



Nortel USP Upgrades

ATTENTION

Perform all software upgrade procedures from the alternate boot server, unless otherwise noted. You must have administrative privileges to perform a software upgrade.

New in this release

Feature changes

In SN09U (USP11.1), there are no new feature changes that affect the USP upgrade.

Upgrade paths

Nortel Networks supports the following direct in-service upgrade paths:

- USP10.0.x/SN08 to USP11.1.x/SN09U
- USP11.0.x/SN09 to USP11.1.x/SN09U
- USP11.1.x/SN09U to USP11.1.y/SN09U (maintenance release)

If upgrading from a USP9.0 or lower release, upgrade to USP10.0.x before continuing with this upgrade.

Impacts of an upgrade

This section provides the following information:

- the estimated time to complete a software upgrade
- the service impacts of a software upgrade
- other information affecting a software upgrade

Time to complete an upgrade

The following table lists the tasks to upgrade USP software and the estimated time to complete each task.

Estimated time to complete a software upgrade

Task	Card	Time
Preparing for the upgrade		35 minutes
Upgrading the software	RTC	20 minutes per card
	IPLINK	15 minutes per card
	SS7IPLINK	15 minutes per card
	NPC	15 minutes per card
	NPE	15 minutes per card
	NPS	15 minutes per card
	other link nodes	5 minutes per node
	CC card	2 minutes per card
Completing the upgrade		30 minutes
Total estimated upgrade time		4 to 8 hours

Large systems and small systems

A small USP system typically requires less time to perform an upgrade than a large USP system.

- A small USP system consists of one or two shelf systems. You can upgrade most small USP systems in a single six-hour maintenance window.
- A large USP system consists of three or more shelves. Most large USP systems require two or more six-hour maintenance windows for a software upgrade.

The following table lists sizes of USP systems and the time to complete a software upgrade for each size.

USP systems and upgrade times

System size	Length of time	Maintenance windows
1 shelf	2 hours	1
2 shelves	5 hours	1
3 shelves	8 hours	2
4 shelves	10 hours	2
5 shelves	12 hours	2
8 shelves	20 hours	4

Service impacts

The upgrade of USP software does not impact service. Traffic is maintained through redundant links configured on different link cards. A loss of network redundancy occurs when a blade is taken out of service.

The CLI is not available for use during an upgrade.

Additional information

This section provides additional information on USP software upgrades.

Auto-negotiate

Auto-negotiate for the CS-LAN can be enabled during a USP software upgrade.

Core Bounce cutover

The procedures for cutover from Core Bounce to Direct Messaging are not performed during an upgrade. Contact Nortel Networks for more information.

In-service cutover

An in-service cutover is not performed during an upgrade. Contact Nortel for more information.

Routemaster

The Routemaster application is beyond the scope of upgrades. Contact Nortel for more information on using Routemaster for end office consolidation.

USP software releases

USP software releases use the following naming convention:

USPnn.n.n

The first and second numbers identify a major USP software release, and the third number identifies a maintenance release.

The following table lists examples of USP major releases and USP maintenance releases.

USP software releases

Major release	Maintenance releases
USP10.0.0	USP10.0.3
USP10.1.0	USP10.1.2
USP11.0.0	USP11.0.3

Scope of document

This document supports major release upgrades and maintenance release upgrades.

- A major release upgrade is an upgrade from one release to another release. Following is an example of a major upgrade.
USP10.0.3 to USP11.0.0
- A maintenance release upgrade is an upgrade from one release to another release within the same major release.

USP10.0.2 to 10.0.3

Upgrade order**Small systems and one maintenance window**

The card upgrade order for a one maintenance window upgrade varies slightly for one- and two-shelf systems.

For a one-shelf system, upgrade the following cards:

- upgrade RTC 15
- upgrade CC1 in slot 1

- upgrade the link cards
- upgrade the NP cards
- upgrade CC2 in slot 18
- upgrade RTC 12

For a two-shelf system, upgrade the following cards:

- upgrade RTC 15
- upgrade CC1 in slot 1 on the control shelf
- upgrade CC1 in slot 1 on the extension shelf
- upgrade the link cards on the extension shelf
- upgrade the link cards on the control shelf
- upgrade the NP cards in the control shelf
- upgrade the NP cards in the extension shelf
- upgrade CC2 in slot 18 on the control shelf
- upgrade CC2 in slot 18 on the extension shelf
- upgrade RTC 12

For a list and detailed procedures of the card upgrade order for a one-and two-shelf system, see [Upgrading the system nodes for one maintenance window upgrades on page 95](#).

Large systems and multiple maintenance windows

When performing a large system upgrade that requires more than one maintenance window to complete, you must upgrade the entire Control CAM shelf and one card for each unique card type before the end of the first maintenance window. The subsequent windows are used to upgrade the remaining cards in the system.

For upgrades spanning multiple maintenance windows, upgrade the following cards:

- upgrade RTC 15
- upgrade CC1 in slot 1 on the control shelf
- upgrade link cards in the control shelf
- upgrade NP cards in the control shelf
- upgrade CC2 in slot 18 on the control shelf
- upgrade one card for each unique card type on any extension shelf

- SWACT RTC 12; if you cannot SWACT RTC 12, upgrade a card of a type that you have not yet upgraded
- perform test calls and monitor the system for at least 15 minutes to evaluate your acceptance of the upgrade
- upgrade RTC 12

Note: The RTC12 upgrade completes the upgrade requirement for the first maintenance window. You can continue the upgrade in this current maintenance window and in the next maintenance window.

- upgrade CC1 in slot 1 on the extension shelf
- upgrade the link cards on the extension shelves
- upgrade the NP cards in the extension shelves
- upgrade CC2 in slot 18

For a list and detailed procedures of the card upgrade order for a multiple shelf systems, see [Upgrading the system nodes for multiple maintenance window upgrades on page 97](#).

NP chain upgrade considerations

The four possible NP card configurations to consider when planning to perform an upgrade over multiple maintenance windows are as follows:

1. All NP cards on the Control Shelf if:
 - both NPCs on the control shelf
 - all the chain related NPx cards on the control shelf

All NP cards will be upgraded during the first window as all cards must be upgraded in the Control shelf during the first window.

2. Only the NPC on the Control Shelf and other NP cards on Extension shelves if:
 - both NPCs are on the control shelf
 - at least one chain associated NPx on an extension shelf

You must finish upgrading both NPC associated chains and all NPx cards on the first maintenance window.

3. NPCs on an Extension shelf and other NP cards on the Control shelf if:
 - both NPCs are on an extension shelf
 - at least one chain related NPx provisioned on the control shelf

You must finish upgrading all NPx cards associated to that chain in the first maintenance window.

Note: Nortel Networks suggests locating both NPCs on the control shelf to avoid extension shelf isolation.

4. All NP cards on Extension shelves if:
 - both NPCs are on one extension shelf
 - all the chain associated NPx also provisioned on extension shelves

You can choose to finish upgrading one NPC associated chain and one NPS associated chain (If an alternate NPS is already involved with the selected NPC associated chain, the NPS associated chain does not have to be upgraded in the first maintenance window).

Note: Nortel Networks suggests locating both NPCs on the control shelf to avoid extension shelf isolation.

System capacity

The software upgrade procedure can impact the system capacity. This means that additional disk space on the OAMP workstation and the RTC system nodes are required for converting existing databases.

The pre-checking procedure checks for adequate disk space on the RTC system nodes. A message box informs you if your disk space is too low. If disk space is too low, delete any old snapshots.

Once the update is complete, the additional disk space is no longer required and is made available for use.

System performance

The software upgrade procedure can impact USP system performance in the following ways:

- An upgrade database conversion is necessary due to internal USP data format changes. This affects the RTC system node in slot 15 (the inactive RTC system node). The RTC in slot 15 is the first system node upgraded to the new version.
- Depending on the scope of data format changes, the inactive RTC in slot 15 takes approximately 20 minutes to load and convert internal data to the new format. During this time, the inactive RTC

system node is not enabled and the system operates with a single RTC system node.

- You must perform software upgrade procedures during maintenance periods, as network capacity is reduced during the software upgrade. This is because the Link system nodes must be reloaded during the upgrade. As a result, all SS7 traffic is rerouted from the links and linksets that reside on the disabled Link system node.

System limitations during upgrade

During a software upgrade, the system prohibits the following actions, listed by subsystem:

- System administration
 - adding, deleting, or modifying users
 - setting the time of day
 - changing passwords
- System management
 - modifying the system name or shelf names
 - adding or deleting RTC, CC, or application system nodes
 - modifying the IP address or the PEC of the RTC system nodes
- SS7 management (MTP Level 3)
 - adding, deleting, or modifying a system identity
 - adding, deleting, or modifying a capability code
 - adding, deleting, or modifying links, linksets, linkset groups, combined linksets, or routesets
 - adding, deleting, or modifying ASP, AS, ASP Paths, AS destinations, or AS assignments
- SS7 management (MSU/Gateway Screening)
 - deleting gateway screening criteria files
- SS7 management (Global Title Translations)
 - adding, deleting, or modifying all GTT results
 - adding, deleting, or modifying all GTA results
 - adding, modifying, or deleting GTT translation type text
 - adding, modifying, or deleting GTT translations

- SS7 management (Special Study Operational Measurements)
 - adding, deleting, or modifying SSOMs
 - enabling/disabling SSOMs on linksets
- SS7 management (SCCP)
 - adding or deleting remote point codes (RPCs)
 - adding, deleting, or modifying remote subsystems (RSSs)
 - adding or deleting concerned point codes
 - adding, deleting, or modifying local subsystems (LSSs)
 - adding or deleting
 - local subsystems concerned point codes (CPCs)
 - adding or deleting LSS instances
- IPS7 management
 - adding, deleting, or modifying application server process
 - adding, deleting, or modifying application server process path
 - adding, deleting, or modifying application server
 - adding, deleting, or modifying application server destination
 - adding, deleting, or modifying application server assignment

OAMP workstation functionality

The GUI allows multiple sites to be configured on an OAMP workstation at one time. Since the sites are not upgraded at the same time, the following conditions apply:

- If the GUI is upgraded and the USP is not, you can access existing USP capabilities. You cannot use the new capabilities.
- The new USP GUI allows you to log in to a previous system, a new system, or a USP system that has an upgrade in progress.
- You cannot use a previous version of the GUI to log in to a newer version of the USP software.
- Only one version of the GUI can be installed at a time, because the GUI upgrade requires the conversion of local files.

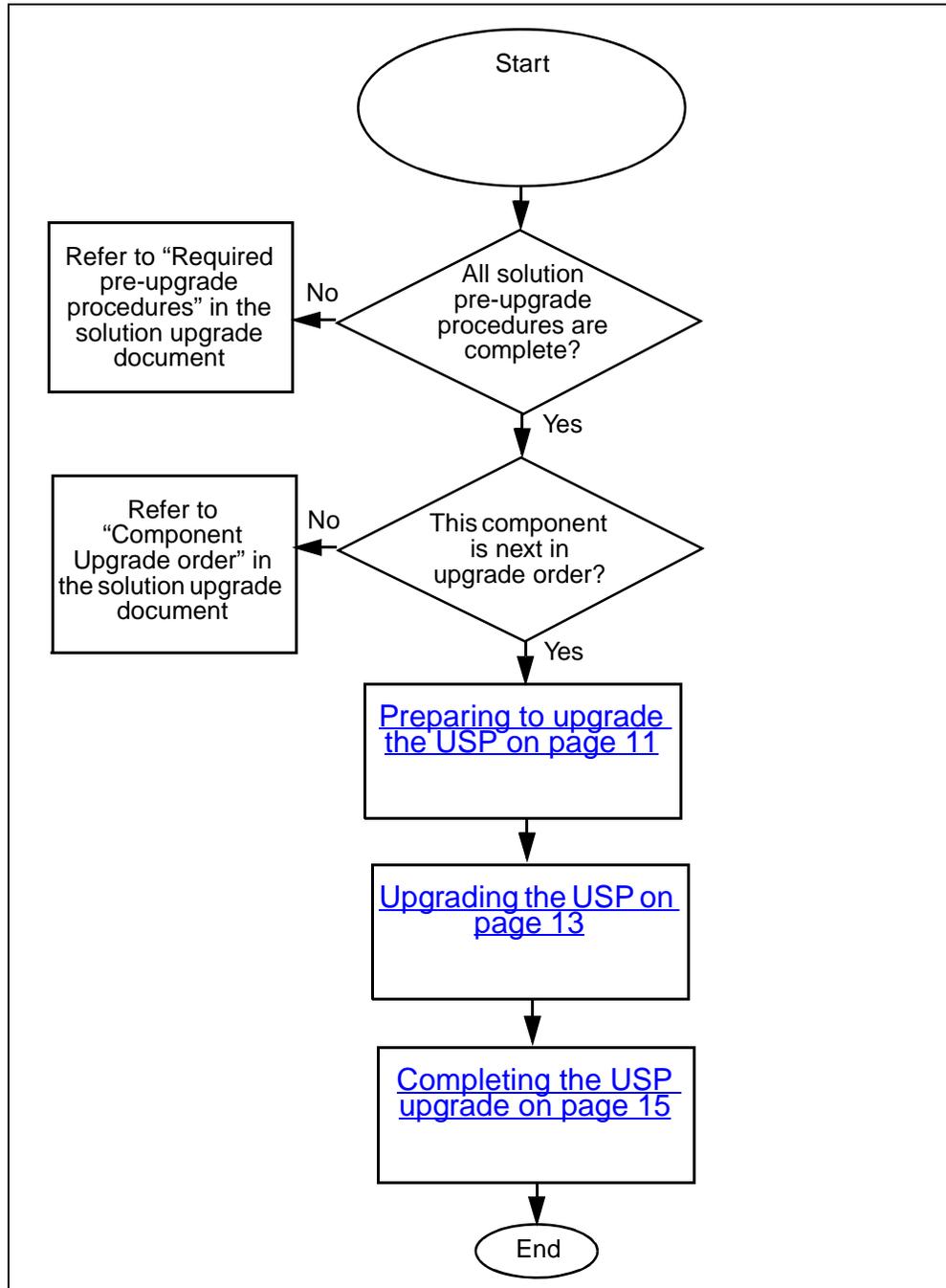
Aborting an upgrade

If you need to abort the USP upgrade, perform [Aborting an Upgrade on page 173](#).

USP upgrade tasks

This taskflow shows you the sequence of tasks you perform to upgrade this component.

USP upgrade tasks



Preparing to upgrade the USP

The following procedure provides the high-level steps you need to execute prior to upgrading this component. Where applicable, a reference to the step-by-step procedure is provided.

Prerequisites

This procedure has the following prerequisites:

- any prerequisites identified at the start of this document, have been completed
- all components that precede the USP, as identified at the start of this document, have been upgraded
- for CS 2000 Management Tools-based workstations, procedure [Upgrading the ABS software on the CS 2000 Management Tools server on page 43](#) was completed during the CS 2000 Management Tools upgrade.

Action

Perform the following tasks to prepare the USP for an upgrade.

At the OAMP workstation

- 1 Log in to the USP GUI.

At the USP GUI

- 2 Determine the release that is running on the USP, which is indicated in the status bar as “Connected to <lab_name> <load_version>”, and ensure the USP is running the latest point release of the current major release. Check for any RMR bulletins to determine the latest point release.
- 3 Determine if the office uses Route Master.
For detailed steps, refer to procedure [Checking Route Master status on page 16](#).
- 4 Make sure all system nodes are operating in one of the following statuses:
 - in-service and unlocked
 - offlineFor detailed steps, refer to procedure [Verify the USP is running on page 17](#).
- 5 Take corrective action to clear all outstanding alarms.
For details refer to *USP Fault Management*, NN10071-911.

- 6** Make sure each IPS7 card has no more than 16 paths. If your system has IPS7 cards with more than 16 paths, redistribute the paths among the system nodes.

For details, refer to section "Application Server Process Paths Configuration" in *USP Configuration Management*, NN10093-511.
- 7** Delete old and unused snapshots.

For detailed steps, refer to procedure [Delete a data snapshot on page 19](#).
- 8** Take an alternate boot data snapshot.

For detailed steps, refer to procedure [Creating an alternate boot data snapshot on page 22](#).
- 9** Perform test calls and verify the calls complete successfully.
- 10** Reinitialize each RTC system node.

For detailed steps, refer to procedure [Reinitializing an RTC system node on page 25](#).
- 11** You have completed this procedure. Proceed to [Upgrading the USP on page 13](#).

Upgrading the USP

The following procedure provides the high-level steps to upgrade this component. Where applicable, a reference to the step-by-step procedure is provided.

Prerequisites

Complete the following tasks:

1. [Preparing to upgrade the USP on page 11](#)
2. Review the upgrade schedule and office records to determine if ABS software on the CS 2000 Management Tools (CMT) server has been upgraded during this upgrade cycle.
3. Determine whether you are upgrading using a CD or Electronic Software Delivery (ESD), and if upgrading using a CD, ensure you have the CD for the release you are upgrading to.

Action

Perform the following tasks procedures to upgrade the component.

Upgrading the USP

At the OAMP workstation

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

If you are upgrading USP on a	Do
non-CMT-based OAMP workstation (Windows-based)	step 2
CMT-based OAMP workstation	step 4

- 2 Perform one of the following tasks:
 - If you receive new USP software on CD, insert the CD in the CD drive of your workstation.
 - If you receive new software through ESD, perform [Installing Using ESD on page 72](#).
- 3 Upgrade the ABS and USP GUI using procedure [Upgrading the ABS and USP GUI on a Windows-based workstation on page 31](#):

4 Use the upgrade wizard. See [Using the Upgrade Wizard on page 91](#)

5 Use the following table to determine your next step.

If	Do
you are running the ABS on a non-CMT-based OAMP workstation in a CVoIP network	step 6
otherwise	step 7

6 Migrate the ABS to the CS 2000 Management Tools (CMT) server. Refer to [Migrating the Alternate Boot Server \(ABS\) from USP PC to CS 2000 Management Tools on page 123](#).

