFO CLEAR
```

Please confirm ("YES", "Y", "NO", OR "N")

```
Mate> Y
```

4 Quit and log out.

```
Mate> QUIT ALL

Mate> LOGOUT
```

Procedure 3-19 PreCutover DIRP and billing

XA MAP terminal

1 Perform this procedure after PreSWACT has completed.

Site and Appl can work together to prepare both PRIMARY and PARALLEL DIRP billing subsystems for the Cutover.

If PRIMARY billing is on DPP/BMC do step 2.

If PRIMARY billing is on DISK perform step 3.

If PRIMARY billing is on TAPE perform step 4.

And, for all other DIRP preparation do step 5.

2 DPP/BMC PRIMARY billing

Make note of the following information for reference:

> MAPCI NODISP;MTC;IOD

> LISTDEV MTD;DIRP

Data to use when remounting.

> QUERY AMA

Note the STANDBY volume.

Important: Ask the operating company if any of the tape devices defined in table DIRPPOOL are poll-able devices (excluding parallel tapes); and if so, then what vendor? The following may apply to not only AMA, but also SMDR or other DIRP subsystem. This step only covers the example for AMA. Do not continue until all tape devices are verified.

- This step does not apply to other vendors poll-able devices (such as PDU, CGI, ECU, and others).
- In a pool of DPP or BMC volumes, field DEVTYPE in table DIRPPOOL should be 'DPP' (not 'TAPE').
- This step is not for BMC/TAPE COMBO.
- This step does not apply to parallel volumes.

Note: While performing this step, it may be convenient to have other devices mapped up in the display mode.

If DPP perform substep 2a below.

If BMC perform substep 2b below.

a DPP AMA preparation

For the following commands, <x> is the STANDBY volume.

```
> DMNT AMA T<x>
> YES
> ERASTAPE <x>
> YES
> MOUNT <x> FORMAT DPPAMA
> DEMOUNT T<x>
> MNT AMA T<x>
> YES
> QUERY AMA
```

Verify the STANDBY volume is mounted before continuing.

```
> ROTATE AMA
> YES
> QUERY AMA
```

Make note of the new STANDBY volume.

```
> DMNT AMA T<x>
> YES
> ERASTAPE <x>
> YES
> MOUNT <x> FORMAT DPPAMA
> DEMOUNT T<x>
> MNT AMA T<x>
> YES
> QUERY AMA
```

Ensure both Active and STANDBY are mounted and IOD alarms (AMA/DPP) are cleared in the MAP level before continuing.

```
> DPP AMA
> IDXMAINT CREATE FILE AMA
> YES
```

Verify in the MAP level that there are no IOD alarms as a result of this step.

```
> QUIT MAPCI
```

b BMC AMA preparation

Perform this substep only if both Active and Standby are BMC (not BMC and Tape).

For the following commands, <x> is the STANDBY volume.

```
> DMNT AMA T<x>
> YES
> ERASTAPE <x>
> YES
> MOUNT <x> FORMAT BMCAMA
> DEMOUNT T<x>
> MNT AMA T<x>
> YES
> QUERY AMA
```

Verify the STANDBY volume is mounted before continuing.

```
> ROTATE AMA
> YES
> QUERY AMA
```

Make note of the new STANDBY volume.

```
> DMNT AMA T<x>
> YES
> ERASTAPE <x>
> YES
> MOUNT <x> FORMAT BMCAMA
> DEMOUNT T<x>
> MNT AMA T<x>
> YES
> QUERY AMA
```

Ensure both Active and STANDBY volumes are mounted.

Verify in the MAP level that there are no IOD alarms as a result of this step.

```
> QUIT MAPCI
```

3 PRIMARY billing on DISK

If primary billing is on a disk perform the following.

```
> MAPCI NODISP;MTC;IOD;DIRP
> QUERY AMA
```

Note the STANDBY volume.

ROTATE any active billing subsystem (such as AMA SMDR OCC CDR).

Example

> ROTATE AMA
> YES
> QUERY AMA
(to verify rotated AMA)

If required by operating company policy copy unprocessed DIRP files to back-up tape (using DIRPAUTO or DIRPCOPY commands).

Verify that table DIRPHOLD contains no unprocessed billing files (if DIRPAUTO was used above).

4 PRIMARY billing on TAPE

If primary billing is on a tape (MTD) perform the following.

```
> MAPCI NODISP;MTC;IOD;DIRP
> QUERY AMA
```

Note the STANDBY volume.

ROTATE any active billing subsystem (such as AMA SMDR OCC CDR).

Example

> ROTATE AMA
> YES
> QUERY AMA
(to verify rotated AMA)

CLOSE the STANDBY file, and DMNT the STANDBY volume.

Example

> CLOSE AMA STDBY 1
> DMNT AMA T1

Remove the demounted STANDBY tape from the tape drive, and put up a new tape to be used as the next DIRP volume.

Prepare a new STANDBY volume as follows.

```
> MOUNT <x> FORMAT <volume_id>
```

where <x> is the STANDBY device number, and <volume_id> is the name of the STANDBY volume.

If prompted enter the first filename, or if system response is:

request aborted. Tape not expired (use ERASTAPE)

then select an unused or expired tape for formatting.

```
> DEMOUNT T<x>
```

Leave the STANDBY volume at load point and ON LINE. Then, immediately after Cutover it will become the ACTIVE volume of the appropriate subsystem.

5 DIRP DISK preparation

This step does not apply to DIRP devices already addressed above (that is, primary billing on DPP/BMC, DISK, or TAPE).

ROTATE any other DIRP DISK volumes before SWACT.