7 You have finished upgrading the software on the USP. Go to [Completing the USP upgrade on page 15](#).

Completing the USP upgrade

The USP Upgrade Wizard performs most upgrade completion tasks. No additional procedures are needed to complete the USP upgrade.

Follow office policy in the removal and storage of extra copies of new USP software.

- If you used a CD to upgrade the USP software, remove the CD from the CD drive and store the CD.
- If you used an ESD software load to upgrade the USP software, archive or delete the following files:
 - ESD software load
 - compressed USP software
 - any extra copies of new USP software on your PC

Checking Route Master status

Use the following procedure to determine if an office uses Route Master. Perform this procedure before a USP software upgrade.

Prerequisites

This procedure has no prerequisites.

Action

Perform the following steps to complete this procedure.

Checking Route Master status

At the OAMP workstation

- 1 Log in to the USP GUI.

At the USP GUI

- 2 Open the Route Master provisioning window through **Configuration>rm>system-id-mapping**.
- 3 Under the Search tab, click **Retrieve**.
A list of provisioned Route Master system IDs appears. If the office does not use Route Master, no system IDs appear.
- 4 Use the following table to determine your next step.

If	Do
a list of system IDs appears	step 5
otherwise	step 6

- 5 Record that the office uses Route Master. You will perform additional test calls after the upgrade.
- 6 Close the Route Master provisioning window.
- 7 You have completed this procedure. Return to [Preparing to upgrade the USP on page 11](#).

Verify the USP is running

Before beginning upgrade procedures, complete this check from the USP GUI to make sure your system is running in a predictable, stable manner.

Prerequisites

This procedure has no prerequisites.

Action

Perform the following steps to complete this procedure.

Verify the USP is running

At the OAMP workstation

- 1 Log in to the USP GUI.

From the USP GUI

- 2 Display the node maintenance and provisioning window by selecting **Configuration>platform>node**.
- 3 Display the graphical view by selecting **Graphical View**.
- 4 Make sure that the icon for each in-service system node is green.

If	Do
all icons for every in-service system node are green	step 5
any icon for any in-service system node is any other color	Do not continue with the upgrade. Troubleshoot the problem or contact your next level of support.

- 5 Make sure that the icon for each offline node are yellow.

If	Do
all icons for every offline system node are yellow	step 6
any icon for any offline system node is any other color	Do not continue with the upgrade. Troubleshoot the problem or contact your next level of support.

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

If your USP system contains	Do
a single shelf	step 7
multiple shelves	Repeat this procedure for each USP shelf in the office.

- 7** You have completed this procedure. Return to [Preparing to upgrade the USP on page 11](#).

Delete a data snapshot

Use this procedure to delete old or unused data snapshots. Perform this procedure before a USP software upgrade.

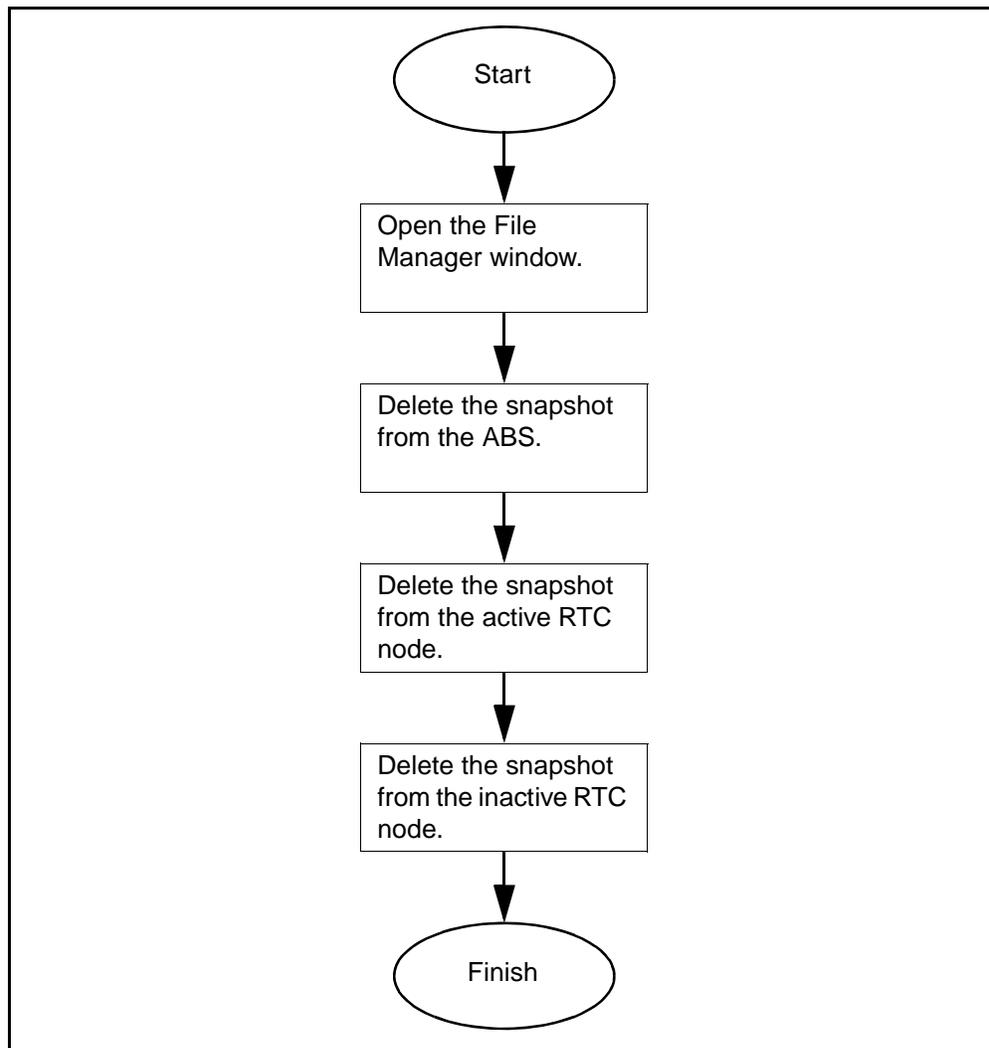
Prerequisites

This procedure has no prerequisites.

Action

The following figure shows the high-level steps of this procedure. Use the step-by-step instructions that follow the figure to perform the procedure.

Delete an old data snapshot



Delete a data snapshot

At the OAMP workstation

- 1 Log in to the USP GUI.

At the USP GUI

- 2 Open the File Manager window by selecting **Administration>file-manager**.

Response

The File Manager window appears.

- 3 At the Source portion of the window, select a snapshot to delete and click Delete.

Note: The Source portion is the left side of the window under Alternate Boot Server.

Response

An hourglass appears while the USP Manager deletes the snapshot from the Alternate Boot Server. The information under Alternate Boot Server refreshes when the snapshot is deleted.

- 4 Repeat [step 3](#) for each snapshot you want to delete from the Alternate Boot Server.

- 5 At the Destination portion of the window, make sure the active RTC node is selected.

Note: The Destination portion is the right side of the window under the RTC selection.

- 6 Expand the Snapshot folder and the folder for the previous version of software.

- 7 Select the snapshot and click Delete.

Response

An hourglass appears while the USP Manager deletes the snapshot from the active node. The information refreshes when the snapshot is deleted.

- 8 Repeat steps [step 6](#) and [step 7](#) for each snapshot on the active RTC node you want to delete.

- 9 At the RTC selection, select the inactive RTC node.

- 10 Expand the Snapshot folder and the folder for the previous version of software.

- 11 Select the snapshot and click Delete.

Response

An hourglass appears while the USP Manager deletes the snapshot from the inactive node. The information refreshes when the snapshot is deleted.

- 12 Repeat steps [step 10](#) and [step 11](#) for each snapshot on the inactive RTC node you want to delete.
- 13 You have completed this procedure. Return to [Preparing to upgrade the USP on page 11](#).

Creating an alternate boot data snapshot

During the upgrade, you will be making many changes to the system. To ensure you have a backup in case a change has a performance degradation impact, you must take a snapshot when your system is operating properly. This allows you to revert the system to that snapshot. You must take a snapshot before you start the upgrade and once again after completing the upgrade.

Prerequisites

This procedure has no prerequisites.

Action

To create an alternate boot data snapshot, perform the following steps:

Creating an alternate boot data snapshot

At the OAMP workstation

- 1 Log in to the USP GUI.

At the USP GUI

- 2 Click **Administration>backup**.
- 3 Enter a description of the data snapshot in the Description box. You can enter up to 32 characters.

Use the following format for the description so the file can be easily identified in the future:

- pre_upgrd_<site>_<date> for backup pre-upgrade snapshot
- post_upgrd_<site>_<date> for backup post-upgrade snapshot

where

<site>

is the site name

<date>

is the current date

- 4 Click the corresponding checkboxes to activate the following options, as appropriate:
 - transfer snapshot to alternate boot server

Note: Nortel Networks recommends that you enable this option. If you do not select this option, a warning dialog box will appear; select yes to continue.
 - set as active snapshot on alternate boot server

Note: Nortel Networks recommends that you enable this option. If you do not select this option, a warning dialog box will appear; select yes to continue.
 - delete oldest snapshot on alternate boot server if maximum reached (16)
 - delete oldest snapshot on rtc if maximum reached (5)
- 5 Click **Create** to create the data snapshot.

A Confirmation required dialog box appears, stating: Backup create command can take up to 20 minutes, during which time system write access will be disabled. Do you want to continue? Click **Yes** to continue.
- 6 When the data snapshot command is complete, close the Administration backup window by clicking the X in the top right corner.
- 7 If you selected both transfer snapshot to alt boot server and set as active snapshot on alternate boot server, go to step [15](#). If you only selected transfer snapshot to alt boot server, go to step [14](#).
- 8 Click **Administration>File Manager**.
- 9 Select the active RTC system node from the drop-box.
- 10 Open the snapshot folder.
- 11 Open the folder corresponding to the version of the USP software that you are running.
- 12 Select the snapshot file you want to copy. When you select a file, its description is displayed in the Description box.
- 13 Copy the snapshot to the ABS by clicking **<-**. An hourglass appears while the data snapshot is copied. The folders in ABS portion of the window are updated with the information for the copied data snapshot when the copy operation is complete.

Note: These files are large and can take several minutes, depending on system activity, to copy from an RTC system node to your alternate boot server.

- 14 Update the ABS Active Snapshot using the ABS Settings window:
 - Open the Alternate Boot Server (ABS) window by clicking **Administration> alternate-boot-server**
 - Select the snapshot you have just created from the Snapshot name drop-down list.
 - Click **Modify** to save your changes and close the window.
A Confirmation dialog box appears, asking if you want to continue with the ABS Modify command. Click **Yes** to continue.
- 15 This procedure is complete. If applicable, return to the higher-level procedure or task flow that directed you to this procedure.

Reinitializing an RTC system node

Perform the following procedure to download a boot image and re-initialize the RTC system node before a USP software upgrade.

Prerequisites

This procedure has no prerequisites.

Action

Perform the following steps to complete this procedure.

Reinitializing an RTC system node

At the OAMP workstation

- 1 Log in to the USP GUI.

At the USP GUI

- 2 Open the system node provisioning window by selecting **Configuration>platform>node**.
- 3 Display the graphical view by selecting **Graphical View**.
- 4 Double-click the icon for the inactive RTC system node, which is the one with no check mark.
- 5 Check the status of the node.

If the inactive RTC system node is	Do
unlocked	step 6
locked	step 8

- 6 Click **Lock**.
- 7 If a confirmation dialog box appears, Click **Yes** to confirm the change.
- 8 Click **Load** to download the RTC system node boot image and re-initialize the RTC system node.
- 9 If a confirmation dialog box appears, Click **Yes** to confirm the change.
- 10 Display the graphical view by selecting Graphical View.
- 11 Wait for the card to display in green. Green indicates initialization is complete.
- 12 Double-click the icon for the inactive RTC system node, which is the one with no check mark.

- 13** Click **Unlock** to unlock the RTC.
- 14** If a confirmation dialog box appears, Click **Yes** to confirm the change.
- 15** Click **SWACT** to make the inactive RTC system node Active.
- 16** If a confirmation dialog box appears, Click **Yes** to confirm the change.
- 17** Use the following table to determine your next step.

If you reinitialized	Do
one RTC system node	step 3
both RTC system nodes	step 18

- 18** Make sure that the RTC system node in slot 12 (RTC12) is the active RTC system node.

If RTC12	Do
inactive	step 19
active	step 21

- 19** Click **SWACT** to make RTC12 the active system node.
- 20** If a confirmation dialog box appears, Click **Yes** to confirm the change.
- 21** This procedure is complete. Return to [Preparing to upgrade the USP on page 11](#).

Extracting and copying a USP ESD software file

Use this procedure to extract USP software from an ESD load file and, if necessary, copy the new USP software to the CS 2000 Management Tools server.

Prerequisites

Perform the following tasks before you begin this procedure.

- Know the name of the ESD load file with the new USP software. Check the e-mail from Nortel that announced the availability of the load.
- Know how you will upgrade USP software. If you upgrade USP software from the CS 2000 Management Tools server, you must copy the new USP software to the server.

Action

Perform the following procedures.

- Extract the new USP software from the ESD load file. Perform [Extracting USP software from an ESD load file on page 27](#).
- If you use the CS 2000 Management Tools server to upgrade USP software, perform [Copying new USP software to the CS 2000 Management Tools server on page 29](#)

Extracting USP software from an ESD load file

ATTENTION

Do not extract or uncompress files on the CS 2000 Management Tools server. The process requires additional disk space that may exceed the capacity of your server.

At your workstation

- 1 Create a temporary directory to store the new USP software.
- 2 Use your FTP client application to copy the USP ESD load file from your ESD load repository server to your workstation. The actual steps to copy the files will depend on your FTP client application. Following is an example of typical steps.

Example

1. *At your workstation, change directories to the temporary directory.*
2. *Start an FTP session to the ESD load repository server.*

3. *Change the session to binary.*
 4. *At the ESD load repository server, change directories to the dropbox with the USP ESD load file.*
 5. *Use the get command to transfer the USP ESD load file to the temporary directory on your workstation.*
 6. *Quit the FTP session*
- 3** Use a file archive program such as WinZip to extract a compressed version of new USP software from the ESD load file to the temporary directory.

Response

The program extracts a compressed file with a .gz extension to a new directory in your temporary directory.

Example of name of compressed file

USPM110.110.R.NCL.NAP.VAULT.9.D.tar.gz.tape

- 4 Locate the compressed USP software file.
- 5 Rename the compressed USP- Compact software file to remove the .tape extension.

Example of new file name

USPM110.110.R.NCL.NAP.VAULT.9.D.tar.gz

- 6 Use your file archive program to extract the new USP software to the temporary directory.

Response

The program extracts the new software into a new folder in the temporary directory.

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

If you install new USP software	Do
--	-----------

from your workstation	step 8
from the CS 2000 Management Tools server	Copying new USP software to the CS 2000 Management Tools server on page 29

- 8 You have completed this procedure. Go to [Upgrading the USP on page 13](#).

Copying new USP software to the CS 2000 Management Tools server

ATTENTION

In a two-server configuration, copy the software files to the active server.

At your workstation

- 1 Establish a connection to the server through telnet or SSH, and log in using the root user id and password.

In a two-server configuration, log in to the active server using the physical IP address of the active server. Use the **ubmstat** command to make sure you are on the active server.

- 2 Determine if the server has a /data/esd_iso directory by typing

```
# ls /data/esd_iso
```

and pressing the Enter key.

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

If the response	Do
indicates no such directory exists	step 4
displays the name of the directory	step 5

- 4 Create the directory by typing

```
# mkdir /data/esd_iso
```

and pressing the Enter key.

- 5 Display the available disk space in the /data directory by typing

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

and pressing the Enter key.

Example response

```
# df -k /data
Filesystem            kbytes  used  avail capacity  Mounted on
/dev/md/dsk/d2        3082223 144128 2876454    5%      /data
```

- 6 Determine the number of megabytes of free space by dividing the number under avail by 1000. The result is the amount of available disk space in Mbytes in the directory.

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

If the directory	Do
does not have at least 500 MBytes of available disk space	step 8
has at least 500 MBytes of available disk space	step 9

- 8 Clear additional disk space before you continue with this procedure. Follow local office policy. If necessary, contact the next level of support.
- 9 Log off of the CS 2000 Management Tools server.
- 10 Use your FTP client application to copy the uncompressed USP software from your workstation to the /data/esd_iso directory on the CS 2000 Management Tools server.
- 11 Confirm all directories and files for new USP software were copied to the /data/esd_iso directory of the CS 2000 Management Tools server.
- 12

ATTENTION

The following steps require you to change the permissions on a file on the CS 2000 Management Tools server. Depending on your FTP client application, you may need to quit the FTP client application and establish a telnet or SSH session to the server.

In the directory with new USP software, locate the file `install.bin`.

- 13 Set the file permissions by typing
- ```
chmod 755 install.bin
```
- and pressing the Enter key.
- 14 Confirm the file permissions were changed by typing

```
ls -al install.bin
```

and pressing the Enter key.

*Response*

*The file install.bin has the permissions -rwxr-xr-x.*

15 You have completed this procedure. Go to [Upgrading the USP on page 13](#).

## Upgrading the ABS and USP GUI on a Windows-based workstation

Use this procedure to upgrade the ABS and USP GUI on a Windows-based OAMP workstation.



### CAUTION

The GUI will not function properly with non-ASCII based character sets. Ensure that the OAMP workstation is set to either English or German language character sets.

### Prerequisites

This procedure has no prerequisites.

### Action

Perform the following tasks to complete this procedure:

1. [Uninstalling the ABS and USP GUI from Windows-based workstations on page 31](#)
2. [Installing the new ABS and USP GUI on a Windows-based workstation on page 33](#)
3. If the workstation serves as the alternate boot server, the Signaling Server Monitor, Alternate Boot Server Configuration Manager, and the three Distinct servers start up automatically when the workstation restarts.

If this is the first time to install ABS on this windows workstation, you need to configure three Distinct servers. For detailed steps, refer to [Configuring the Distinct BOOTP, FTP and NFS Servers for Windows on page 36](#).

### Uninstalling the ABS and USP GUI from Windows-based workstations

#### *At the OAMP workstation*

- 1 If you are upgrading ABS server, identify the current installation path. From Distinct FTP server window, select **configure-->server-->export**, then record the exported folder's path.
- 2 Close all open applications and exit the USP Distinct Servers (if running) and Signaling Server Monitor (if running).
- 3 Click the Windows **Start** button on your desktop taskbar.

- 4 On the Settings menu, select **Control Panel**.
- 5 In the Control Panel window, double-click **Add/Remove Programs**.
- 6 In the Change or Remove Programs tab of the Add/Remove Programs window, select Universal Signaling Point from the alphabetical list of programs.
- 7 Click the **Change/Remove** button. A uninstall pop-up window appears prior to removing the application and its components.
- 8 Wait for the uninstall window to open and click **Next** when it appears.
- 9 Click **Completely Uninstall**, then click **Next**. All installed components will be uninstalled.

If you want to uninstall ABS or USP GUI only, click **Uninstall specific components**. Then use the following table to determine your action:

| <b>If</b>            | <b>Do</b>                                                        |
|----------------------|------------------------------------------------------------------|
| Uninstalling ABS     | uncheck USP Software Loads and ABS Manager, then click uninstall |
| Uninstalling USP GUI | uncheck USP Graphical Interface Client, then click uninstall     |

- 10 Click **Done**.
- 11 This procedure is complete. Restart your computer and go to [Installing the new ABS and USP GUI on a Windows-based workstation on page 33](#).

## Installing the new ABS and USP GUI on a Windows-based workstation

### ATTENTION

Installing this USP software on a workstation other than your Nortel Networks-approved workstation may overwrite some system files used by other applications. This can cause failure of existing applications. Also, installing software other than Nortel Networks-approved applications on your USP OAMP workstation can cause failure of the USP application.

### ATTENTION

When adding the ABS and USP GUI on an NTST30DA workstation, install the GUI using the Add/Remove Programs utility in the Windows Control Panel.

### *At the OAMP workstation*

- 1 Close any open applications.
- 2 Use the following table to determine your next step.

| If the new USP software is located | Do                                                                              |
|------------------------------------|---------------------------------------------------------------------------------|
| on a CD                            | <a href="#">step 3</a>                                                          |
| in a directory on your PC          | Open the directory with the new USP software and go to <a href="#">step 6</a> . |

- 3 Insert the USP Software CD-ROM disk into the CD-ROM drive.
- 4 Double-click the **My Computer** icon on your desktop.
- 5 Double-click the CD-ROM disk icon.
- 6 Double-click **Install.exe**.

**Note:** When adding the USP GUI on an NTST30DA workstation, install the GUI using the Add/Remove Programs utility in the Windows Control Panel.

- 7 At the Introduction window for the USP setup program, click **Next**.

- 8 Select the package(s) that you want to install on this workstation.
  - Select USP Software Loads and ABS manager if you want this workstation to act as the alternate boot server.

Each USP system needs one workstation configured as an alternate boot server. Do not configure more than one alternate boot server for each USP system.
  - Select USP Graphical User Interface Client if you want this workstation to be able to log into the USP site.
  - Select USP User Manuals and Documentation Suite to install the complete collection of FCAPS documents, Marconi TNX-210 ATM Switch Manuals, and Interface Specifications.
  - Select USP GR-310 Mediation Application to install a SEAS OSS Interface.
  - Select Acrobat Reader if you do not have a version of Adobe Acrobat Reader installed on this workstation.
- 9 Select **Next**. If you select GR-310 Mediation Application, enter your Nortel Networks provided serial number when prompted by the system.
- 10 Select an Installation Directory and click **Install**.

If you selected the ABS pkg, the following pop-up will appear:

```
Prior to installing the Alternate Boot Server
Package please ensure that all unnecessary
snapshots and old release loads (i.e.
maintenance releases that are no longer in use)
are deleted. This will ensure adequate disk
space is available during the install procedure.
```

Select **OK** and then select an installation directory.

If this is to upgrade the ABS server, please select the installation directory where the old release was installed, refer to the installation path recorded in [step 1](#) of [Uninstalling the ABS and USP GUI from Windows-based workstations on page 31](#).

The Copying Program Files window appears with a status bar to show progress in copied files.

If you chose to install Acrobat reader, a Welcome window for the Adobe Acrobat Reader Setup Program appears. Adobe Acrobat Reader is required to view the Solution information. If Adobe Acrobat Reader is already installed on this workstation, click **No**. Click **Yes** to the "Are you sure" message. Proceed to the next step.

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

| If                                       | Do                      |
|------------------------------------------|-------------------------|
| you want to install Adobe Acrobat Reader | <a href="#">step 12</a> |
| otherwise                                | <a href="#">step 16</a> |

- 12 Click **Next**. The Acrobat Reader License Agreement appears.

- 13 Click **Yes** to accept the terms of the agreement. The Acrobat Reader Destination Location window appears.

- 14 Click **Next**.

**Note:** Do not modify the destination path for Acrobat Reader.

- 15 The Acrobat Reader Setup Complete window appears. Click **OK**.

- 16 Log in to the USP from the new release of the USP GUI and monitor the OAMP workstation for 10 minutes while logged into the USP. Check logs during this time. Your USP GUI is now upgraded. You will use the GUI to upgrade your USP software.

**Note:** When you first connect the GUI it will detect that the lab is running a prior version and will logout and log back in automatically to re-initialize based on the older feature set (it is expecting the new release by default).

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

| If you                                               | Do                                                                                                    |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| freshly installed ABS software during this procedure | proceed to <a href="#">Configuring the Distinct BOOTP, FTP and NFS Servers for Windows on page 36</a> |
| otherwise                                            | <a href="#">step 18</a>                                                                               |

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

## Configuring the Distinct BOOTP, FTP and NFS Servers for Windows

### At the OAMP workstation

1



#### CAUTION

Make a record of the password immediately.

#### ATTENTION

For upgrading ABS server, if the installation directory is the same as the one before uninstallation, procedure [Configuring the Distinct BOOTP, FTP and NFS Servers for Windows](#) can be ignored.

If this is the initial install of the ABS, a pop-up window prompts you to create a password for the Alternate Boot Server Configuration Manager.

- 2 Click the **Distinct BOOTP Server** button on the taskbar to maximize the Distinct BOOTP Server window.
- 3 Click the **Configure** menu and select **Administrator** and then **Login** to display the Distinct BOOTP Login window.
- 4 Enter your administrator password in the Enter the administrator password field and click **OK** to log into the server.  
The Distinct BOOTP Login window closes.
- 5 Click the **Configure** menu and select **Server** to display the Configure BOOTP window.
- 6 In the Addresses tab window, view the contents of the field at the bottom of the window, next to the Add, Modify, and Remove buttons. This field should contain the hexadecimal Ethernet hardware addresses of the RTC system nodes in your system.
- 7 Select the Ethernet hardware address that matches the Ethernet hardware address for the RTC system node in slot 12 of your system. The information for that Ethernet hardware address should appear in the various fields.
- 8 In the Boot File field, change the value to **/c/ntssgusp/abs/sites/<site\_name>/rtc1/rtcboot** (site\_name

is the name of your system as it appears in the site configuration information).

- 9 Click **Modify** to save the changes.
- 10 Select the Ethernet hardware address that matches the Ethernet hardware address for the RTC system node in slot 15 of your system. The information for that Ethernet hardware address should appear in the various fields.
- 11 In the Boot File field, change the value to **/c/ntssgusp/abs/sites/<site\_name>/rtc2/rtcboot** (site\_name is the name of your system as it appears in the site configuration information).
- 12 Click **Modify**, then **Apply** to save the changes.
- 13 Open the Alternate Boot Server Configuration Manager.
- 14 Log in to the Alternate Boot Server Configuration Manager.
- 15 Under the File drop-down menu, select **ABS Configuration**.
- 16 Select a site from the Site list.
- 17 Confirm that the Alternate Boot Loads displayed for each RTC are for the pre-upgrade load.
- 18 Confirm that the Alternate Boot Snapshot display is the snapshot taken earlier in this procedure. A pre-upgrade snapshot
- 19 Click **Apply** to save the changes.
- 20 Log out of the Alternate Boot Server Configuration Manager.

### ***Configuring the FTP server***

- 21 Click on the Distinct FTP Server in the task bar.
- 22 From the Distinct FTP Server window, select **Configure->Administrator->Login**.
- 23 In the query dialog box, type **SERVICE** for password and select **OK**.
- 24 From the Distinct FTP Server window, select **Configure->Server**.
- 25 From the Server Properties window, select the **Users** tab window.
  - For User Name, enter **ntssg**.
  - For User Password, enter **1ntssgstp** (number 1 followed by ntssg in lowercase).

- For Confirm Password, enter **1ntssgstp**.
  - Select **Add**.
- 26** From the Server Properties window, select the **Exports** tab window. Important:
- The **Browse** Button must be used to find the C:\ directory, do not type the choice into the field.
- Select **ntssg** from the Users droplist.
  - For Folder, use Browser button to select **C:\**
  - For Export Name, enter: **/c**
  - Check all permissions (Download, Upload, List, Delete).
  - Select **Add**.
- 27** From the Server Properties window, select **OK**.
- 28** From the Distinct FTP Server window, select **Configure->Administrator->Logout**.
- 29** Select **OK**.
- 30** Minimize the Distinct FTP Server to the Taskbar.

### ***Configuring the NFS server***

- 31** Click on the **Distinct NFS Server** in the task bar.
- 32** From the Distinct NFS Server window, select **Configure->Administrator->Login**.
- 33** In the query dialog box, type **SERVICE** for password and select **OK**.
- 34** From the Distinct NFS Server window, select **Configure->Server**.
- 35** From the Configure the NFS Server window, select the **Groups** tab window.
- For Group Name, enter **ssg** (in lower case).
  - For Group ID, enter **453**.
  - Then select **Add**.
- 36** From the Configure the NFS Server window, select the **Users** tab window.
- For User Name, enter **ntssg** (in lower case).
  - For User Password, enter **1ntssgstp**.
  - For User ID, enter **50015**.

- For Group Name, select **ssg** from the droplist.
  - Select **Add**.
- 37** From the Configure the NFS Server window, select the **Exports** tab window.
- For Path, use Browser button to select C:\ and double-click on **C:\**.
  - Select **OK**. In the Path Edit Box, ensure that C:\ is the only entry.
  - For Owner, select **ntssg** from the droplist.
  - Show Hidden Files attribute is not checked.
  - Show System Files attribute is not checked.
  - Read, write, execute for Owner permissions is checked.
  - Read, execute for Group permissions is checked.
  - Read, execute for World permissions is checked.
  - Select **Export**.
  - Select **Apply**.
- 38** From the Configure the NFS Server window, select the **General** tab window.
- Enter the path of the Log Folder as **C:\PROGRAM FILES\DISTINCT\LOG**
  - Under Prompt Dialogs, the On Application Exit is checked.
  - The Set Spool Folder is not checked.
  - From the Configure the NFS Server window, select **OK**.
- 39** From the Distinct NFS Server window, select **Configure->Administrator->Logout**.
- 40** When a window Are you sure you want to Logout? appears, Select **Yes**.
- 41** Minimize the Distinct NFS Server to the Taskbar.
- 42** This procedure is complete. If applicable, return to the higher-level procedure or task flow that directed you to this procedure.

## Upgrading the USP GUI on a CS 2000 Management Tools-based OAMP workstation



### CAUTION

The GUI may not function properly with non-ASCII based character sets. Ensure that the OAMP workstation is set to either English or German language character sets.

### ATTENTION

If you installed the USP ABS software and GUI during the CS 2000 Management Tools upgrade, use the procedure [Using the Upgrade Wizard on page 91](#) to upgrade the USP GUI.

Use this procedure to use console mode to upgrade the USP GUI on a CS 2000 Management Tools OAMP workstation.

### Prerequisites

This procedure has no prerequisites.

### Action

Perform the following tasks to complete this procedure:

1. [Uninstalling the USP GUI on the CS 2000 Management Tools workstation on page 41](#)
2. [Installing the new USP GUI on the CS 2000 Management Tools workstation on page 41](#)

## Uninstalling the USP GUI on the CS 2000 Management Tools workstation

### At the OAMP workstation

- 1 Launch the USP uninstall procedure.  

```
> cd <original install path>/ntssgusp/
```

 where  
     **original install path**  
       is /data/usp for offices at USP10 and lower  
       is /opt/usp for offices at USP11 and higher  

```
> ./Uninstall_Universal_Signaling_Point -i console
```

**Note:** A space precedes -i in the above command line.
- 2 Press Enter in the Introduction window.
- 3 In the Uninstall Options step, press Enter to uninstall the USP GUI.
- 4 Press Enter to complete the installation and to exit.
- 5 You have uninstalled the USP GUI. Go to [Installing the new USP GUI on the CS 2000 Management Tools workstation on page 41](#).

## Installing the new USP GUI on the CS 2000 Management Tools workstation

### At the OAMP workstation

- 1 Change directories:
 

| If the new USP-Compact software is located | Do                |
|--------------------------------------------|-------------------|
| in a CD                                    | >cd /cdrom/cdrom0 |
| on the CS 2000 Management Tools server     | >cd /data/esd_iso |
- 2 List the directory and locate the install.bin file:  

```
>ls
```
- 3 Launch the installation program, which can take several minutes to finish launching.  

```
> ./install.bin -i console
```
- 4 Press Enter in the Introduction step.

- 5 Press Enter in the Component Selection step.
- 6 In the Pre-Installation Summary step, confirm that USP Graphical Interface Client is included in Software Components. Press Enter to continue.
- 7 Press Enter in the Installation Directory step to accept the default installation directory.  
*Note:* Executing the Component Installation step can take several minutes to run.
- 8 Press Enter to complete the Installation and exit.
- 9 You have completed this procedure. Return to [Upgrading the USP on page 13](#).

---

## Upgrading the ABS software on the CS 2000 Management Tools server

---

Use this procedure to install or upgrade the alternate boot server (ABS) software on the SPFS-based server that is hosting the CS 2000 Management Tools.

### Prerequisites

This procedure has the following prerequisites:

- If ABS software is currently installed on the CS 2000 Management Tools server, this procedure includes steps to backup the existing ABS software to a backup directory on the server.
  - Make sure you know the location of the backup directory. Nortel recommends a directory with unique name, such as `usp_backup`.
  - Make sure you have write access to the backup directory.
- Know the existing install path for USP software on the CS 2000 Management Tools server before you begin this procedure.
  - For offices at USP10 and lower, the default USP install path is `/data/usp`.
  - For offices at USP11 and higher, the default USP install path is `/opt/usp`.

To identify the existing install path, execute the **more bootptab** command from the `/etc` directory on the CS 2000 Management Tools server. The values for `hd` or `bf` identify the existing install path.

- If you install the USP ABS on the CS 2000 Management Tools server using the GUI mode, you must export the X-Windows display of the CS 2000 Management Tools server to a remote workstation. If you are using a Windows-based workstation, use X-Windows server software such as Hummingbird's Exceed. Refer to [Configuring Exceed for an upgrade on page 58](#).

### Action

An ABS software upgrade consists of the following tasks:

1. [Preparing to upgrade ABS software on page 44](#)
2. [Upgrading the ABS software on page 45](#)
3. [Completing the ABS software upgrade on page 55](#)

## Preparing to upgrade ABS software

The steps to prepare for an upgrade of ABS software depend on the method you received ABS software. Nortel delivers ABS software through electronic software delivery (ESD) and compact disk (CD).

Use one of the following procedures:

- If you received ABS software through ESD, use procedure [Preparing to upgrade ABS software using an ESD load on page 44](#).
- If you received ABS software on CD and are accessing the server from a local workstation at the CS 2000 Management Tools server, use procedure [Preparing to upgrade ABS software from a CD at a local workstation on page 44](#).

### Preparing to upgrade ABS software using an ESD load

#### *At your workstation*

- 1 Transfer the new software from the ESD load repository server. For detailed steps, refer to procedure [Installing Using ESD on page 72](#).
- 2 From the /opt/usp/iso\_esd directory, set the file permissions by typing  
**chmod 755 install.bin**  
and pressing the Enter key.
- 3 View the permissions on the install.bin file and confirm the change was successful by typing  
**ls -l install.bin**  
and pressing the Enter key.  
*Example of response*  
RWXR-XR-X 2 FIELD maint2 \*date\* \*time\*  
install.bin
- 4 You have prepared ABS software for the upgrade. Go to [Upgrading the ABS software on page 45](#).

### Preparing to upgrade ABS software from a CD at a local workstation

#### *At the CS 2000 Management Tools server*

- 1 Insert the USP software CD in the CD drive of the CS 2000 Management Tools server. If CS 2000 Management Tools

resides on a high-availability cluster, insert the CD in the CD drive of active server.

### ***At your workstation***

- 2 Log in to the CS 2000 Management Tools server as the root user.

For detailed steps, refer to procedure [Logging in to an SPFS-based server on page 77](#)

- 3 Change directories by typing

```
cd /cdrom/cdrom0
```

and pressing the Enter key.