```
> MAPCI NODISP;MTC;IOD;DIRP
```

```
> QUERY <dirp_subsystem>
```

where <dirp_subsystem> can be DLOG, SMDR, OM, JF, and others

```
> ROTATE <dirp_subsystem>
```

6 Parallel DIRP

App Applicator should make a note of how the PARALLEL devices are allocated in table DIRPPOOL.

Site The operating company is responsible to recover parallel AMA as required after Cutover. Parallel DDU should come up automatically, parallel tape will have to be remounted, preferably with new tape.

Note: DIRP does not support parallel AMA recording on a DPP or BMC volume. Table control prohibits the filling of devtype DPP in a parallel pool.

ATTENTION

Recently recorded parallel data may be overwritten.

Site should copy the parallel files to tape to prevent loss of parallel data if this is the operating company policy.

If a single parallel volume is in use, information on the volume will be lost over Cutover.

If more than one parallel volume is allocated, DIRP will start recording after Cutover on the volume with the oldest timestamp. Hence, information on that volume will be lost over Cutover.

Cutover and PostCutover procedures

This section details the steps required to perform a Cutover and instructs **Site** to test the new XA-Core load. At the end of this phase, the XA-Core replaces the CM core as the active Office core.

> **ATTENTION**
>
> All PreCutover steps must be complete *before* Cutover can start. You must complete PreSWACT successfully before executing the cutover command.

IMPORTANT: In order to support the cutover activities, **Instl** must confirm that the Cutover configuration is established. This configuration (which was also a requirement for PreSWACT) consists of two core-to-MS links for each MS (one link from the SNODE CM to the MS, and one link from the XA-Core to the MS).

Procedure 3-20 Bulletins before Cutover

1 Appl: Verify and perform all applicable market-specific software delivery bulletins and workarounds before beginning the Cutover and PostCutover procedures.

Procedure 3-21 Before starting Cutover

1 Site: Do not continue until both the operating company and Nortel Networks on-line support agree to proceed.

2 Contact high profile customers and customers with essential services (police and emergency bureaus, hospitals, radio stations) to check that they are not in emergency call processing mode.

3 Make sure that no additional activity is performed on the DPP, if provisioned, including DPP polling or disk backup. Inform the downstream processing center.

4 Disable all polling and periodic testing. There must be no activity on the SuperNode CM, MS, and CLOCK until cleared by Appl. Failure to comply can result in a system restart.

5 Make sure that REGISTER readings have been taken (if these readings are required in your office). Switch usage is monitored under the REGISTER MAP level.

6 Dump SPMS register information to a printer if needed by the operating company. This refers to the Switch Performance Monitoring System (SPMS) data.

Procedure 3-22 Start logs before Cutover

88k MAP terminal

1 **Appl**: Set up LOGS for Cutover:

Note: The purpose of this step is to turn on logs at the 88k MAP terminal. Normally, logs are also routed to a printer at the beginning of the session.

a Stop LOGS:

```
> LOGUTIL;STOP
```

b Delete the device:

```
> DELDEVICE <device_name>
```

*where <**device_name**> is the 88k MAP terminal*

c Add replacement device:

```
 > ADDREP <device_name> SWCT CM MS IOD DIRP AFT DRM
```

d Start the log on **device**:

```
> START
```

If a different terminal device was selected above, use:

```
>STARTDEV <device_name>
```

e Quit out of LOGUTIL:

```
> QUIT
```

Procedure 3-23 Run STATUSCHECK

88k MAP terminal

1 AppL: Run STATUSCHECK to compare hardware status of the active SNODE and the inactive XA-Core. (Status must be OK, OFFLINE, or UNEQUIPPED.) This step also verifies communication with the inactive (mate) side.

Note: STATUSCHECK may cause a restart on the inactive side (watch the inactive RTIF). If the inactive side does restart, it should initialize and come back to a flashing 00A1.

a

```
> BCSUPDATE;SWACTCI;STATUSCHECK
```

b Ensure the STATUSCHECK passes (active and inactive sides match).

If STATUSCHECK fails, investigate and correct any hardware mismatches and any devices not OK or OFFLINE. Once all problems have been corrected, rerun STATUSCHECK and ensure it passes.

Note: The operating company is responsible for changing active side device states, and the Applicator is responsible for inactive side device states.

Procedure 3-24 Check logs XA-Core

XA MAP terminal

1 **Appl**: Check XA-Core (mate) logs to verify processor stability. Use LOGCHECK or open logs manually (TRAP, INIT, SWER, XAC, MS, MM, and IOP).

```
Mate> BCSUPDATE;LOGCHECK
```

or list manually

```
Mate> QUIT
```

2 Print trap information for the XA-Core.

```
Mate> TRAPINFO
```

Determine the significance of any trap that might have occurred. To display the full trap information for each trap listed:

```
Mate> LOGUTIL

Mate> OPEN TRAP

Mate> TRAPINFO <trap_number>
```

Repeat for each trap.

3 To clear any traps.

```
Mate> TRAPINFO CLEAR
```

Please confirm ("YES", "Y", "NO", OR "N")

```
Mate> Y
```

4 Quit and log out.