- 4 Verify the install.bin file is present by typing

```
ls
```

and pressing the Enter key.

- 5 You have prepared ABS software for the upgrade. Go to [Upgrading the ABS software on page 45](#).

## **Upgrading the ABS software**

Upgrade the ABS software. Use one of the following procedures:

- To upgrade ABS software in console mode, go to [Upgrading the ABS software in console mode on page 45](#).
- To upgrade ABS software in GUI mode, go to [Upgrading the ABS software in GUI mode on page 50](#).

### **Upgrading the ABS software in console mode**

#### ***At the workstation***

- 1 Login to the CS 2000 Management Tools server as FIELD then change to the root user.

For detailed steps, refer to procedure [Logging in to an SPFS-based server on page 77](#).

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

| <b>If ABS is</b>                  | <b>Do</b>              |
|-----------------------------------|------------------------|
| currently installed on the server | <a href="#">step 3</a> |
| not installed on the server       | <a href="#">step 6</a> |

- 3 Change to the ABS directory by typing  
**cd /<original USP install path>/ntssgusp/abs/**  
and pressing the Enter key.  
*where*  
<original USP install path> is one of the following:
  - /data/usp for offices at USP10 and lower
  - /opt/usp for offices at USP11 and higher
- 4 Copy the sites folder by typing  
**cp -r sites <backup path>**  
and pressing the Enter key.  
*where*  
<backup path> is ~/usp\_backup/ or the path to your backup directory for ABS software
- 5 Copy the releases folder by typing  
**cp -r releases <backup path>**  
and pressing the Enter key.  
*where*  
<backup path> is ~/usp\_backup/ or the path to your backup directory for ABS software
- 6 Change directories by typing  
**cd /<original USP install path>/ntssgusp**  
and pressing the Enter key.  
*where*  
<original USP install path> is one of the following:
  - /data/usp for offices at USP10 and lower
  - /opt/usp for offices at USP11 and higher
- 7 Start the uninstall wizard by typing  
**./Uninstall\_Universal\_Signaling\_Point -i console**  
and pressing the Enter key.
- 8 When the Introduction panel appears, click **Enter**.
- 9 Wait for the uninstall wizard to open, which can take two to three minutes.

- 10** When the uninstall wizard opens, type **1** to completely remove all USP software components, and press Enter to continue.

**Note:** If you want to uninstall only ABS, type **2**, select USP Software Loads and ABS Manager to uninstall, and press Enter to continue.

- 11** When the Uninstall Complete panel appears, press the Enter key to exit the uninstall process.

- 12** Change directory by typing

```
cd /<original USP install path>/ntssgusp/
```

and pressing the Enter key.

where

*<original USP install path>* is one of the following:

- /data/usp for offices at USP10 and lower
- /opt/usp for offices at USP11 and higher

- 13** Make sure the removal was successful by typing

```
ls -l |grep ABS
```

and pressing the Enter key.

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

| <b>If</b>                    | <b>Do</b>                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| one or more files are listed | Return to <a href="#">step 7</a> . If you are unable to uninstall the software on a second attempt, contact your next level of support. |
| otherwise                    | <a href="#">step 15</a>                                                                                                                 |

- 15** Change to the directory with the new ABS software. Use the following table to determine the correct command.

| <b>If you received ABS software</b> | <b>Do</b>                                                                                                                                                                                |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| through ESD                         | type <code>cd /opt/usp/iso_esd/&lt;installation_directory&gt;/</code><br>where<br><installation_directory> is the directory where the software was extracted, for example, USP11.1.0.16F |

- |  | <b>If you received ABS software</b> | <b>Do</b>                          |
|--|-------------------------------------|------------------------------------|
|  | on CD                               | type <code>cd /cdrom/cdrom0</code> |
- 16** Launch the install wizard. Enter **`./install.bin -i console`** and pressing the Enter key.  
The application can take 2 to 3 minutes to launch.
- 17** When the Introduction panel appears, click **Enter**.  
The Component Selection panel appears.  
*Example of Component Selection panel*
- ```

1 - [ ] USP Software loads and ABS Manager
2 - [X] USP Graphical Interface Client
3 - [X] USP User Manuals and Documentation Suite
4 - [ ] USP GR-310 Mediation Application

```
- Enter software component numbers and press <Enter> to continue.
Components 2 and 3 are selected by default.
To view a detailed description of each software component, enter '`?<component_number>`'.
- 18** Use the following table to determine your next step.
- | If you are | Do |
|--|-------------------------|
| using the CS 2000 Management Tools webstart application | step 19 |
| not using the CS 2000 ManagementTools webstart application | step 21 |
- 19** Select the USP Software loads and ABS Manager component in addition to components 2 and 3, which are selected by default, by typing
- ```
1
```
- and pressing the Enter key.  
A pre-installation summary appears which displays the selected components.

### Example of Pre-Installation Summary

Please review the selected software components

Product Name:

Universal Signaling Point v11.1

Software Components:

USP Software Loads and ABS Manager,

USP Graphical Interface Client ,

USP User Manuals and Documentation Suite

Press <ENTER> to continue:

- 20** Press **Enter** and go to [step 23](#).
- 21** Select the USP Software loads and ABS Manager component in addition to component 3, which is selected by default, and deselect the USP Graphical Interface Client component, by typing
- 1, 2**
- and pressing the Enter key.

A pre-installation summary appears which displays the selected components.

### Example of Pre-Installation Summary

Please review the selected software components

Product Name:

Universal Signaling Point v11.1

Software Components:

USP Software Loads and ABS Manager,

USP User Manuals and Documentation Suite

Press <ENTER> to continue:

- 22** Press **Enter** to continue.
- 23** If a disk space warning displays, press **Enter**.
- 24** On the Install Complete panel, press **Enter**.
- 25** Change directories by typing
- cd /opt/usp/ntssgusp/abs**
- and pressing the Enter key.

- 26 Verify the new version of ABS software. Launch the updated console-based ABS Configuration Manager application by typing  
**./console\_abs**  
and pressing the Enter key.  
It takes approximately 2 to 3 minutes for the application to launch and be fully populated with data.
- 27 Log in to the ABS by typing  
ABSCM> **login**  
and pressing the Enter key.
- 28 When prompted, enter the password for the ABS.  
**Note:** Refer to the *ABS\_Specification.pdf* document for all the command syntax of the console-based ABS Configuration manager.
- 29 Log out of the ABS by typing  
ABSCM> **exit**  
and pressing the Enter key.
- 30 When prompted, confirm you want to log out of the ABS by typing  
**Y**  
and pressing the Enter key.
- 31 Return to the root directory by typing  
**cd /**  
and pressing the Enter key.
- 32 You have completed this procedure. Go to [Completing the ABS software upgrade on page 55](#).

## Upgrading the ABS software in GUI mode

### *At the workstation*

- 1 Ensure that your X-Windows server software is running and that host access permissions are allowed for the CS 2000 Management Tools server. Refer to your X-Windows server software manual for details.
- 2 Login to the CS 2000 Management Tools server as FIELD.
- 3 Once logged in, change to the root user by typing:  
**su -**

and pressing the Enter key.

- 4 Set the display variable by typing:

**DISPLAY=<IP address of your PC>:0.0**

and pressing the Enter key.

**Note:** You can find the IP address of the PC you are using by entering the command `ipconfig` from a DOS window. If you are using Contivity or similar software to connect to the network, make sure you use the IP address assigned to your PC by Contivity and not the IP address assigned to you by your LAN.

- 5 Export the display by typing:

**export DISPLAY**

and pressing the Enter key.

- 6 Confirm the export by typing:

**echo \$DISPLAY**

and pressing the Enter key.

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

| If ABS is                         | Do                      |
|-----------------------------------|-------------------------|
| currently installed on the server | <a href="#">step 8</a>  |
| not installed on the server       | <a href="#">step 10</a> |

- 8 Change to the ABS directory by typing

**cd /<original USP install path>/ntssgusp/abs/**

and pressing the Enter key.

*where*

*<original USP install path>* is one of the following:

- /data/usp for offices at USP10 and lower
- /opt/usp for offices at USP11 and higher

- 9 Copy the sites folder by typing

**cp -r sites <backup path>**

and pressing the Enter key.

*where*

*<backup path>* is `~/usp_backup` or the path to your backup directory for ABS software

- 10 Change directories by typing  
**cd /<original USP install path>/ntssgusp**  
and pressing the Enter key.  
*where*  
<original USP install path> is one of the following:
  - /data/usp for offices at USP10 and lower
  - /opt/usp for offices at USP11 and higher
- 11 Start the install wizard by typing  
**./Uninstall\_Universal\_Signaling\_Point -i gui &**  
and pressing the Enter key.
- 12 Wait for the install wizard to open. The application can take two to three minutes to launch and receive data.
- 13 When the uninstall wizard opens, click **Next**, then click **Completely remove all USP software components**.  
**Note:** If you want to uninstall ABS only, you can do the following: When the uninstall wizard opens, click **Choose specific USP components to uninstall**, then select **USP Software Loads** and **ABS Manager** to uninstall.
- 14 Change directories by typing  
**cd /<original USP install path>/ntssgusp/abs**  
and pressing the Enter key.  
*where*  
<original USP install path> is one of the following:
  - /data/usp for offices at USP10 and lower
  - /opt/usp for offices at USP11 and higher
- 15 Try to launch the ABS Configuration Manager to ensure the removal was successful by typing  
**./ABS**  
and pressing the Enter key.

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

| <b>If the ABS Configuration Manager</b> | <b>Do</b>                                                                                                                                |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| launches                                | Return to <a href="#">step 11</a> . If you are unable to uninstall the software on a second attempt, contact your next level of support. |
| fails to launch                         | <a href="#">step 17</a>                                                                                                                  |

- 17 Change to the directory with the new ABS software. Use the following table to determine the correct command.

| <b>If you receive ABS software</b> | <b>Do</b>                  |
|------------------------------------|----------------------------|
| through ESD                        | <b>cd /opt/usp/iso_esd</b> |
| on CD                              | <b>cd /opt/usp/absCD</b>   |

- 18 Launch the install wizard by typing

```
./install.bin
```

and pressing the Enter key.

The application can take 2 to 3 minutes to launch.

**Note:** If the following error appears, the DISPLAY environment variable is not set up correctly.

```
Invocation of this Java Application has caused
an InvocationTargetException. This
application will now exit. (LAX)
```

Stack Trace:

```
at java.lang.Class.forName0(Native Method)
at java.lang.Class.forName (Class.java:130)
```

If any other errors occur, ensure that your X-Windows server software is running and that host access permissions are allowed for the CS 2000 Management Tools server. Refer to your X-Windows software manual for details.

If the errors persist, contact your Nortel support representative.

- 19 When the Introduction panel appears, click **Next**.
- 20 Select the **USP Software Loads and ABS Manager** package on the Package Selection panel. If using the CS 2000 Management Tools webstart application, also select the USP

- Graphical Interface Client package. Do not select other packages. Click **Install**.
- 21 If a disk space warning displays, click **OK**.
  - 22 On the Install Complete panel, click **Done**.
  - 23 Login to the CS 2000 Management Tools server as FIELD.
  - 24 Change directories by typing  
**cd /opt/usp/ntssgusp/abs**  
and pressing the Enter key.
  - 25 Ensure that your X-Windows software is running and that host access permissions are allowed for the CS 2000 Management Tools server.
  - 26 Ensure that the DISPLAY environment variable is set up correctly.
  - 27 Launch the updated graphically-based ABS Configuration Manager application by typing  
**./ABS &**  
and pressing the Enter key.  
  
It takes approximately 2 to 3 minutes for the application to launch and be fully populated with data.
  - 28 Click **File>Login**, and as this is the first time you are launching the new release of ABS, set the password when prompted to set and confirm the password.
  - 29 When prompted, enter the password and press enter to login into ABS.
  - 30 Click **File>Exit**, then a prompt indicates  

```
Exit Alternate Boot Server Configuration
Manager?
```

  
Click **Yes** to exit the ABS Manager.
  - 31 Exit to the root directory by typing  
**cd /**  
and pressing the Enter key.
  - 32 You have upgraded ABS software. Go to [Completing the ABS software upgrade on page 55](#)

## Completing the ABS software upgrade

Perform the following procedure to complete the upgrade of ABS software.

### Completing an ABS software upgrade

#### *At your workstation*

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

| <b>If you received software</b> | <b>Do</b>              |
|---------------------------------|------------------------|
| received software through ESD   | <a href="#">step 2</a> |
| working on a local workstation  | <a href="#">step 4</a> |

- 2 Delete the temporary files by typing `rm -rf /opt/usp/iso_esd` and press the Enter key.
- 3 Proceed to [step 6](#).
- 4 Eject the USP Software CD-ROM disk from the drive by typing `eject cdrom` and pressing the Enter key.
- 5 Remove the CD and close the drive.
- 6 You have completed the upgrade of ABS software on the CS 2000 Management Tools server. Make sure that ABS is working correctly. Refer to [Verifying correct ABS settings for the USP \(RTC\) on page 55](#).

### Verifying correct ABS settings for the USP (RTC)

#### *From the BOOTP server*

- 1 You can use the USP EM PC to perform [step 2](#) to [step 8](#) or log in to the CMT and perform the steps.
- 2 Establish a telnet connection to RTC-12 or RTC-15.
- 3 Log in with a valid user name and password.
- 4 Verify the settings on RTC-12 by typing `admin abs test rtc-12` and pressing the Enter key.
- 5 When prompted, confirm the execution of the command by typing `y`

and pressing the Enter key.

If the settings are correct and the test is successful, the prompt returns after a few seconds. Otherwise, the system displays the failure before the prompt returns. If the test is not successful, contact your next level of support.

- 6 Verify the settings on RTC-15 by typing

```
admin abs test rtc-15
```

and pressing the Enter key.

- 7 When prompted, confirm the execution of the command by typing

```
y
```

and pressing the Enter key.

If the settings are correct and the test is successful, the prompt returns after a few seconds. Otherwise, the system displays the failure before the prompt returns. If the test is not successful, contact your next level of support.

- 8 Display all ABS settings by typing

```
admin abs show all
```

and pressing the Enter key.

- 9 Verify the following information:

- the rtc-12-load-server-ipaddress is the address of the CMT ABS
- the rtc-15-load-server-ipaddress is the address of the CMT ABS
- the correct RTC loads and snapshot are selected
- all other output information is correct

Example response for a site named "Enterprise"

```
~CMD>admin abs show all
rtc-12-loadname = ss7rtc_ppc750_11_00_00_36g
rtc-15-loadname = ss7rtc_ppc750_11_00_00_36g
snapshot-version = v11.0.0
snapshot-name = v11.0.0
snapshot-description = USP11.0.0 Default
Database
virtual-index = 1
```

```

rtc-12-load-server-ipaddress = 47.135.60.47
rtc-12-bootfile =
/data/usp/ntssgusp/abs/sites/enterprise/rtc1/r
tcboot
rtc-12-ipaddress = 47.135.60.88
rtc-12-gateway-ipaddress = 47.135.60.1
rtc-12-subnet-mask = 255.255.252.0
rtc-15-load-server-ipaddress = 47.135.60.47
rtc-15-bootfile =
/data/usp/ntssgusp/abs/sites/enterprise/rtc2/r
tcboot
rtc-15-ipaddress = 47.135.60.89
rtc-15-gateway-ipaddress = 47.135.60.1
rtc-15-subnet-mask = 255.255.252.0
rtc-12-last-test-result = alternate-boot-server
test completed successfully
rtc-15-last-test-result = alternate-boot-server
test completed successfully
~CMD>

```

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

| <b>If</b>                                         | <b>Do</b>                          |
|---------------------------------------------------|------------------------------------|
| the information in the system response is correct | <a href="#">step 11</a>            |
| otherwise                                         | contact your next level of support |

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

---

## Configuring Exceed for an upgrade

---

Perform the following procedure to configure the Exceed application for an upgrade of alternate boot server (ABS) software.

### Prerequisites

Familiarity with starting the Exceed Xconfig application. Depending on the setup of your PC, you can start Xconfig through any of the following methods:

- Double-click a desktop shortcut.
- Select the menu option from Programs->Exceed or Programs->Hummingbird
- Double-click the xconfig.exe file in the Exceed folder.
- Type the directory path and name of the xconfig.exe file in Start->Run or a DOS prompt.

### Action

The following configuration steps apply to the Hummingbird version 10.0.0.0. For other versions please consult your Hummingbird documentation.

#### Configuring Exceed for an upgrade

##### *At your PC*

- 1** Start the Exceed Xconfig application.  
*Response*  
*The Xconfig window opens.*
- 2** Switch to "classic view" and select the Security icon.  
*Response*  
*The Security window opens.*
- 3** Under Host Access Control List, choose host access. Select the Green check mark on the toolbar to save and exit.  
*Response*  
*The Security window closes and the Xconfig window opens.*
- 4** Select the Communication icon.  
*Response*  
*The Communication window opens.*

- 5** Make sure Mode is set to Passive. Select the Green check mark on the toolbar to save and exit.

*Response*

*The Communication window closes and the Xconfig window opens.*
- 6** Double-click the Screen Definition window.

*Response*

*The Screen Definition window opens.*
- 7** Select the tab Screen 0.
- 8** Under Window Mode, make sure Multiple is selected. Select the Green check mark on the toolbar to save and exit.

*Response*

*The Screen Definition window closes and the Xconfig window opens.*
- 9** Close the Xconfig window. From the menu bar, select File->Exit.

*Response*

*The Xconfig window closes.*
- 10** You have completed this procedure.

---

## Transferring and mounting an ISO image on an SPFS-based server

---

### Application

Use this procedure to perform the following tasks:

- uncompress the software load on your ESD load repository server
- transfer an iso image file from your ESD load repository server to the SSPFS-based server
- mount the image on the SSPFS-based server

Nortel delivers a software load in a compressed file through Electronic Software Delivery (ESD) to a local ESD load repository server. Once the file is uncompressed, the software load and patches are then available as International Standard of Organization (ISO) 9660-compliant images for transfer to an SSPFS-based server.

Only the files with a .iso extension need to be transferred to the SSPFS-based server. The other files contained in the uncompressed file are for information purposes and do not need to be transferred to the SSPFS-based server.

The patch iso image file contains a P in its name, for example, CS2MP080, when delivered with an NCL, or an X, for example, CS2MX080.iso, when delivered with an MNCL.

### Prerequisites

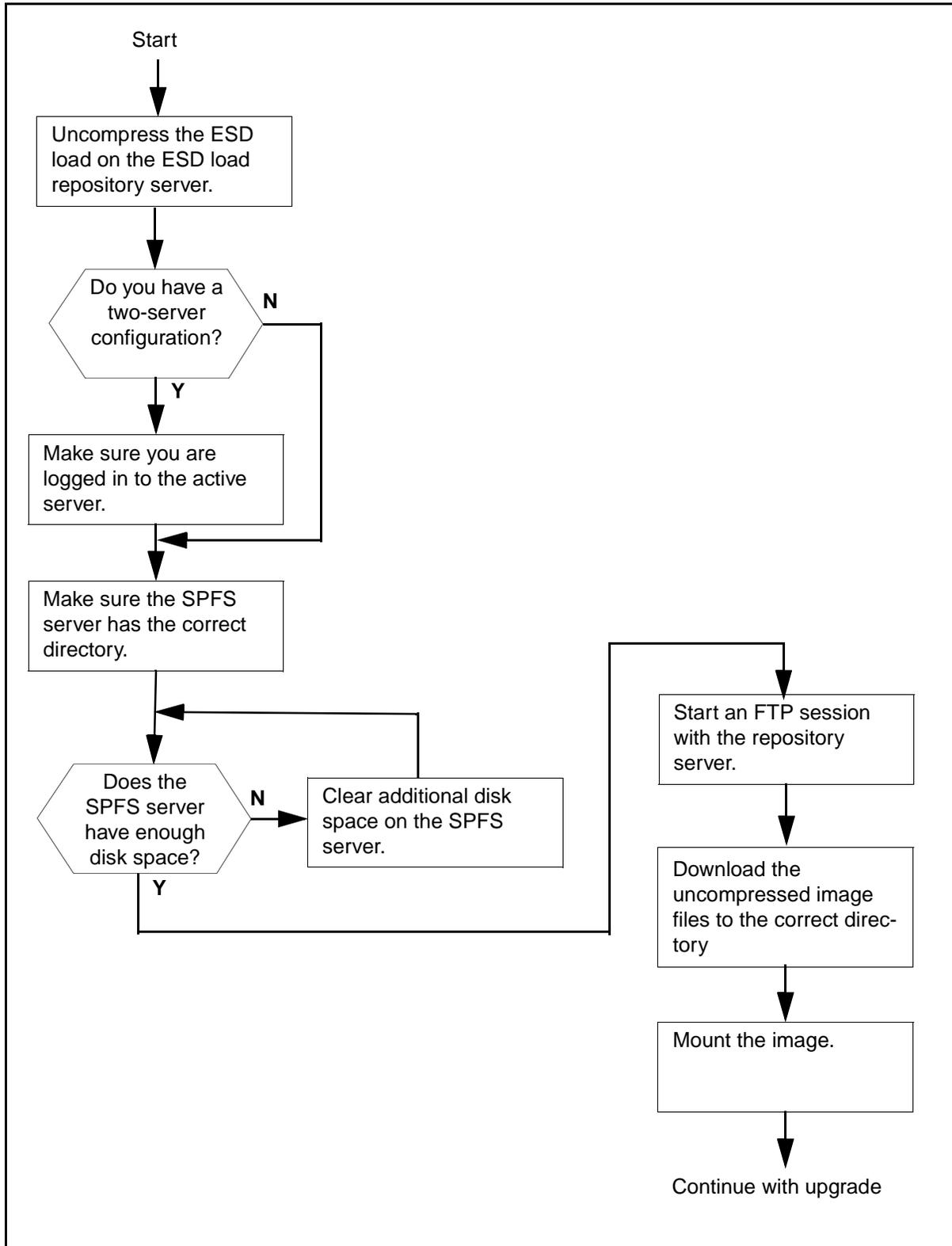
This procedure has the following prerequisites:

- The ESD load must be available on your ESD load repository server.
- You must know the name or IP address of the load repository server and the location of the dropbox directory on the server.
- You must know the name or IP address of the SPFS-based server.
- You must know the root password to the SPFS-based server.

This procedure requires you to confirm the availability of disk space on the SPFS-based server. If the server does not have the required amount of available disk space, follow your local office policy to clear space. If you do not know your policy or cannot clear the required amount of available disk space, contact your next level of support.

## **Action**

Use the flowchart as an overview of the tasks required to complete this procedure. Use the step-by-step instructions to complete the procedure.

**Overview of steps to transfer and mount an ISO image to an SPFS-based server**

## Uncompressing the load on the ESD load repository server

### *At the ESD load repository server*

- 1 Log in to the ESD load repository server, and change directory to the drop box location.

**Note:** Ensure you log in with a user ID that has permission to uncompress files.

- 2 List the contents of the drop box:

```
ls *.gz
```

- 3 Locate the file you want to uncompress.

- 4 Uncompress the file:

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

where

#### **esd\_filename**

is the name of the ESD software load, for example:

SPFS0091.91.LAB.NCL.NAP.VAULT.1.D, which is the  
esd\_filename for SPFS

IEMS0091.91.LAB.NCL.NAP.VAULT.2.D, which is the  
esd\_filename for IEMS

UCBM0010.10.LAB.NCL.NAP.VAULT.5.D, which is the  
esd\_filename for CBM

CS2M0091.91.LAB.NCL.NAP.VAULT.1.D, which is the  
esd\_filename for CS 2000 Management Tools

- 5 List the uncompressed file:

```
ls *.tar
```

- 6 Unpack the file:

```
tar -xvf <esd_filename>.tar
```

where

#### **esd\_filename**

is the name of the ESD software load, for example:

SPFS0091.91.LAB.NCL.NAP.VAULT.1.D, which is the  
esd\_filename for SPFS

IEMS0091.91.LAB.NCL.NAP.VAULT.2.D, which is the  
esd\_filename for IEMS

UCBM0010.10.LAB.NCL.NAP.VAULT.5.D, which is the esd\_filename for CBM

CS2M0091.91.LAB.NCL.NAP.VAULT.1.D, which is the esd\_filename for CS 2000 Management Tools

The unpacked file is a directory that contains the iso image files.

- 7 Log out of the ESD load repository server.
- 8 Perform the steps under [Transferring an ISO image to an SPFS-based server on page 64](#) to continue with this procedure.

### Transferring an ISO image to an SPFS-based server

#### ATTENTION

In a two-server configuration, you will transfer the ISO image to the active server.

#### *At your workstation*

- 1 Establish a connection to the SPFS-based server through telnet or SSH, and log in using the root user ID and password.  
  
In a two-server configuration, log in to the active server using the physical IP address of the active server, and ensure you are on the active server using the **ubmstat** command.  
  
For detailed steps, refer to procedure [Logging in to an SPFS-based server on page 77](#).
- 2 Make sure the server has the correct directories. Use the following table as reference to identify the directory required for the SPFS-based server type (component) to which the ISO image is to be transferred.

| Component            | Directory path |
|----------------------|----------------|
| ERS 8600             | /swd           |
| GWC                  | /gwc           |
| All other components | /data/esd_iso  |

List the directory for your component:

```
ls <directory>
```

where

**directory**

is /swd, /gwc, or /data/esd\_iso

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

| If the response                    | Do                     |
|------------------------------------|------------------------|
| indicates no such directory exists | <a href="#">step 4</a> |
| displays the name of the directory | <a href="#">step 5</a> |

- 4 Create the directory:

```
mkdir <directory>
```

where

**directory**

is /swd, /gwc, or /data/esd\_iso

- 5 Display the available disk space in the directory:

```
df -k <directory>
```

where

**directory**

is /swd, /gwc, or /data

Example response

```
df -k /data
```

| Filesystem     | kbytes  | used   | avail   | capacity | Mounted on |
|----------------|---------|--------|---------|----------|------------|
| /dev/md/dsk/d2 | 3082223 | 144125 | 2876454 | 5%       | /data      |

- 6 Record the amount of available disk space, which is provided in kilobytes. You will need the information later in this procedure.

- 7 Change directory:

```
cd <directory>
```

where

**directory**

is /swd, /gwc, or /data/esd\_iso

- 8 Start an FTP session with the ESD repository server:  
**ftp <ESD\_repository\_server\_ip>**  
*where*  
**ESD\_repository\_server\_ip**  
is the machine owned by the operating company that was selected to be the destination for ESD software.
- 9 When prompted, enter your user ID and password.
- 10 List the directories on the ESD repository server:  
**ftp> ls**
- 11 Change directory to the drop box directory:  
**ftp> cd <dropbox\_directory>**  
*where*  
**dropbox\_directory**  
is the name of the your dropbox directory.
- 12 List the contents of the drop box:  
**ftp> ls -l**
- 13 Change to the directory that contains the iso image files:  
**ftp> cd <esd\_filename\_directory>**  
*where*  
**esd\_filename\_directory**  
is the directory that contains the iso image files, for example:  
  
SPFS0091.91.LAB.NCL.NAP.VAULT.1.D, for SPFS  
  
IEMS0091.91.LAB.NCL.NAP.VAULT.2.D, for IEMS  
  
UCBM0010.10.LAB.NCL.NAP.VAULT.5.D, for CBM  
  
CS2M0091.91.LAB.NCL.NAP.VAULT.1.D, for CS 2000 Management Tools
- 14 Locate the load or patch iso image file you want to transfer, and identify the size of the file, which is provided in bytes.  
**Note 1:** Divide the number of bytes by 1024 to convert the size to kilobytes.  
**Note 2:** The patch iso image file contains a P in its name, for example, CS2MP080, when delivered with an NCL, or an X, for example, CS2MX080.iso, when delivered with an MNCL.

- 15** Compare the size of the iso image file with the amount of available space you recorded in [step 6](#).
- 16** Use the following table to determine your next step.
- | <b>If</b>                                  | <b>Do</b>               |
|--------------------------------------------|-------------------------|
| the server has enough available disk space | <a href="#">step 18</a> |
| otherwise                                  | <a href="#">step 17</a> |
- 17** Clear additional disk space following local office policy, before you continue with this procedure. If necessary, contact your next level of support.
- 18** Change the transfer mode to binary:  
ftp> **bin**
- 19** Transfer the iso image file to the SPFS-based server:  
ftp> **get <iso\_image>**  
where  
**iso\_image**  
is the full name of the iso image file  
**Note:** Do not transfer any file with a .tar.gz extension.
- 20** End the FTP session:  
ftp> **bye**
- 21** List the contents of the directory to ensure the files successfully transferred to the server:  
**ls -l**  
You are now ready to mount the iso image on the server.
- 22** Perform the steps under [Mounting an ISO image on an SPFS-based server on page 67](#) to complete this procedure.

### Mounting an ISO image on an SPFS-based server

#### ATTENTION

In a two-server configuration, you will mount the ISO image on the inactive server with the exception of the APS, CEM, Media Server 2000, GWC, SAM21, MG 9000 nodes (cards) ISO images, and Patch Media ISO images, which you will mount on the active server.

**At your workstation**

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

| <b>If</b>                           | <b>Do</b>              |
|-------------------------------------|------------------------|
| you have a two-server configuration | <a href="#">step 2</a> |
| otherwise                           | <a href="#">step 4</a> |

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

| <b>If</b>                                                                                                               | <b>Do</b>              |
|-------------------------------------------------------------------------------------------------------------------------|------------------------|
| you are mounting the APS, CEM, Media Server 2000, GWC, SAM21, MG 9000 nodes (cards) ISO image, or Patch Media ISO image | <a href="#">step 4</a> |
| otherwise                                                                                                               | <a href="#">step 3</a> |

- 3 Establish a connection to the inactive server through telnet or SSH using the physical IP address of the inactive server, log in using the root user ID and password, and ensure you are on the inactive server using the **ubmstat** command.

For detailed steps, refer to procedure [Logging in to an SPFS-based server on page 77](#).

- 4 Start the command line interface:

```
c1i
```

- 5 Enter the number next to the Other option in the menu.
- 6 Enter the number next to the mount\_image option in the menu.
- 7 Use the following table to determine your next step.

| <b>If the system response is</b> | <b>Do</b>              |
|----------------------------------|------------------------|
| Enter full path to ISO image     | <a href="#">step 9</a> |
| ISO image Already Mounted        | <a href="#">step 8</a> |

- 8 Enter the number next to the umount\_image option in the menu and retry [step 6](#).

**Note:** If either command is unsuccessful a second time, contact your next level of support.

- 9 When prompted, enter the full path name of the iso image on the server:

**<directory\_path>/<iso\_image>**

*where*

**directory\_path**

is /swd, /gwc, or /data/esd\_iso

**iso\_image**

is the full name of the ISO image file

**Note 1:** Do not attempt to change directories to the /tmpmnt directory until the mount command is complete.

**Note 2:** Record the path of the ISO image file for ISO image file removal.

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

| <b>If the response is</b>                                                                                                                                                                                                                                                          | <b>Do</b>                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| It is very important for the user of this command to know that if you mount an iso image, you must unmount the image before removing the image file. If the file is deleted while the operating system has it mounted, it can be harmful to the runtime applications on this unit. | <a href="#">step 11</a>                                                                                                                                                         |
| Provided full path to ISO image does not exist                                                                                                                                                                                                                                     | Verify the location and name of the image and retry <a href="#">step 8</a> .                                                                                                    |
| Error creating the image device location                                                                                                                                                                                                                                           | Retry <a href="#">step 8</a> . An operating system error with the loopback file driver occurred. If the command fails a second time, contact your next level of support.        |
| ERROR MOUNTING<br><ESD_filename>                                                                                                                                                                                                                                                   | This response indicates that either the iso file is corrupt, or the /tmpmnt directory has been deleted.                                                                         |
|                                                                                                                                                                                                                                                                                    | Exit each menu level of the command line interface to eventually return to the root level prompt by typing<br>select - x                                                        |
|                                                                                                                                                                                                                                                                                    | Repeat the steps under <a href="#">Transferring an ISO image to an SPFS-based server on page 64</a> . If the procedure fails a second time, contact your next level of support. |

**11** Exit each menu level of the command line interface:

select - x

- 12** You have completed this procedure. If applicable, return to the high level task or procedure that directed you to this procedure.

---

## Installing Using ESD

---

You can use a PC or Solaris to install the USP software. The following procedure is required to load the installation files onto the respective platforms.

### Prerequisites

At least 500 MBytes must be available on the destination system to accommodate the USP install.

The workstation must be equipped with an FTP client application, such as WS FTP Pro or WinSCP, that supports the recursive transfer of directory structures.

### Action

Perform the following tasks in the order they are presented, to prepare for a USP software installation:

- [Uncompressing the load on the ESD load repository server](#)
- [Transferring the uncompressed file to the CMT](#) or [Transferring the uncompressed file to Windows](#)

#### Uncompressing the load on the ESD load repository server

##### *At the ESD load repository server*

- 1 Log in to the ESD load repository server, and change directory to the drop box location.

**Note:** Ensure you log in with a user ID that has permission to uncompress files.

- 2 List the contents of the drop box.

```
ls *.gz
```

- 3 Locate the file you want to uncompress.

- 4 Uncompress the file.

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

where

**esd\_filename**

is the name of the ESD software load, for example,  
USP11.1.0.NCL.NAP.VAULT.1.D

- 5 List the uncompressed file.

```
ls *.tar
```

- 6     Unpack the file.  
**tar -xvf <esd\_filename>.tar**  
where  
      **esd\_filename**  
      is the name of the ESD software load, for example,  
      USP11.1.0.NCL.NAP.VAULT.1.D  
  
The unpacked file is a directory that contains the USP  
installation software, for example  
USP11.1.0.NCL.NAP.VAULT.1.D.
- 7     Change to the directory that contains the USP installation  
software.  
**cd <esd\_filename>**  
where  
      **esd\_filename**  
      is the name of the directory that contains the USP  
      installation software, for example,  
      USP11.1.0.NCL.NAP.VAULT.1.D
- 8     Remove the .tape suffix from the USP package.  
**mv <usp\_sys\_filename>.tar.gz.tape  
<usp\_sys\_filename>.tar.gz**  
where  
      **usp\_sys\_filename**  
      is the name of the USP package, for example,  
      usp11.1.0\_sys
- 9     Uncompress the file.  
**gzip -d <usp\_sys\_filename>.tar.gz**  
where  
      **usp\_sys\_filename**  
      is the name of the USP package, for example,  
      usp11.1.0\_sys
- 10    Unpack the file.  
**tar -xvf <usp\_sys\_filename>.tar**  
where  
      **usp\_sys\_filename**  
      is the name of the USP package, for example,  
      usp11.1.0\_sys
- 11    Log out of the ESD load repository server.

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

| <b>If you are upgrading USP on a</b>           | <b>Do</b>                                                                |
|------------------------------------------------|--------------------------------------------------------------------------|
| CMT-based OAMP workstation                     | <a href="#">Transferring the uncompressed file to the CMT on page 74</a> |
| non-CMT-based OAMP workstation (windows-based) | <a href="#">Transferring the uncompressed file to Windows on page 76</a> |

### Transferring the uncompressed file to the CMT

#### At a PC terminal

- 1 Make a temporary directory to store the ESD software on the PC.

```
c : /usp/loads
```

- 2 Change directory to the newly created directory.
- 3 Use your FTP client application to transfer the uncompressed USP software from the ESD load repository server to the directory you created in [step 1](#).