```
Mate> QUIT ALL

Mate> LOGOUT
```

Procedure 3-25 Cutover

88k MAP terminal

1 **Appl:** Access the CUTSWACTCI directory from within the XARETRO increment:

```
> XARETRO

XARETRO:

> CUTSWACTCI

CUTSWACTCI
```

2

ATTENTION

For this step, it is extremely important that you understand which type of cutover is to be performed for your particular customer because they have drastically different outage times.
The NA100 market will use NORESTARTCUTOVER.
In the wireless market,
GSM loads will use RESTARTCUTOVER,
MTX08 loads will use RESTARTCUTOVER,
MTX09 and later MTX loads will use NORESTARTCUTOVER
If you are unsure of which command to use, consult with the next level of support.

Appl and **Instl**: Run Cutover:

a If your Office supports NoRestartCutover (recommended procedure):

```
CUTSWACTCI:
> DATE;NORESTARTCUTOVER
```

Example

```
ACTIVE DEFAULT SETTINGS:
NOMATCH set OFF
Do you to continue?
Please confirm ("YES" or "NO")
...Starting WarmSWACT now.
```

NoRestartCutover is under way when the numbers begin to roll on the XA-Core RTIF.

b If your Office does *not* support NoRestartCutover:

```
CUTSWACTCI:
> DATE;RESTARTCUTOVER
Beginning Swact Checks:
```

RestartCutover is under way when the numbers begin to roll on the XA-Core RTIF.

3 **Appl:** You can view the current status of Cutover at any time:

```
XARETRO:
> STATUS
```

4 Instl: At the XA-Core RTIF, monitor the Cutover and inform the Applicator as soon as there is a flashing 00A1.

IMPORTANT: Start Post-Cutover immediately after the end of Cutover.

ATTENTION

In the unlikely event of an Abort, you will need to manually propagate any changes you made on the XA-Core beyond this point.

Nortel Networks recommends that the office go into a data freeze until the beginning of the de-commissioning phase, with no data changes allowed.

Note 1: **Instl**: Refer to Installation Method 78-6134 or 78-6135 for further requirements before starting PostCutover procedures. Immediately after the cutover, continue with Procedure 7- Cutover continuing with step 3.

Note 2: **Site:** As soon as the XA-Core returns to flashing 00A1, the operating company should commence with the test call plans beginning with critical calls.

Procedure 3-26 PostCutover

MAP terminal (Both terminals are now served by the XA-Core)

1 Appl: Immediately after cutover, Installation and Site will continue with their activities. The Applicator is to proceed with the below procedures in parallel. Login and start POSTSWACT:

Type:

<break>

?LOGIN

Enter username and password

> <username> <password>

or

> <username>

> <password>

2 Verify the date and time are correct.

```
> DATE
```

3 IMPORTANT: Instruct the operating company to perform a 911 test call. If the test call fails to complete, contact Nortel Networks Emergency Recovery immediately to prepare the office for a revert to the old load. If the test call is successful, continue and begin POSTSWACT.

4 Start POSTSWACT.

```
> BCSUPDATE;POSTSWACT
```

Note: POSTSWACT runs all steps required after the Cutover and sets them as complete when they pass. If any step fails to complete, POSTSWACT will stop and give additional information. Use the information given to investigate and correct the problem. After making corrections, continue running POSTSWACT by typing:

```
> POSTSWACT
```

(still in BCSUPDATE)

If no problems are encountered, POSTSWACT stops after step BEGIN_TESTING and waits until the operating company verifies the sanity of the current load.

5 IMPORTANT: After starting POSTSWACT, ensure the following actions take place:

a System recovery of all DIRP billing subsystems,

b System recovery of any critical alarms,

c Operating company begin Test Calls, and

d System logs are monitored for office stability.

Procedure 3-27 Recover billing

Billing server

1 **Site and Appl:** POSTSWACT recovers PRIMARY (regular) billing subsystems (such as AMA SMDR OCC CDR). Confirm that affected DIRP subsystems were successfully activated. If billing is on tape manually assign the STANDBY volumes. Then the site can manually bring up the PARALLEL subsystem as required.

2 Query the AMA subsystems.

```
> MAPCI;MTC;IOD;DIRP
```

```
> QUERY AMA ALL
```

(note which volume is ACTIVE)

3 If DPP or BMC, call downstream processing to POLL billing data. (Polling is optional. It may also be done after test calls are completed.)

4 TAPEX volumes must be manually remounted using the DIRP MNT command.

5 As needed, assign STANDBY billing devices for TAPE and DPP/BMC.

For details refer back to the "DIRP and billing procedure" in the PRESWACT procedure section.

6 If using SMDR rotate the SMDR volume from the DIRP level of the MAP. (This will ensure the RECORD HEADER is correct.)

If SMDR recording is on BMC and NO standby volume is available, then mount a temporary STDBY TAPE volume. Rotate the BMC port OUT and back IN. Remove the tape volume after this is done.

Note: Since some SMDR recording applications on BMC collect SMDR records based on the customer group ID only, this ensures that any changes to the customer group IDs are passed to the BMC upon rotate (and the RECORD HEADER is correct).

7 As needed, bring up PARALLEL devices.

8 Verify all regular and parallel devices are working for all available billing subsystems in DIRP.

Procedure 3-28 Monitor logs after Cutover

MAP terminal

1 Appl: Monitor LOGS after the Cutover then do a LOGCHECK.

Note: The purpose of this step is to turn on active-side logs at the XA MAP terminal. Any other terminal device may also be used. Logs can also be routed to a printer for the remainder of this session.

a

```
> LOGUTIL;OPEN SWCT;BACK ALL
```

This prints out SWACT time, SWACT duration and other SWACT information.

b

```
> LOGUTIL;START;QUIT
```

This starts logs on this device. If a different terminal device is desired, then use >STARTDEV <device>.

c Let logs run for at least 30 minutes, then run LOGCHECK.