Before the transfer, ensure your FTP client is in binary mode.

#### At the CMT server

- 4 Log in to the CMT server using the FIELD account and change to the root user.

For detailed steps, refer to procedure [Logging in to an SPFS-based server on page 77](#).

- 5 Determine the usp install directory:

```
cat /opt/proftpd/etc/proftpd.conf |grep usp
```

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

| <b>If the response is</b> | <b>Do</b>               |
|---------------------------|-------------------------|
| /data/usp                 | <a href="#">step 7</a>  |
| /opt/usp                  | <a href="#">step 14</a> |

- 7 Create a temporary directory to store the ESD software:

```
mkdir /data/usp/iso_esd
```

- 8 Change directory to the newly created location:

```
cd /data/usp/iso_esd
```

- 9 Ensure that enough disk space is available for the ESD software (500 MByte is recommended):

```
df -k /data
```

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

- 10 Transfer the USP software installation files from the PC to the temporary directory (created in [step 7](#)) using your FTP client application at the PC terminal.

Before the transfer, ensure your FTP client is in binary mode.

- 11 Create a temporary directory to store the ESD software:

```
mkdir /opt/usp/iso_esd
```

- 12 Move all the data from /data/usp/iso\_esd/ to /opt/usp/iso\_esd/:

```
mv /data/usp/iso_esd/* /opt/usp/iso_esd/
```

- 13 Proceed to [step 18](#).

- 14 Create a temporary directory to store the ESD software:

```
mkdir /opt/usp/iso_esd
```

- 15 Change directory to the newly created location:

```
cd /opt/usp/iso_esd
```

- 16 Ensure that enough disk space is available for the ESD software (500 MByte is recommended):

```
df -k /opt
```

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

- 17 Transfer the USP software installation files from the PC to the temporary directory (created in [step 14](#)) using your FTP client application.

- 18 Confirm the USP installation software is present:

```
cd /opt/usp/iso_esd/<installation_directory>
```

```
ls -l
```

**installation\_directory**

is the directory that contains the USP files, for example USP11.1.0.16F

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

### **Transferring the uncompressed file to Windows**

#### ***At the Windows-based OAMP workstation***

- 1 Make a temporary directory to store the ESD software on the PC.  
**c : /usp/loads**
- 2 Change directory to the newly created directory.
- 3 Use your FTP client application to transfer the uncompressed USP software from the ESD load repository server to the directory you created in [step 1](#).  
Before the transfer, ensure your FTP client is in binary mode.
- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

---

## Logging in to an SPFS-based server

---

### Application

Use this procedure to log in to a Server Platform Foundation Software (SPFS)-based server. This procedure provides the steps to establish a login session using SSH, which is secure, or telnet, which is not secure.

Some tasks will require that you log in to the server through the console (port A) using the root user ID and password.

### Prerequisites

This procedure requires the following information:

- the IP address or host name of the server

**Note:** In a two-server configuration, you need the physical IP address of the active or inactive server.

- a valid user id and password
- the root password if you need to perform a task on the server that requires root user privileges

### Action

Perform the steps under one of the following headings to complete this procedure.

- [Logging in using SSH on page 77](#)
- [Logging in using Telnet on page 80](#)
- [Logging in through the console on page 82](#)

#### Logging in using SSH

##### *At your workstation*

- 1 Establish an SSH session.

If you have access to a workstation which supports the ssh command (Linux, for example) then proceed with [step a](#) below.

Otherwise, connect to the server using an SSH client and proceed to [step 2](#).

- a** Establish an SSH session to the server by typing

```
> ssh -l <user_id> <server>
```

where

**user\_id**

is root or your user id

**server**

is the IP address or host name of the SPFS-based server, or the physical IP address of the active or inactive server as required, in a two-server configuration

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

| If you receive                                                                            | Do                     |
|-------------------------------------------------------------------------------------------|------------------------|
| a message indicating a host authentication issue and a request to continue the connection | <a href="#">step 3</a> |
| a prompt for a password                                                                   | <a href="#">step 4</a> |

- 3**

**ATTENTION**

The prompt indicates SSH is verifying whether the server is a trusted host for the workstation. SSH performs the verification the first time SSH is run on a workstation.

Continue the connection by typing

**y**

and pressing the Enter key.

- 4** Enter the password for root or your user id.

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

| If your server is a      | Do                     |
|--------------------------|------------------------|
| one-server configuration | <a href="#">step 9</a> |
| two-server configuration | <a href="#">step 6</a> |

- 6** Ensure you are on the correct server by typing  
`# ubmstat`  
and pressing the Enter key.
- 7** Use the following table to determine your next step.

---

| <b>If you need to be on the</b>                          | <b>Do</b>              |
|----------------------------------------------------------|------------------------|
| active server and the response is ClusterIndicatorSTBY   | <a href="#">step 8</a> |
| inactive server and the response is ClusterIndicatorACT  | <a href="#">step 8</a> |
| active server and the response is ClusterIndicatorACT    | <a href="#">step 9</a> |
| inactive server and the response is ClusterIndicatorSTBY | <a href="#">step 9</a> |

---

- 8** You are logged in to the wrong server. Return to [step 1](#) to log in to the other server.
- 9** You have completed this procedure. If applicable, return to the high-level task or procedure that directed you to this procedure.

## Logging in using Telnet

### *At your workstation*

- 1 Establish a telnet session to the server by typing

```
> telnet <server>
```

and pressing the Enter key.

*where*

#### **server**

is the IP address or hostname of the SPFS-based server, or the physical IP address of the active or inactive server as required, in a two-server configuration

- 2 When prompted, enter your userid.

**Note:** You cannot log in using the root userid at this step.

- 3 When prompted, enter your password.

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

| <b>If</b>                  | <b>Do</b>              |
|----------------------------|------------------------|
| you need to log in as root | <a href="#">step 5</a> |
| otherwise                  | <a href="#">step 7</a> |

- 5 Change to the root user by typing

```
$ su -
```

and pressing the Enter key.

- 6 When prompted, enter the root password.

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

| <b>If your server is a</b> | <b>Do</b>               |
|----------------------------|-------------------------|
| one-server configuration   | <a href="#">step 11</a> |
| two-server configuration   | <a href="#">step 8</a>  |

- 8 Ensure you are on the correct server by typing

```
ubmstat
```

and pressing the Enter key.

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

---

| <b>If you need to be on the</b>                          | <b>Do</b>               |
|----------------------------------------------------------|-------------------------|
| active server and the response is ClusterIndicatorSTBY   | <a href="#">step 10</a> |
| inactive server and the response is ClusterIndicatorACT  | <a href="#">step 10</a> |
| active server and the response is ClusterIndicatorACT    | <a href="#">step 11</a> |
| inactive server and the response is ClusterIndicatorSTBY | <a href="#">step 11</a> |

---

- 10** You are logged in to the wrong server. Log out of this server and return to [step 1](#) to log in to the other server.
- 11** You have completed this procedure. If applicable, return to the high-level task or procedure that directed you to this procedure.

## Logging in through the console

### *At the console connected to the server*

**1** Log in to the server through the console (port A) using the root user ID and password. In a two-server configuration, log in to the the active or inactive server as required.

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

| <b>If your server is a</b> | <b>Do</b>              |
|----------------------------|------------------------|
| one-server configuration   | <a href="#">step 6</a> |
| two-server configuration   | <a href="#">step 3</a> |

**3** Ensure you are on the correct server by typing

```
ubmstat
```

and pressing the Enter key.

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

| <b>If you need to be on the</b>                          | <b>Do</b>              |
|----------------------------------------------------------|------------------------|
| active server and the response is ClusterIndicatorSTBY   | <a href="#">step 5</a> |
| inactive server and the response is ClusterIndicatorACT  | <a href="#">step 5</a> |
| active server and the response is ClusterIndicatorACT    | <a href="#">step 6</a> |
| inactive server and the response is ClusterIndicatorSTBY | <a href="#">step 6</a> |

**5** You are logged in to the wrong server. Log out of this server and return to [step 1](#) to log in to the other server.

**6** You have completed this procedure. If applicable, return to the high-level task or procedure that directed you to this procedure.

---

## Configuring OAMP Workstations

---

The USP supports various workstations.

### Windows 95 workstation

If you want to replace a Windows 95 workstation with a Windows 2000 workstation you must order a Windows 2000 workstation and configure it for use with your USP.

#### Replacing a Windows 95 workstation

##### *At the workstation site*

- 1 Connect the Windows 2000 workstation to the same hub to which the Windows 95 workstation is connected.
- 2 Disable the alternate boot functionality on the Windows 2000 workstation.
- 3 Add the site information for your USP to the Windows 2000 workstation.
- 4 Disable the alternate boot functionality on the Windows 95 workstation and enable it on the Windows 2000 workstation.
- 5 Ensure that the Windows 2000 workstation is functioning normally.
- 6 Disconnect the Windows 95 workstation.
- 7 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Windows 2000 workstation

Perform the following steps to replace a Windows 2000 workstation.

#### Replacing a Windows 2000 workstation

##### *At the workstation site*

- 1 Connect the new Windows 2000 workstation to the same hub to which the original Windows 2000 workstation is connected.
- 2 Disable the alternate boot functionality on the new Windows 2000 workstation.
- 3 Add the site information for your USP to the new Windows 2000 workstation.
- 4 Disable the alternate boot functionality on the original Windows 2000 workstation and enable it on the new Windows 2000 workstation.

- 5 Ensure that the new Windows 2000 workstation is functioning normally.
- 6 Disconnect the original Windows 2000 workstation.  
Refer to the next section, *Installing and Configuring External Reachthrough Client Software*, for information about setting up client software on Windows and UNIX reachthrough workstations.

## Installation and configuration of the Windows client software

You must install Windows client software on each remote Windows workstation before you can use the remote reachthrough feature. For details refer to the Administrator's guide, Citrix ICA Win32 Client, Version 7.0 or Administrator's guide, Citrix ICA Win16 Client, Version 7.0.

### Alternate boot server (NTST30DA)

NTST30DA servers support five terminal server licenses for remote Windows workstations and five Citrix licenses for remote Windows or UNIX workstations. Nortel Networks recommends using the terminal server licenses for remote Windows workstations, reserving the Citrix licenses for remote UNIX workstations. If you need more than five terminal server licenses for remote Windows workstations, use the Citrix licenses.

### Connecting to an alternate boot server (NTST30DA)

#### *At the OAMP workstation*

- 1 Insert Diskette 1 from the set of Windows client software diskettes into the disk drive of your remote Windows workstation.
- 2 Run the setup.exe file on the diskette.
- 3 Follow the on-screen instructions to install the client software on your remote Windows workstation.
- 4 After you install the client software you will see a Citrix Program Neighborhood icon on your desktop. Double-click the icon. Select **Add ICA Connection**.
- 5 After you have created a connection you will see an icon for the new connection in Citrix Program Neighborhood - ICA Connections.
- 6 After you have finished configuring the new connection icon, double-click it to connect your remote Windows workstation to your alternate boot server and run the selected application.

- 7 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Installation and configuration of external Reachthrough client software

### Reachthrough support for Windows 2000

If your USP alternate boot workstation supports external reachthrough you can access the USP GUI using a remote Windows or UNIX workstation.

**Note:** Each remote workstation supports up to 16 GUI sessions at once, provided each session is connected to a different site. Each USP supports up to 16 simultaneous connections in total.

You must install and configure client software on all remote workstations except for UNIX workstations that do not support the Independent Computing Architecture (ICA) protocol.

The following sections describe the procedures for installing and configuring client software on remote Windows and UNIX workstations.

### Connecting to the Citrix Server

#### *At the OAMP workstation*

- 1 Log in as **Administrator**.

**Note:** The system displays error messages as the ABS software attempts to start. Since this software is already running errors will be generated, this will not affect the operation of the ABS server. Changing the ABS settings through reachthrough can only be done through the USP GUI and not by changing the settings directly.

### Adding new Windows users for Citrix

#### *At the OAMP workstation*

- 1 From the Windows Start Menu, click **Start>Programs>Administrative Tools >Computer Management**.
- 2 Click **Local Users and Groups** on the left-hand window of the Computer Management Utility. A Users folder will be displayed in the right-hand window of the Computer Management Utility.
- 3 Right-click the folder and select **New User**. The New user panel appears.
- 4 Enter **uspgui** in the User Name dialog box.

- 5 Enter **USP GUI Access** in the Full Name dialog box.
- 6 Enter a password in the Password dialog box.
- 7 Re-enter the password in the Confirm Password dialog box.
- 8 Uncheck the User must change password at next logon box.
- 9 Check the Password never expires box.
- 10 Click **Create**.
- 11 Create a second user for desktop access. If you require desktop access, this is the preferred method as it will prevent possible resource conflicts with the ABS server software.
  - a Enter **desktop** in the User Name dialog box.
  - b Enter **USP desktop Access** in the Full Name dialog box.
  - c Enter a password in the Password dialog box.
  - d Re-enter the password in the Confirm Password dialog box.
  - e Uncheck the User must change password at next logon box.
  - f Check the Password never expires box.
  - g Click **Create**.
- 12 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## **Publishing Citrix applications**

### ***At the OAMP workstation***

- 1 From the Windows Start Menu, click **Start>Programs>Citrix>Citrix Management Console**.
- 2 Press **Ctrl-P** (Publish Application). The Application Publishing Wizard will start.
- 3 Enter **USP GUI** in the Display Name dialog box.
- 4 Enter **Nortel Networks USP GUI** in the Application Description dialog box.
- 5 Click **Next**. The Specify what to publish panel appears.
- 6 Click the **Application** radio button.
- 7 Click **Browse**.
- 8 Select your installation directory path from the file browser. The default path is **c:\ntssgusp\gui\Graphical User Interface Client.exe**.
- 9 Click **Next**. The Program Neighborhood Settings appears.

- 10 Click **Next**. The Specify Application Appearance panel appears.
- 11 Select **Session Windows size** of 1024x768 and **256 colors**.
- 12 Click **Next**. The Specify ICA Client Requirements panel appears.
- 13 Click **Next**. The Specify Servers panel appears.
- 14 Click the **Add All** button located in the middle of the screen. All Citrix Servers will be added to the right hand list.
- 15 Click **Next**.
- 16 Activate the Show Users check box on the Specify Users screen.
- 17 Double-click the server name in order to display all provisioned users.
- 18 Find the uspgui user and click **Add**. The uspgui user is added to the list of Configured Accounts.
- 19 Click **Finish**.
- 20 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Creating an.ica file

#### *At the OAMP workstation*

- 1 From the Windows Start Menu, click **Start>Programs>Citrix>Citrix Management Console**.
- 2 Right-click the **Applications** folder on the left window of the Citrix Management Console. A list of published applications will be displayed.
- 3 Right-click the **USPGUI** application.
- 4 Click the **ICA** button on the toolbar. The ICA File Wizard starts.
- 5 Select the **Minimum explanation required** radio button.
- 6 Click **Next**. The ICA Files Settings (1 of 2) screen appears.
- 7 Click **Next**. The ICA Files Settings (2 of 2) screen appears.
- 8 Note the ICA File Name which indicates where the file will be created. Use the browse feature if you want to save it elsewhere.
- 9 Click **Next**. The Create HTML File screen appears.
- 10 Select the **No** radio button.
- 11 Click **Next**. The ICA File Summary screen appears.
- 12 Click **Finish**.

- 13 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Windows remote workstations

Perform the following procedures for Windows remote workstations.

### Windows Client software diskettes

You must have a set of Windows client software installation diskettes before you can install the client software on a remote Windows workstation. If you do not already have a set of client software diskettes you must create one.

### Windows 2000 Advanced Server

You can also use this procedure to load client software on a Windows 95 (NTST30AA) workstation.

Use the Terminal Services Client Creator software on your alternate boot server to create a set of Windows client software diskettes.

### Creating Windows client software diskettes

#### *At the alternate boot server*

- 1 Open the Terminal Services Client Creator. Open the Administrative Tools program group. Double-click the **Terminal Services Client Creator** icon.
- 2 Ensure that you have several blank formatted diskettes available. The 16-bit Windows client software requires four diskettes and the 32-bit client software requires two diskettes.
- 3 Insert a blank diskette into the disk drive of your alternate boot server.
- 4 Select either 16 or 32-bit Terminal Services and click **OK**. Normally, you will select 32-bit terminal services unless your remote Windows workstation is using Windows 3.1.
- 5 Follow the on-screen instructions until you have finished creating your set of client diskettes.
- 6 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Windows 2000 Advanced Server (NTST30DA) with Metaframe

Use the ICA Client Create software on your alternate boot server to create your client software diskettes.

## Using the ICA Client Create software to create your client software diskettes

### *At the alternate boot server*

- 1 Open the ICA Client Creator (**Start>Programs>Metaframe Tools>ICA Client Creator**).
- 2 Ensure that you have several blank formatted diskettes available.
- 3 Insert a blank diskette into the disk drive of your alternate boot server.
- 4 Follow the on-screen instructions until you have finished creating the set of client diskettes.
- 5 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## UNIX remote workstations

If you have an NTST30DA USP alternate boot server you can access the USP GUI from a remote UNIX workstation. The following procedures describe the installation and configuration of client software on a remote UNIX workstation. This procedure applies to most common UNIX workstation configurations. For more details refer to the Citrix ICA UNIX Client Administrator's Guide, Version 3.0, which is available on the Citrix Metaframe software CD.