```
> LOGUTIL;STOP;QUIT
```

```
> BCSUPDATE;LOGCHECK;QUIT
```

d When LOGCHECK is done, start logs again and let run until monitoring is completed. (Repeat substep b.)

Procedure 3-29 Perform test plan

MAP terminal

1 **Site**: Execute the test plan defined in the Planning stages (see your *Upgrade Planning* Installation Method for more information). Do not continue with the cutover process until all portions of the test that can be done have completed successfully.

2 **Appl**: Once test calls are completed in the step above, complete POSTSWACT.

```
> BCSUPDATE; POSTSWACT
```

3 Start journal file and verify started.

a

```
> JF START
```

b

```
> Y
```

c

```
> MAPCI;MTC;IOD;DIRP
```

d

```
> QUERY JF ALL
```

QUERY JF should respond with AVAIL. If a standby device is being used, both active and standby volumes should be marked AVAIL.

e

```
> QUIT ALL
```

Procedure 3-30 PostCutover clean up

At your location

1 **App/ACT:** Clean up SFDEV by erasing any application-related files (for example: FEATDATA, SITEINFO, and DIRP_INAC).

2 **Site/ACT:** For security Telco should verify passwords for users ADMIN and OPERATOR.

3 **Site/ACT:** Reassign all current PROFILE information (LOGIN or RESTART) in SFDEV.

4 **Site/ACT:** Reassign any temporary log ROUTING setup via LOGUTIL.

5 **Site/ACT:** If table PADNDEV was manually changed for mate-side patching, restore the original data in this table to point to the correct patch download device(s).

6 **Site/ACT:** Reassign any changes in the INTEG level of the MAP (for example, UPTH, BUFFSEL, FILTER and others).

7 **Site/ACT:** Return PORTS and USER information back to original values.

8 **Site/ACT:** Notify DNC end users to LOGIN the DNC.

9 **Site/ACT:** If Network Management code blocking was removed earlier, have Network Maintenance personnel restore code blocking active.

Procedure 3-31 Logout

At your location

1 **APPL:** LOGOUT of all terminals.

List of terms

ACDGRP

Automatic Call Distribution Group.

AMA

Automatic Message Accounting.

Appl

See *Applicator*.

Applicator (Appl)

The software Applicator is the software delivery engineer from Nortel Networks.The Applicator connects to the Office from a remote location.

BCS

Batch Change Supplement.

BMC

Billing Media Converter.

Cabinet XA-Core

The XA-Core cabinet installed during an Extension Cabinet cutover, or the portable XA-Core used during a Shelf Replacement cutover.

CDR

Call Detail Recording.

CI

Command Interpreter.

CM

Computing Module.

CMMNT

Communication Memory Management Network.

CPU

Central Processing Unit.

CRSFMT

Call Record Stream Format Table.

CSP

Communication Services Platform.

Cutover

With an uppercase c, *Cutover* refers to RestartCutover and NoRestartCutover. With a lowercase c, *cutover* refers to the process of upgrading the hardware and software of a SuperNode switch to XA-Core.

CUTSWACTCI

Cutover SWACT Command Interpreter.

DART

Dump And Restore Table.

DAT

Digital Audio Tape.

DDU

Disk Drive Unit.

DIRP

Device Independent Recording Package.

DISKUT

Disk Utility.

DMS

Digital Multiplex System.

DPP

Distributed Processing Peripheral.

Extension Cabinet cutover

Type of cutover where an XA-Core in its own cabinet replaces the CM/SLM of the SuperNode.

FEATDATA

Feature Data.

FP

File Processor.

FX

Foreign Exchange.

IMGSCHED

Image Schedule.

Installer (Instl)

The Installer is the technician from Nortel Networks. The Installer performs the hardware upgrade procedures, and works at the Office site.

Instl

See *Installer*

IOC

Input/Output Controller.

ISN

Integrated Services Node.

LTC

Line/Trunk Controller.

LTCI

ISDN Line/Trunk Controller.

MAP

Maintenance and Administration Position.

MIS

Management Information System.

MM

Mismatches.

MS

Message Switch.

NNASST

refer to Table NNASST

NOC

Night of Cutover.

NONRES

Non-resident software tools (loaded only for the duration of the cutover process).

NTP

Northern Telecom Publication.

OCGRP

Operator Centralization Group.

OFCENG

Office engineering table

OFCSTD

Office standard table

OFCVAR

Office variable table

Office

The Telco switch that is upgraded to XA-Core.

ONP

One Night Process.

PARM

Parameter downloading.

PARMCHGS

Parameter changes

PATADM

Patch administration

PCL

Product CM (Computing Module) Load.

PM

Peripheral Module.

PRS

Problem Report System.

REX

Routine exercise.

RTIF

Reset Terminal Interface.

SCSI

Small Computer System Interface.

SFDEV

Storefile Device.

Shelf Replacement cutover

Type of cutover where an XA-Core shelf replaces the CM/SLM shelves in the SuperNode cabinet.

Shelf XA-Core

The XA-Core shelf installed in the SuperNode cabinet in a Shelf Replacement cutover.

Site

Site is the Telco personnel that helps the Installer and the Applicator. *Site* works at the Office site.

SLM

System Load Module

SMDR

Station Message Detail Recording.

SOC

Software optionality control.

SR

Service Request.

SSC

Subsystem Clock.

SWACT

Switch of Activity.

TAS

Technical Assistance Service.

Telco

Telephone company.

TOPS

Traffic Operator Position System.

TRKMEM

Trunk member.

XA

Extended Architecture.

XADAT

XA-Core Digital Audio Tape.

XARETRO

XA-Core Retrofit.

XPM

Extended Peripheral Module.

Appendix A Checklist for shelf replacement cutover

Site preparation checklists

Table D-1 Prepare SuperNode for upgrade (Sheet 1 of 2)

Procedure	Done by	Start[a]	Date and time completed	See page
Site performs initial test plan	S	-35 days		page 2-2
Upgrade office software to baseline	S	-35 days		page 2-2
Check upgrade tapes	S			page 2-2
Load peripheral module patches	S			page 2-3
Upgrade MS	I			page 2-3
Check disk space	S			page 2-3
Save image	S			page 2-4
Set up logs	S			page 2-4
Test processors	S			page 2-5
Clean storefile	S			page 2-7
Check table OCGRP	S			page 2-8
Datafill table ACDGRP	S			page 2-9
Perform test plan	S	-30 days		page 2-9
Run precheck	S			page 2-9

Table D-1 Prepare SuperNode for upgrade (Sheet 2 of 2)

Procedure	Done by	Start[a]	Date and time completed	See page
Run AUTOTABAUDIT	S			page 2-10
Load cutover software on CM	I			page 2-13

a.Number of days before night of cutover.

Table D-2 Prepare XA-Core cabinet for upgrade

Procedure	Done by	Start[a]	Date and time completed	See page
Install and commission cabinet XA-Core	I	-35 days		page 2-13
Load cutover software on cabinet XA-Core	I			page 2-13
Integrate cutover devices	I	-28 days		page 2-13
Plan DIRP/billing media configuration	S I	-22 days		page 2-13
Perform prechecks	S			page 2-14
Transfer SLM files to cabinet XA-Core	S I	-22 days		page 2-14

a.Number of days before night of cutover.

Switch of activity procedures

Cutover procedures to the XA-Core cabinet.

Table D-3 Cutover to XA-Core cabinet (Sheet 1 of 3)

Procedure	Done by	Start[a]	Date and time completed	See page
Preliminary phase procedures				page 3-3
Perform test plan	S			
Prepare office for cutover	S I			
Perform PreCutover tests	S I			
Perform SLM data transfer	S I			
Remote login	S A I			page 3-3
Check SuperNode logs	A			page 3-4

Table D-3 Cutover to XA-Core cabinet (Sheet 2 of 3)

Procedure	Done by	Start[a]	Date and time completed	See page
Stop the journal file	S A			page 3-5
Set date and header message	A			page 3-8
Download application files	A			page 3-10
Save PARM values	A			
Check XA-Core logs	A			page 3-9
TABXFR procedures				page 3-12
TABXFR setup	S A			page 3-14
Start TABXFR	A			page 3-16
Print TABXFR reports	A			page 3-18
Trapinfo inactive	A			page 3-19
PreCutover procedures				page 3-20
PreCutover configuration set up	S I			
Start PreCutover	A I			page 3-21
PreCutover DIRP and billing	S A I			page 3-24
Logout DNC	S A			
Table CRSFMT alarm	A			
Cutover and PostCutover procedures				
Before starting Cutover	S A			page 3-30
Restore special logs	A			
Start logs before Cutover	A			page 3-31
Establish communication with inactive side	A			
Check XA-Core logs	A			page 3-33
Cutover	A I	-22 days		page 3-34
PostCutover	S A I			page 3-35
Soak office	S			

Table D-3 Cutover to XA-Core cabinet (Sheet 3 of 3)

Procedure	Done by	Start[a]	Date and time completed	See page
Check table OCGRP	S			
Recover billing	S			page 3-36
Perform test plan	S			page 3-39
PostCutover clean up	S I	-17 days		page 3-40

a.Number of days before night of cutover.

Table D-4 Cutover to XA-Core shelf

Procedure	Done by	Start[a]	Date and time completed	See page
Install shelf XA-Core in SuperNode cabinet	I	-15 days		
Commission shelf XA-Core	I	-10 days		
Load Cutover software in shelf XA-Core	S I			
Integrate optical switchboxes	I	-8 days		
Transfer data to shelf XA-Core	S I	NOC		
Prepare for Cutover to shelf XA-Core	S I			
Perform PreCutover tests	I			
Perform limited PreSWACT	I			
Cutover to shelf XA-Core		NOC		
Clean up after Cutover	S I			
Perform test plan	S			
De-integrate optical switchboxes	I			
De-commission cabinet XA-Core	I	+5 days		
Unload software tools	I			
Run final test plan	S			

a.Number of days before night of cutover.

Appendix B Checklist for extension cabinet cutover

Site preparation checklists

Table E-1 Prepare SuperNode for upgrade (Sheet 1 of 2)

Procedure	Done by	Start[a]	Date and time completed	See page
Site performs test plans	S			page 2-2
Upgrade office software to baseline	S	-15 days		page 2-2
Check upgrade tapes	S			page 2-2
Load peripheral module patches	S			page 2-3
Upgrade MS	I			page 2-3
Check disk space	S			page 2-3
Save image	S			page 2-4
Set up logs	S			page 2-4
Test processors	S			page 2-5
Clean storefile	S			page 2-7
Check table OCGRP	S			page 2-8
Datafill table ACDGRP	S			page 2-9
Perform test plan	S			page 2-9
Run precheck	S			page 2-9

Table E-1 Prepare SuperNode for upgrade (Sheet 2 of 2)

Procedure	Done by	Start[a]	Date and time completed	See page
Run AUTOTABAUDIT	S			page 2-10
Load cutover software on CM	I			page 2-13

a.Number of days before night of cutover.

Table E-2 Prepare XA-Core cabinet for upgrade

Procedure	Done by	Start[a]	Date and time completed	See page
Install and commission cabinet XA-Core	I	-14 days		page 2-13
Load cutover software on cabinet XA-Core	I			page 2-13
Integrate cutover devices	I	-6 days		page 2-13
Plan DIRP/billing media configuration	S I	NOC		page 2-13
Perform prechecks	S			page 2-14
Transfer SLM files to cabinet XA-Core	S I	NOC		page 2-14

a.Number of days before night of cutover.

Switch of activity procedures

Table E-3 Cutover to XA-Core cabinet (Sheet 1 of 3)

Procedure	Done by	Start[a]	Date and time completed	See page
Preliminary phase procedures				
Perform test plan	S			
Prepare office for cutover	S I			
Perform PreCutover tests	S I			
Perform SLM data transfer	S I			
Remote login	S A I			page 3-3
Check SuperNode logs	A			page 3-4

Table E-3 Cutover to XA-Core cabinet (Sheet 2 of 3)

Procedure	Done by	Start[a]	Date and time completed	See page
Stop the journal file	S A			page 3-5
Set date and header message	A			page 3-8
Download application files	A			
Save PARM values	A			
Check XA-Core logs	A			page 3-9
TABXFR procedures				
TABXFR setup	S A			page 3-14
Start TABXFR	A			page 3-16
Print TABXFR reports	A			page 3-18
Trapinfo inactive	A			page 3-19
PreCutover procedures				
PreCutover configuration set up	S I			
Start PreCutover	A I			page 3-21
PreCutover DIRP and billing	S A I			page 3-24
Logout DNC	S A			
Table CRSFMT alarm	A			
Cutover and PostCutover procedures				
Before starting Cutover	S A			page 3-30
Restore special logs	A			
Start logs before Cutover	A			page 3-31
Establish communication with inactive side	A			
Check logs inactive XA-Core	A			page 3-33
Cutover	A I			page 3-34
PostCutover	S A I			page 3-35
Soak office	S			

Table E-3 Cutover to XA-Core cabinet (Sheet 3 of 3)

Procedure	Done by	Start[a]	Date and time completed	See page
Check table OCGRP	S			
Recover billing	S			page 3-36
Perform test plan	S			page 3-39
PostCutover clean up	S I			page 3-40

a.Number of days before night of cutover.

Table E-4 Clean up after extension cabinet cutover

Procedure	Done by	Start[a]	Date and time completed	See page
De-integrate cutover devices	I			
De-commission CM/SLM	I			
Unload software tools	S I			
Run final test plan	S			

a.Number of days before night of cutover.

Appendix C Abort procedures

Abort procedures

This section details the steps required to abort the cutover procedure. Follow the procedures below to perform a controlled revert to the CM pre- or post-Cutover.

Note 1: The following procedures must be completed by the on-site Installer. Please see Installation Method 78-6134 for SuperNode or Installation Method 78-6135 for SuperNode SE.

Note 2: The Applicator is responsible for performing any abort of the cutover during TABXFER, and for cleaning up the old (CM) core.

Recover primary billing

You can recover primary billing after an Abort since the datafill for the DIRP billing device(s) should still be valid on the old (CM) core.

To recover primary billing if there is an abort:

- Before reverting to SuperNode: on the SuperNode, check that datafill causes primary billing to rotate and come up active on the SuperNode after the Revert.
- Revert to SuperNode.
- Recover primary and standby billing on the active SuperNode, and bring up parallel devices as needed.

Abort from data transfer prior to Cutover

Procedure F-1 Abort from data transfer configuration (COD 1 toggled to XA)

At the MAP terminal

1 Instl: At the CM MAP level enter:

```
>MATECORELINK BSY
```

2 Toggle COD 1, located in Slot 13R of the XA-Core shelf, back to the CM position.

3 Instl: Return the link to service by entering:

```
>MS
```

For a SuperNode enter:

```
>SHELF 0; CARD 25
>RTS 1 PORT 0
```

For a SuperNodeSE enter:

```
>SHELF 0; CARD 4
>RTS 1 PORT 1
```

At the CM_MAP

4 Appl: To abort TABXFER, type:

```
>TABXFR;CANCEL
>BCSUPDATE;ABORT_PRESWACT
```

5 Appl: Clean up any files in sfdev that were created by the cutover process (for example, STD$LNS2, HAZ$LNS2, INB$TRKS2).

Abort from cutover configuration prior to Cutover

Procedure F-2 Abort from cutover configuration prior to cutover (CODs 1 and 2 toggled to XA)

At the MAP terminal

1 Instl: Drop the Matecore link by typing:

```
>QUIT ALL
>XARETRO
>MATECORELINK BSY
```

Confirm the busy by typing:

```
>Y
```

2 Instl: Confirm that the Matecore link is dropped by typing:

```
>MATECORELINK STATUS
```

3 Instl: Toggle the switch in COD 1, located in slot 13R of the XA-Core shelf, back to the CM position.

Note: The LEDs on the COD that was toggled now indicate that the MS is connected to the CM; CM LED is now illuminated.

4 Instl: Return the link to service from MS1 to CPU0 by typing:

```
>MAPCI;MTC;MS
```

For a SuperNode enter:

```
SHELF 0; CARD 25
>RTS 1 PORT 0
```

For a SuperNodeSE enter:

```
>SHELF;CARD 4
>RTS 1 PORT 1
```

5 Instl: Toggle the switch on COD 2, located in slot 6R of the XA-Core shelf, back to the CM position.

Note: The LEDs on the COD that was toggled now indicate that the MS is connected to the CM; the CM LED is illuminated.

6 Instl: Return to service the link from MS0 to CPU1 by typing:

```
>MAPCI;MTC;MS
```

For a SuperNode enter:

```
>SHELF;CARD 25
>RTS 0 PORT 0
```

For a SuperNodeSE enter:

```
>SHELF; CARD 4
>RTS 0 PORT 1
```

At the CM_MAP

7 Appl: To abort TABXFER, type:

```
>TABXFR;CANCEL
>BCSUPDATE;ABORT_PRESWACT
```

8 Appl: Clean up any files in sfdev that were created by the cutover process (for example, STD$LNS2, HAZ$LNS2, INB$TRKS2).

Abort from cutover configuration post Cutover

Warning: ETAS support must be available to assist with this procedure. This procedure must only be done in extreme emergency situations that require the CM to regain control of the switch.

Procedure F-3 Abort from cutover configuration post Cutover

At the RTIF terminal

1 Instl: Perform a restart reload from the CM_RTIF by typing:

```
>RESTART RELOAD ACTIVE
```

Note: If you do not have a CI prompt type the following at the INACTIVE CM_RTIF:

```
\OVERRRIDE

\JAM

Y
```

At the ACTIVE CM_RTIF type:

```
\RESTART RELOAD

Y
```

When the ACTIVE CM_RTIF shows CCA0 in the banner, type the following at the INACTIVE CM_RTIF:

```
\RELEASE JAM

Y
```

When prompted enter login name and password, log into the ACTIVE CM-RTIF using the username and password given by the operating company.

At the XA MAP terminal

2 Instl: Busy links through COD 1 and COD 2 by typing:

```
>MAPCI;MTC;MS;SHELF

>CARD 25

>BSY 0 PORT 0

>BSY 1 PORT O
```

3 Instl: Toggle the switch on COD 1, located in slot 13R of the XA-Core shelf, back to the CM position.

4 Instl: Toggle the switch on COD 2, located in slot 6R of the XA-Core shelf, back to the CM position.

At the RTIF terminal

5 Instl: At the CM_RTIF terminal check that the MCs on the CM are either ISTB or INSV by typing:

```
>CM;MC
>PRINTMAP
```

If MC 0 is not ISTB or Inservice then RTS MC 0 by typing:

```
>RTS 0
>PRINTMAP
```

Confirm that MC 0 is now either ISTB or Inservice.

If MC 1 is not ISTB or Inservice then RTS MC 1 by typing:

```
>RTS 1
>PRINTMAP
```

Confirm that MC 1 is now either ISTB or Inservice.

6 Instl: Access the XARETRO tools level by typing:

```
>XARETRO
>COREGOACTIVE
```

When prompted to toggle all the COD switches to the CM side confirm by typing:

```
>Y
```

7 Instl: Ensure that the RTIF is indicating a flashing A1.

At the MAP terminal

8 Instl: The MAP is now controlled by the CM. At the prompt type:

```
><BREAK>
<BREAK>
>??LOGIN
```

When prompted enter login name and password, log into the MAP using the username and password given by the operating company.

9 Site: Have ETAS and the operating company ensure that billing is brought online and that the peripherals are up and running. The operating company must perform critical call testing.

10 Instl: Reconnect the two RTIF RIB keys on the RTIF circuit packlets in slots 15RU and 4RU on the XA-Core shelf.

At the CM_MAP

11 Appl: To abort TABXFER, type:

```
>TABXFR;CANCEL
>BCSUPDATE;ABORT_PRESWACT
```

12 Appl: Clean up any files in sfdev that were created by the cutover process (for example, STD$LNS2, HAZ$LNS2, INB$TRKS2).

TABXFR

Abort TABXFR

Use the following procedure to abort TABXFR. You can then schedule TABXFR again.

Aborting TABXFR resets office parameter DUMP_RESTORE_IN_PROGRESS in table OFCSTD to *N*. It also enables Patcher/PRSM and turns on AUTODUMP and AUTOPATCH.

Procedure F-4 Abort TABXFR

At the MAP terminal

1 **Appl**: To abort TABXFR, type:

```
> BCSUPDATE;ABORT_PRESWACT
> TABXFR;CANCEL
> QUIT ALL
```

Interrupt TABXFR

You can interrupt TABXFR two ways:

- HALT: Used most of the time. Stops after the data transfer of the current table is complete.
- HALT NOW: Used to stop the data transfer of a long table.

Procedure F-5 Interrupt TABXFR using HALT

At the XA_RTIF terminal

1 **Appl**: Halt TABXFR after the data transfer of the current table is complete by typing:

```
Mate> HALT
```

Procedure F-6 Interrupt TABXFR using HALT NOW

At the XA_RTIF terminal:

1 **Appl**: Halt TABXFR immediately, even in the middle of a table by typing:

```
Mate: HALT NOW
```

Procedure F-7 Restart TABXFR

At the XA_RTIF terminal

1 **Appl**: Restart the TABXFR data transfer from the last table successfully completed by typing:

```
Mate> STARTXFR
```

Appendix D Additional procedures

Billing server procedures

Billing server (FP) upgrade procedures and the related abort procedures are found in Chapter 2 of the *UCS DMS-250 One Night Process Procedures Guide,* NTP 297-2621-303.

TABAUDIT procedures

About TABAUDIT

TABAUDIT (Table Audit) checks table data integrity. Reports are produced for generic table checks, syntax checks, and table-specific data checks including routing checks. TABAUDIT is available for all tables and is executed on the active side with the switch in sync. Nortel Software Delivery recommends automatic scheduling of TABAUDIT (AUTOTABAUDIT) instead of manual TABAUDIT. (For information about manual TABAUDIT, see "Manual TABAUDIT" on page G-3.)

Note: A manual TABAUDIT session occupies the terminal device until completed. To minimize terminal use, use AUTOTABAUDIT to run a scheduled TABAUDIT on all tables (AUTOTABAUDIT does not occupy the user's terminal).

The total time to complete a scheduled TABAUDIT session varies depending on the number and size of all office tables. You may have to schedule multiple sessions to check all the tables in the office.

Note: TABAUDIT must finish with no errors on all tables in the office before the upgrade. Correct any table errors identified by TABAUDIT and run TABAUDIT again on those tables. Failure to correct table errors can cause problems during the upgrade and can put to risk the software upgrade.

Refer serious table errors to your local translations department. For additional support, contact your Nortel regional customer representative

ATTENTION

Review all customer service bulletins about TABAUDIT and notices before trying to correct any table errors.

The bulletins and notices will alert you to any known table errors identified by TABAUDIT. You can ignore known table errors as they do not require any corrective action.

This procedure does not use all of the AUTOTABAUDIT options available to the user. Use the help command to generate a list of all the commands in the TABAUDIT or AUTOTABAUDIT directory.

Automatic TABAUDIT

AUTOTABAUDIT checks table data integrity without external help. You can access the AUTOTABAUDIT directory from the TABAUDIT directory.

Use the AUTO command to access AUTOTABAUDIT from the TABAUDIT directory. The AUTO command has the following exceptions, restrictions, and limits:

- Only one user at a time can access the AUTOTABAUDIT directory.
- You must define a list of session parameters from within the AUTOTABAUDIT level before executing AUTOTABAUDIT.
- You can do only one AUTOTABAUDIT session at a time; however, you can schedule multiple AUTOTABAUDIT sessions.
- You cannot change an active AUTOTABAUDIT session's parameters without first terminating the session.
- You cannot do AUTOTABAUDIT at the same time as TABXFR or an image dump.

The AUTOTABAUDIT increment consists of the following subcommands:

- INCLUDE
- EXCLUDE
- STATUS
- REPORT
- CLEAR
- TIMEFRAME
- EXECUTE

- TERMINATE
- QUIT
- HELP
- INFO

For help on any subcommand, access the AUTOTABAUDIT increment and type **HELP subcommand**.

Enhancement feature AR1917

Feature AR1917 improves the automated TABAUDIT scheduling capacities, and user interface.

Manual TABAUDIT

Running manual TABAUDIT on specific tables

Use the following procedure to check table changes and update the report generated by the REPORT ERRORS command.

Procedure G-1 Check table changes

MAP terminal

1 Access TABAUDIT:

```
> TABAUDIT
```

2 TABAUDIT:

```
> INCLUDE table_name
```

*where **table_name** is the changed or corrected table.*

3 Run TABAUDIT:

```
TABAUDIT:
> EXECUTE
```

4 TABAUDIT:

```
> REPORT table_name
```

5 Repeat steps 1 through 4 for each table that was changed or corrected.

Note: You must complete TABAUDIT with *no* errors on *all* tables in the office before the upgrade. This condition is verified at the final office review.

XA-Core software tools

The cutover software tools for XA-Core support and control the SuperNode to XA-Core upgrade procedures. These tools help **Appl** and **Instl** to manage the cutover process through the upgrade. These tools are delivered through the same mechanisms as the commissioning tools process and are loaded on both the CM and XA-Core for the cutover. The software tools are removed when the cutover to XA-Core is complete.

The following are some of the commands provided by the XARETRO Command Increment:

- XARETINIT: The XARETINIT command initializes and prepares the system software to begin an XA-Core upgrade.
- LINKTEST: The LINKTEST command checks the installation and integrity of the temporary switchboxes used to connect each core to the MS.
- MATECORELINK: The MATECORELINK command establishes a communication path between the CM and the Cabinet XA-Core, and between the Cabinet XA-Core and the Shelf XA-Core. This communication path provides a smooth transfer of the office data and activity to the new core.
- SLMXFR: The SLMXFR command group provides an SLM file transfer tool set to transfer the SLM disk data from the CM to the XA-Core. This command group supports the change from the SLM disk and quarter inch tape devices to the XA-Core disk and digital audio tape (DAT) devices.
- VOLNAMXFR: The VOLNAMXFR command transfers the names of the SLM disk volume names from the CM to the XA-Core. This information helps to setup the FROM portion of the VOLALIAS volume mapping.
- RESTARTCUTOVER/NORESTARTCUTOVER: The RestartCutover/ NoRestartCutover command set provides the switch of activity mechanism between the CM and the Cabinet XA-Core, and between the Cabinet XA-Core and the Shelf XA-Core.
- COREGOACTIVE: The COREGOACTIVE command provides the ability to return activity to the old core (either the CM or the Cabinet XA-Core) in order to support the AbortCutover functionality.
- STATUS: The STATUS command provides a report of the state of the XA-Core cutover. This command gives a report on the progress that has been made for each procedure within the cutover process.

The following is a resident tool providing an associated function:

- VOLALIAS: The VOLALIAS command establishes the name mapping of the SLM volume to the XA-Core disk volume. The new disk and tape devices of the XA-Core platform replace the SLM devices during the cutover. The SLM to XA-Core volume name translation mechanism eliminates mismatch in application data between the SLM volume name and the XA-Core disk volume name.

DMS-100 Family

Software Delivery

XA-Core Cutover Procedures

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