### **Installing and configuring client software on a remote UNIX workstation**

#### *At the remote UNIX workstation*

- 1 Log in as administrator on your remote UNIX workstation and open a command window.
- 2 Insert the Citrix Metaframe CD-ROM disk into the UNIX workstation CD player and mount the CD-ROM using the procedure for your workstation.
- 3 Go to the ICA Client/Ica unix directory on the CD-ROM disk.
- 4 Run the setup program by entering `./setupwfc` at the UNIX command line. Press **Enter**.
- 5 Select item 1 from the displayed menu to install the Citrix ICA client. Press **Enter**.
- 6 Follow the on-screen instructions to complete the installation of the ICA client.

After you have finished installing the ICA client you will see a Citrix ICA Client window on your desktop.

- 7 Add a new connection by selecting **Entry>New** from the ICA Client window. Enter a description for your connection and select the alternate boot server from the server list.
- 8 Select the application that you want to run when you connect to the alternate boot server by selecting Application from the list at the top left of the ICA Client window. Enter the name of the application file and the path to that file for the application that you want to run.

For example, to run the USP GUI when you connect to your alternate boot server, enter the following information:  
**c:\ntssgusp\gui\Graphical User Interface Client.exe.** (This is the default installation path. If you have selected another directory location, enter your installation directory path information.)

- 9 You can connect to the alternate boot server and run the application by double-clicking the connection name in the Citrix ICA Client window.
- 10 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Using the Upgrade Wizard

Use the following procedure to upgrade USP software.

### ATTENTION

Do not use the software upgrade wizard to upgrade NPC/NPS/NPE system nodes if there are NPE chains provisioned. Manually upgrade these nodes instead. See [Upgrade of NPC, NPS, and NPE nodes on page 102](#).

Upgrading NPC, NPS, and NPE system nodes is only applicable to systems that include the optional Universal Number Portability Master (UNPM) capability.

## Setup

The system performs the following actions to prepare the USP for an upgrade:

- copies upgrade package to the RTCs from Alternate Boot Server
- copies software loads to RTCs from Alternate Boot Server
- sets the target upgrade software version

**Note:** Prior to running the setup, ensure that the maximum number of files permitted in the file system has not been reached. Otherwise, the setup procedure will fail.

### Running the setup

#### *At the OAMP workstation*

- 1 Log in to the USP GUI.
- 2 Click **Fault>Log**. Display the Realtime log list by selecting Realtime View. Any new logs generated by the system are displayed on the screen.
- 3 Click the Clear button to clear the Realtime log.
- 4 Click the Start button.
- 5 Click **Administration>software-upgrade**. Select the software release you are installing in the Target Version text box. Use the notation vn.n.n (for example v11.0.0).
- 6 Click the **Run Setup** button. A confirmation dialog box is displayed.

- 7 Click **Yes**.  
**Note:** Setup can take up to an hour to complete. A confirmation that the setup is complete will appear at the bottom left corner of the dialog box.
- 8 Click **Next** when you see the message "command completed" at the bottom left corner of the window.
- 9 Proceed to the next section ([Precheck](#)).

## Precheck

Run the precheck to ensure that the upgrade is ready to proceed. The system confirms the following:

- Both RTCs are in-service with an operational state of enabled.
- RTC in slot 12 of control shelf is the current active RTC.
- The alternate boot server is configured properly for current system configuration for both RTCs.
- All other system nodes are in-service with an operational state of enabled or have an availability state of offline.
- Software upgrade packages have been transferred to both RTCs.

If any of the checks fail, resolve them before proceeding with the upgrade.

### Running the precheck

#### *At the OAMP workstation*

- 1 Click the **Run Precheck** button.
- 2 Click **Yes** to confirm the action.
- 3 Click **Next** when you see the message "upgrade precheck successful" at the bottom left corner of the dialog box.
- 4 If the status panel indicates that the precheck is successful, proceed to the next section ([Limit user access](#)). If the precheck was not successful, address any error messages and repeat the precheck before you proceed. For example, if the precheck status panel indicates that disk space is low, delete any unused snapshots and loads from the RTC SCSI disk using the File Manager.

## Limit user access

Before you begin a software upgrade, limit connections to the USP to prevent other users from accidentally modifying provisioning data while the upgrade is in progress.

Although the following procedure is not a part of the Upgrade Wizard, it is performed at this point since you are now ready to proceed with the upgrade.

To view or restrict user access to the USP during a software upgrade, perform the following procedure.

## Viewing and restricting user access to the USP

### *At the OAMP workstation*

- 1 To modify user account information, click **Security>user-account**.
- 2 Click the **Search** tab.
- 3 Select **All** from the **Records** drop-down menu.
- 4 Click **Retrieve**.
- 5 Select all records by clicking the first one and then holding the shift key down, and clicking the last record.  

Do not include your own user account with the records you have selected. Find your own record in the list and while holding down the Ctrl key, click on your record. This will de-select your record, while keeping the others selected.
- 6 Click on **Post**. An X appears to the left of all the records.
- 7 Create a record showing the currently enabled and disabled users as follows:
  - a Click on the **Export posted records** icon (the second button to the left of the context-sensitive Help button). A message box appears, asking: "Do you want to continue?". Answer **Yes**.
  - b The **Export** dialog box appears. Enter a filename and specify a file type for the exported records file. Click **Save**.  

The file you have just created is a list of all user accounts. It shows which users were enabled or disabled before beginning the upgrade procedure. Use this list to restore the correct user account status when directed to do so in [Complete the upgrade on page 114](#).
- 8 Double-click on any posted record. The Administration tab then appears.
- 9 Ensure the **enabled** option is not selected. Uncheck the enabled option if it is checked.
- 10 Click **Modify**.

- A confirmation dialog box appears.
- 11 Use the following table to determine your next step.
- | If                                                   | Do                                                                                                                       |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| only one user was posted in <a href="#">step 6</a>   | click <b>Yes</b> and proceed to <a href="#">step 14</a>                                                                  |
| multiple users were posted in <a href="#">step 6</a> | click <b>Posted</b> , which displays the multi-modify field selection dialog box, and proceed to <a href="#">step 12</a> |
- 12 Select the **enabled** option field. The letter n should appear to the right.
- 13 Click **OK**. All posted users will be disabled once the command completes.
- 14 Proceed to section [Start the upgrade](#).

## Start the upgrade

Run the Start Upgrade procedure to begin the software upgrade. All pre-check conditions must be met before the upgrade is allowed to start. All upgrade packages and target software loads must be transferred to both RTCs.

### Running the Start Upgrade procedure

#### *At the OAMP workstation*

- 1 Click the **Start Upgrade** button.
- 2 Click **Yes** to confirm.
- 3 Click **Next**.
 

**Note:** To abort the software upgrade, all nodes must be running the original back-level release (no nodes must have an upgrade-status of upgraded. If nodes are upgraded, they must be downgraded before you click the Stop Upgrade button.
- 4 Proceed to section [Software load setup](#).

## Software load setup

The Software Load Setup builds a mapping between the current software loads and the target software loads and automatically re-maps the software load pointer to the new target software release.

The system creates a default mapping based on the current software version and the target upgrade version specified during setup. All current software loads must be mapped to the target software loads. If a software mapping does not exist for the current load, you must resolve the missing pairing.

The current load list contains all software loads available on the active RTC that match the current software release.

The upgrade load list contains all software loads available on the active RTC that match the target upgrade software release.

### Running the software load setup

#### *At the OAMP workstation*

- 1 Review the software mapping displayed in the software load setup. Confirm the mapping is correct.
- 2 Click the **Next** button.
- 3 Proceed to the next section ([Upgrade the system nodes](#)).

## Upgrade the system nodes

Run the node upgrade to perform the software upgrade for a specific node. You can also select multiple nodes to upgrade using the Shift+Ctrl keys or Ctrl+click with a mouse.

### Upgrading the system nodes for one maintenance window upgrades

Upgrade the system nodes for a one-shelf or two-shelf system using the procedure that follows.

#### *At the OAMP workstation*

- 1 Upgrade the inactive RTC in slot 15. For detailed steps, refer to [Upgrading the inactive RTC in slot 15 on page 98](#).

2 Upgrade the CC in slot 1 on the control CAM shelf. For detailed steps, refer to [Upgrade a CC node on page 100](#).

3 Use the following table to determine your next step.

---

| <b>If you have a</b> | <b>Do</b>              |
|----------------------|------------------------|
| one-shelf system     | <a href="#">step 5</a> |
| two-shelf system     | <a href="#">step 4</a> |

---

4 For a two-shelf system, also upgrade the CCs in slot 1 on the extension CAM shelf. For detailed steps, refer to [Upgrade a CC node on page 100](#).

5 Upgrade the link system nodes on the control shelf. For detailed steps, refer to [Upgrade a link node on page 100](#).

6 Use the following table to determine your next step.

---

| <b>If you have a</b> | <b>Do</b>              |
|----------------------|------------------------|
| one-shelf system     | <a href="#">step 8</a> |
| two-shelf system     | <a href="#">step 7</a> |

---

7 For a two-shelf system, also upgrade the link system nodes on the extension CAM shelf. For detailed steps, refer to [Upgrade a link node on page 100](#).

8 If your system includes the optional Universal Number Portability Master (UNPM) capability, upgrade the NPC, NPS and NPE nodes on the control CAM shelf. For detailed steps, refer to [Upgrade of NPC, NPS, and NPE nodes on page 102](#).

9 Use the following table to determine your next step.

---

| <b>If you have a</b> | <b>Do</b>               |
|----------------------|-------------------------|
| one-shelf system     | <a href="#">step 12</a> |
| two-shelf system     | <a href="#">step 10</a> |

---

10 For a two-shelf system, also upgrade the NPC, NPS and NPE nodes on the extension CAM shelf. For detailed steps, refer to [Upgrade of NPC, NPS, and NPE nodes on page 102](#).

11 Upgrade the CCs in slot 18 on the control CAM shelf. For detailed steps, refer to [Upgrade a CC node on page 100](#).

12 Upgrade the CC in slot 18 on the extension CAM shelf. For detailed steps, refer to [Upgrade a CC node on page 100](#).

- 13 Switch activity (SWACT) between RTCs, and upgrade the inactive RTC in slot 12. For detailed steps, refer to [Perform a SWACT and upgrade the Inactive RTC node in slot 12 on page 109](#).
- 14 Activate new features. For detailed steps, refer to [Activate features on page 113](#).
- 15 Monitor the USP for 15 minutes, and ensure the USP performs without degradation. If there is a degradation in service, complete section [Deactivate upgrade features on page 113](#). If there is no degradation and you want to keep the features activated, proceed to section [Cleanup on page 114](#).

### Upgrading the system nodes for multiple maintenance window upgrades

When performing a large system upgrade that requires more than one maintenance window to complete, you must upgrade the entire Control CAM shelf before the end of the first maintenance window. Use the additional window to upgrade the cards in the extension shelves.

**Note:** If your system includes NPC, NPS and/or NPE nodes, you must upgrade the NPC, NPS and NPE system nodes (on all shelves if you have a dual-shelf or multi-shelf system) in a specific order depending on the local subsystem assignment. (See [Upgrade of NPC, NPS, and NPE nodes on page 102](#).) Re-ordering of the upgrade sequence may be required if performing a multi-node upgrade operation.

Upgrade the system nodes with three or more shelves using the procedure that follows:

#### **At the OAMP workstation**

- 1 Upgrade the inactive RTC in slot 15. For detailed steps, refer to [Upgrade of the inactive RTC node in slot 15 on page 98](#).
- 2 Upgrade the CC in slot 1 on the control CAM shelf. For detailed steps, refer to [Upgrade a CC node on page 100](#).
- 3 Upgrade the CCs in slot 1 on the extension CAM shelves. For detailed steps, refer to [Upgrade a CC node on page 100](#).
- 4 Upgrade the link system nodes on the control CAM shelf. For detailed steps, refer to [Upgrade a link node on page 100](#).
- 5 If your system includes the optional Universal Number Portability Master (UNPM) capability, upgrade the NPC, NPS and NPE nodes on the control CAM shelf. For detailed steps, refer to [Upgrade of NPC, NPS, and NPE nodes on page 102](#).

- 6 Upgrade the CCs in slot 18 on the control CAM shelf. For detailed steps, refer to [Upgrade a CC node on page 100](#).  
**Note:** When you perform the SWACT command in [step 7](#), you will be informed if you have not upgraded one card of each unique card type in your system. In this case, upgrade the card which will be on an extension shelf. You can perform the SWACT again until it is successful.

7

#### **ATTENTION**

Before upgrading RTC12, perform test calls to ensure the system is performing properly. Once RTC 12 is upgraded, the abort of the upgrade requires an out-of-service alternate boot to the snapshot taken before starting the upgrade.

Switch activity (SWACT) between RTCs, and upgrade the inactive RTC in slot 12. For detailed steps, refer to [Perform a SWACT and upgrade the Inactive RTC node in slot 12 on page 109](#).

**Note:** The required cards have been upgraded for the first maintenance window. You can continue to upgrade cards now or in the next maintenance window.

- 8 Upgrade the link system nodes on the extension CAM shelves. For detailed steps, refer to [Upgrade a link node on page 100](#).
- 9 If your system includes the optional Universal Number Portability Master (UNPM) capability, upgrade the NPC, NPS and NPE nodes on the extension CAM shelves. For detailed steps, refer to [Upgrade of NPC, NPS, and NPE nodes on page 102](#).
- 10 Upgrade the CCs in slot 18 on the extension CAM shelves. For detailed steps, refer to [Upgrade a CC node on page 100](#).

### **Upgrade of the inactive RTC node in slot 15**

The upgrade of the RTC in slot 15 can take up to 20 minutes to complete.

#### **Upgrading the inactive RTC in slot 15**

##### ***At the OAMP workstation***

- 1 Click on the appropriate row to select the RTC15 node to upgrade from the list of available nodes in the software upgrade wizard. The RTC node is in slot 15, with a slot type of rtc.

- 2 Click the **Upgrade** button. A confirmation dialog box appears. Click **Yes** to continue.
- 3 Wait for the upgrade to complete. The upgrade-status will change to upgraded on completion.

**Note:** If the automatic node upgrade fails to complete successfully, perform the upgrade manually. For detailed steps, refer to [Upgrade nodes manually on page 110](#).
- 4 Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG\_SWERRS or LOG\_TRAPS. If it does, contact your next level of support.
- 5 Set the alternate boot load for RTC system nodes to the new upgrade load.

The alternate boot settings are used when an RTC is not able to boot from disk. After upgrading RTC15, if RTC15 were to boot, it would be able to data sync from RTC12 and upgrade. But if RTC12 were to boot, it would be booting the old release load and would not be able to data sync from RTC15, which is now running the upgrade load. So RTC12 would alternate boot. If the alternate boot load is the old release load, RTC 12 would again, not be able to data sync and become enabled. This is why the active alternate boot loads for both RTCs must be changed to the new upgrade load, thus permitting RTC12 to alternate boot the upgrade load and then data sync with RTC15 (also running the upgrade load).

A special case occurs if both RTCs were to alternate boot at the same time, before you changed the active snapshot to one taken with the active RTC running the upgrade load. In this case, you will have to change the active alternate boot loads to the old release loads, since the snapshot would contain data from the old release.

  - a Click **Administration>alternate-boot-server**.
  - b Update RTC 12 to the new release version by selecting the new release from the ABS Active Loads drop-down menu.
  - c Update RTC 15 to the new release version by selecting the new release from the ABS Active Loads drop-down menu.
  - d Click **Modify**.
- 6 This procedure is complete. Return to [Upgrade the system nodes on page 95](#) to determine your next step.

## Upgrade a CC node

To upgrade a CC node, perform the following steps:

**Note:** Start with CC1 on the control shelf.

### Upgrading the CC node

#### *At the OAMP workstation*

- 1 Select the node to upgrade in the list of available nodes in the software upgrade wizard.
- 2 Click the **Upgrade** button. The system asks for confirmation.
- 3 Wait for the node upgrade to complete (the upgrade-status will change to upgraded on completion).

**Note:** If the automatic node upgrade fails to complete successfully, perform the upgrade manually.
- 4 Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node upgrade, contact your next level of support.
- 5 This procedure is complete. Return to [Upgrade the system nodes on page 95](#) to determine your next step.

## Upgrade a link node

### **ATTENTION**

To upgrade an NPC, NPS, or NPE node see [Upgrade of NPC, NPS, and NPE nodes on page 102](#).

### **ATTENTION**

Traffic is maintained through redundant links configured on different link cards. To maintain the traffic, ensure there are redundant links configured on different link cards before upgrading the link card.

To upgrade a single system node, perform the following steps:

## Upgrading a link node

### *At the OAMP workstation*

- 1 Select the node to upgrade in the list of available nodes in the software upgrade wizard.
- 2 Click the **Upgrade** button. The system asks for confirmation.
- 3 Wait for node upgrade to complete (upgrade-status will change to upgraded on completion).
- 4 Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node upgrade.
- 5 Repeat this procedure for all remaining link nodes.
- 6 This procedure is complete. Return to [Upgrade the system nodes on page 95](#) to determine your next step.

## Upgrade multiple link nodes

### **ATTENTION**

To upgrade an NPC, NPS, or NPE node, see [Upgrade of NPC, NPS, and NPE nodes on page 102](#).

To upgrade multiple system nodes, perform the following steps.

## Upgrading multiple link nodes

### *At the OAMP workstation*

- 1 **Shift-click** or **ctrl-click** to select a range of nodes to upgrade in the list of available nodes in the software upgrade wizard.
- 2 Select the delay interval between each successive node upgrade. This will be used to soak the upgraded node before moving to the next system node.
- 3 Click the **Upgrade node** button. The system asks for confirmation.
- 4 Wait for the node upgrade to complete (upgrade-status will change to upgraded on completion).  
**Note:** If the automatic node upgrade fails to complete successfully, perform the upgrade manually.
- 5 The upgrade will now delay for the selected interval before continuing to the next node to upgrade. Upgrade of nodes can

be cancelled at any time by clicking the **Stop** button. To skip the delay count down, click **No delay** and the next node will be upgraded immediately.

- 6 Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node upgrade.
- 7 Repeat this procedure for all remaining link nodes.
- 8 This procedure is complete. Return to [Upgrade the system nodes on page 95](#) to determine your next step.

### Upgrade of NPC, NPS, and NPE nodes

The upgrade of an NPC, NPS or NPE node or all nodes, requires special handling to ensure that the local subsystem instances associated with an NPC, NPS and NPE chain, have been deactivated. Also, the node to upgrade must not be the active NPC node. If the node to upgrade is the active node, then a switch of activity must be performed prior to upgrading the node.

**Note:** Upgrading NPC, NPS and NPE nodes is only applicable to systems that include the optional Universal Number Portability Master (UNPM) capability.



#### **CAUTION**

##### **Potential for NPDB corruption**

If upgrading the NP nodes/chains, the connection to the LSMS will need to be released on the LSMS. Refer to the LSMS operation manual for release methods. Contact Nortel Networks Technical Support for more information. Failure in doing so will result in NPDB corruption.

For a multiple maintenance window, upgrade the NPC and NPS system nodes without NP chains, as indicated in the procedure that follows.

#### ***In the first maintenance window***

- 1 Upgrade the inactive NPC system node.
- 2 Upgrade one NPS system node.

#### ***In subsequent maintenance windows***

- 3 Upgrade the remaining NPS system nodes.
- 4 Switch activity (SWACT) to the newly-upgraded NPC node.

- 5 Upgrade the inactive NPC system node.

For a multiple maintenance window, upgrade the NPC, NPS, and NPE system nodes with NP chains as indicated in the procedure that follows.

***In the first maintenance window***

- 1 Upgrade the inactive NPC system node, the NPE nodes in that chain, and any associated NPS nodes.
- 2 If no NPS cards have been upgraded, upgrade one NPS node and the NPE nodes in its chain.

***In subsequent maintenance windows***

- 3 Upgrade the remaining NPS chains, their associated NPS nodes, and the NPE nodes in those chains.
- 4 Switch activity (SWACT) to the newly-upgraded NPC node.
- 5 Upgrade the final NPC system node, the NPE nodes in that chain, and any associated NPS nodes.

**Upgrading NPC, NPS, and NPE nodes**

***On LSMS***

- 1 Release all SMI connections to the UNPM. Refer to the LSMS operation manual for release methods.

***At the OAMP workstation***

- 2 In the menu bar, click **Administration>Platform>Node**.
- 3 Select the NPC you want to upgrade, and check the activity state of the NPC.
- 4 Use the following table to determine your next step.

| <b>If the NPC is</b> | <b>Do</b>                                                  |
|----------------------|------------------------------------------------------------|
| active               | Perform a SWACT, then continue to <a href="#">step 5</a> . |
| inactive             | Continue to <a href="#">step 5</a> .                       |

- 5 Deactivate the NP local subsystem instance running on the inactive NPC system node as follows:

Click

**Configuration>SCCP>shared-local-subsystem-instance**, select the desired NPx, and click **Deactivate**.

- 6** If an NPE chain has been provisioned with this NPC node as the master and with an alternate NPS system node, then deactivate the local subsystem instance running on the alternate NPS as follows:

Click

**Configuration>SCCP>shared-local-subsystem-instance**, select the desired NPx, and click **Deactivate**.

- 7** Using the software upgrade wizard, select the NPC node to upgrade in the list of available nodes.
- 8** Click the **Upgrade node** button. The system asks for confirmation.
- 9** Wait for node upgrade to complete (the upgrade-status will change to upgraded on completion).

**Note:** If the automatic node upgrade fails to complete successfully, perform the upgrade manually.

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

| If                                                       | Do                                                                                                                                             |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| an NPE chain is provisioned with this NPC node as master | repeat <a href="#">step 7</a> to <a href="#">step 9</a> for each NPE system node and the alternate NPS system node associated with this chain. |
| there is no NPE chain associated with this NPC node      | proceed to <a href="#">step 11</a>                                                                                                             |

- 11** Wait for the local subsystem instance to be deactivated/prohibited.
- 12** Reactivate the local subsystem instance running on the inactive NPC as follows:

Click

**Configuration>SCCP>shared-local-subsystem-instance**, select the desired NPx, and click **Activate**.

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

| If                                                            | Do                      |
|---------------------------------------------------------------|-------------------------|
| an NPE chain is provisioned with an alternate NPS system node | <a href="#">step 14</a> |

|           | <b>If</b>                                                                                                                                                                                                                                                                                                | <b>Do</b>                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | there is no NPE chain provisioned with an alternate NPS system node                                                                                                                                                                                                                                      | <a href="#">step 15</a>                                                                                                                                                                        |
| <b>14</b> | Wait for the local subsystem instance to be deactivated/prohibited, and then reactivate the local subsystem instance running on the alternate NPS as follows:<br>Click<br><b>Configuration&gt;SCCP&gt;shared-local-subsystem-instance</b> , select the desired NPx, and click <b>Activate</b> .          |                                                                                                                                                                                                |
| <b>15</b> | Wait for the reactivated local subsystem instances to return to the activated/allowed state.                                                                                                                                                                                                             |                                                                                                                                                                                                |
| <b>16</b> | Click <b>Fault&gt;Log</b> . Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG_SWERRs or LOG_TRAPs. If it does, do not continue with the node upgrade.                                                               |                                                                                                                                                                                                |
| <b>17</b> |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                |
|           | <b>If</b>                                                                                                                                                                                                                                                                                                | <b>Do</b>                                                                                                                                                                                      |
|           | NPS system nodes are provisioned without a chain, or NPS system nodes which are masters of a chain                                                                                                                                                                                                       | select an NPS system node to be upgraded. This node cannot be an NPS system node already upgraded in the previous steps or the NPS system node associated with the currently active NPC chain. |
|           | there are no further NPS system nodes to be upgraded                                                                                                                                                                                                                                                     | proceed to <a href="#">step 30</a> .                                                                                                                                                           |
| <b>18</b> | Deactivate the NP local subsystem instance running on the NPS system node as follows:<br>Click<br><b>Configuration&gt;SCCP&gt;shared-local-subsystem-instance</b> , select the desired NPx, and click <b>Deactivate</b> .                                                                                |                                                                                                                                                                                                |
| <b>19</b> | If an NPE chain has been provisioned with an alternate NPS for the selected NPS, deactivate the NP LSS instance running on the alternate NPS system node as follows:<br>Click<br><b>Configuration&gt;SCCP&gt;shared-local-subsystem-instance</b> , select the desired NPx, and click <b>Deactivate</b> . |                                                                                                                                                                                                |

- 20** Using the software upgrade wizard, select the NPS node to upgrade in the list of available nodes
- 21** Click **Upgrade node**.
- 22** Wait for node upgrade to complete (upgrade-status will change to upgraded on completion).

**Note:** If the automatic node upgrade fails to complete successfully, perform the upgrade manually.

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

| If                                                  | Do                                                                                                                                               |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| an NPE chain has been provisioned for this NPS node | repeat <a href="#">step 20</a> to <a href="#">step 22</a> for each NPE system node and the alternate NPS system node associated with this chain. |
| there is no NPE chain associated with this NPS node | <a href="#">step 24</a>                                                                                                                          |

- 24** Wait for the local subsystem instance to be deactivated/prohibited.
- 25** Reactivate the local subsystem instance running on the NPS as follows:  
Click  
**Configuration>SCCP>shared-local-subsystem-instance**, select the desired NPx, and click **Activate**.
- 26** If an NPE chain has been provisioned with an alternate NPS system node:  
**a** Wait for the local subsystem instance to be active/allowed.  
**b** Reactivate the NP local subsystem instance running on the alternate NPS as follows:  
Click  
**Configuration>SCCP>shared-local-subsystem-instance** select the desired NPx, and click **Activate**.
- 27** Wait for the reactivated local subsystem instances to return to the activated/allowed state.
- 28** Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node upgrade.

- 29 Repeat [step 17](#) to [step 28](#) for any remaining NPS system nodes in the system, otherwise proceed to [step 30](#).
- 30 Switch activity between the active and inactive NPC nodes as follows:  
Click **Administration>platform>node** for the currently active NPC node, then click **Swact**.
- 31 Deactivate the NP local subsystem instance running on the inactive NPC system node as follows:  
Click  
**Configuration>SCCP>shared-local-subsystem-instance**, select the desired NPx, and click **Deactivate**.
- 32 If an NPE chain has been provisioned with an alternate NPS system node, deactivate the local subsystem instance running on the alternate NPS as follows:  
Click  
**Configuration>SCCP>shared-local-subsystem-instance**, select the desired NPx, and click **Deactivate**.
- 33 Using the software upgrade wizard, select the newly inactive NPC node to upgrade in the list of available nodes.
- 34 Click the **Upgrade node** button.
- 35 Wait for the node upgrade to complete (upgrade-status will change to upgraded on completion).  
**Note:** In the event that the automatic node upgrade fails to complete successfully, perform the upgrade manually.
- 36 If an NPE chain has been provisioned for this NPC, repeat [step 33](#) to [step 35](#) for each NPE system node and the alternate NPS system node associated with this chain.
- 37 Wait for the local subsystem instance to be deactivated/prohibited, then, reactivate the local subsystem instance running on the inactive NPC as follows:  
Click  
**Configuration>SCCP>shared-local-subsystem-instance**, select the desired NPx, and click **Activate**.
- 38 If an NPE chain has been provisioned with an alternate NPS system node, wait for the local subsystem instance to be deactivated/prohibited, then reactivate the local subsystem instance running on the alternate NPS as follows:  
Click  
**Configuration>SCCP>shared-local-subsystem-instance**, select the desired NPx, and click **Activate**.

- 39** Wait for the reactivated local subsystem instances to return to the activated/allowed state.
- 40** Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node upgrade.
- 41** Ensure the activity state of the NPC is set to not-active as follows:

Click **Administration>shared>local-subsystem**. If the NPC's activity state is currently active then go to [step 38](#), otherwise go to [step 39](#).

---

**If:**

**Do:**

the NPC's activity state is currently active

proceed to [step 42](#).

the NPC's activity state is currently inactive

proceed to [step 43](#).

---

- 42** Switch activity between the active and inactive NPC nodes as follows:
- Click **Administration>platform>node** for the currently active NPC node, then click **Swact**.
- 43** Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node upgrade.

### ***On LSMS***

- 44** Re-establish all SMI connections to the UNPM. Refer to the LSMS operation manual for release methods.
- 45** This procedure is complete. Return to [Upgrade the system nodes on page 95](#) to determine your next step.

## Perform a SWACT and upgrade the Inactive RTC node in slot 12

### ATTENTION

After completing [step 5](#) in the procedure that follows, you will not be able to abort the upgrade process, except by performing an out-of-service alternate boot to the data snapshot taken before you started the upgrade procedure.

Upgrade of the RTC in slot 12 can take up to 20 minutes to complete.

### Performing a SWACT and upgrade for the inactive RTC node in slot 12

#### At the OAMP workstation

- 1 Verify that RTC15 is the active RTC.
  - a In the menu bar, click **Configuration>platform>node**.
  - b Click the **Graphical view** tab.
  - c Double-click the RTC in slot 15.

| If:                              | Do:                                                     |
|----------------------------------|---------------------------------------------------------|
| the Activity State is Active     | <a href="#">step 2</a>                                  |
| the Activity State is not Active | perform a SWACT, then proceed to <a href="#">step 2</a> |

- 2 Select the RTC12 node to upgrade from the list of available nodes in the software upgrade wizard.
- 3 Use the following table to determine your next step.

| If                                    | Do                     |
|---------------------------------------|------------------------|
| you want to proceed with the upgrade  | <a href="#">step 5</a> |
| you want to abort the upgrade process | <a href="#">step 4</a> |

- 4 Verify that RTC12 is the active RTC.
  - a In the menu bar, click **Configuration>platform>node**.
  - b Click the **Graphical view** tab.
  - c Double-click the RTC in slot 12.

| If:                              | Do:                                                                                     |
|----------------------------------|-----------------------------------------------------------------------------------------|
| the Activity State is Active     | <a href="#">Downgrading Using the Wizard on page 174</a>                                |
| the Activity State is not Active | perform a SWACT and proceed to <a href="#">Downgrading Using the Wizard on page 174</a> |

- 5 Click the **Upgrade** button.
- 6 Wait for the node upgrade to complete (upgrade-status will change to upgraded on completion).
 

**Note:** In the event that automatic node upgrade fails to complete successfully, perform the upgrade manually.
- 7 Wait 10 minutes and then perform a SWACT.
- 8 Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If LOG\_SWERRs or LOG\_TRAPs are reported, do not continue with the node upgrade. If the upgrade was successful, proceed to the next step.
- 9 Click **Next** and continue with [Activating new features on page 113](#).
- 10 This procedure is complete. Return to [Upgrade the system nodes on page 95](#) to determine your next step.

### Upgrade nodes manually

Perform the steps in the following procedure to manually upgrade any system node type including link nodes, as appropriate.

#### ATTENTION

The procedure that follows provides the general steps on how to upgrade a system node. However, nodes must be upgraded in a specific order. Refer to section [Upgrading the system nodes for one maintenance window upgrades on page 95](#) or [Upgrading the system nodes for multiple maintenance window upgrades on page 97](#) as appropriate.

## Upgrading nodes manually

### *At the OAMP workstation*

- 1 If you are manually upgrading a system link node and if the system link node is unlocked and enabled, proceed to [step 2](#); otherwise, proceed to [step 3](#).  
  
If you are manually upgrading a non-link node, and if the system node is unlocked and enabled proceed to [step 5](#), otherwise, proceed to [step 4](#).
- 2 Inhibit all of the links on the system node, if applicable. See the USP Configuration Management guide for these procedures.  
  
**Note:** You cannot inhibit IPS7 links. If there is only one available link on a linkset, you will not be able to inhibit it. If it is a one-link linkset, proceed to [step 3](#) without inhibiting the link. If there are other links on the linkset, make at least one of them available before attempting to inhibit the link.
- 3 Deactivate all of the links or paths on the system node, as applicable to the system node. See the USP Configuration Management guide for these procedures.
- 4 Set the boot image of the node by completing the following steps. For link nodes, complete substeps [a](#) - [f](#). For non-link nodes, complete substeps [a](#) - [d](#) and then [f](#).
  - a Click **Configuration>platform>node**.
  - b Click **Graphical View**.
  - c Click the slot for the node you need to upgrade to open the node in the Administration panel.
  - d Select the drop-down menu to set the boot image to the new release version.
  - e For link nodes, you also need to set its HA boot image to the new HA release version.  
  
**Note:** IPS7 and IP high-speed (HSL) link cards do not require HA loads.
  - f Click **Modify**.  
  
**Note:** The card must be reloaded immediately after the boot image is set to the new release version.  
If the system node is off-line, the setting of the boot image reset the status to Upgraded. There are no alarms for an offlined node.

- 5 Lock and load the system node. See the USP Configuration Management guide for these procedures.
- 6 When the system node becomes enabled, **unlock** it.
- 7 Verify that the running load is the new version. If not, make sure that the correct image is selected in the platform-node Administration panel. If not, contact your next level of support.
- 8 For link nodes, **Activate** and **uninhibit** all of the links on the system link node.
- 9 Click **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP for 15 minutes after you upgrade the first card and each unique card type in the system (for example, ATM and IP). Make sure the USP performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. During this period, perform test calls to verify that the newly loaded system node performs consistently with its pre-upgrade status. Take steps to ensure test calls are routed through links on this Link system node.
- 10 After the first linkset is upgraded (a linkset upgrade requires the upgrade of several link cards), perform a test call to make sure all of the link cards in the linkset have been correctly upgraded. If there are any errors, contact your next level of support. The test call for the linkset is required only for the first linkset upgraded.
- 11 Repeat [step 1](#) to [step 9](#) for the remaining system nodes on the remaining CAM shelves. Upgrade the system nodes from the lowest slot on the lowest-numbered shelf to the highest slot on the highest-numbered shelf. After you have successfully upgraded the first system node, remaining system nodes only need to be monitored for stability. A complete set of test calls will be performed when all system nodes are upgraded.
- 12 Perform a complete set of test calls when all system nodes are upgraded.

If it was determined prior to the upgrade, that the site is using a route master configuration, perform the following test calls:

  - network to host
  - network to donor
  - host to donor
  - migrated donor to donor
- 13 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Activate features

You must activate the new features of the software load. All system nodes must be upgraded to activate features.

### ATTENTION

When you activate new features, all GUI connections will log out and log back in automatically to re-initialize in order to pick up the new features. Select Administration>software-upgrade. Click Next to go to the feature activation screen.

## Activating new features

### *At the OAMP workstation*

- 1 Click **Activate Features**.
- 2 Click **Yes** to accept the activation and continue.
- 3 Perform test calls to verify that messages are correctly routed.  
If it was determined prior to the upgrade that the site is using a route master configuration, the following test calls must be performed:
  - network to host
  - network to donor
  - host to donor
  - migrated donor to donorClick **Fault>Log**. Display the Realtime log list by selecting Realtime View to monitor the USP to ensure it does not report any LOG\_SWERRs or LOG\_TRAPs.
- 4 This procedure is complete. Return to [Upgrade the system nodes on page 95](#) to determine your next step.

## Deactivate upgrade features

Complete this procedure only if you want to deactivate new features from a software upgrade (for instance, in the event of a degradation in service). If features for the new release were activated, deactivate the features using the Upgrade Administration window.

## Deactivating new features

### *At the OAMP workstation*

- 1 Open the Upgrade Administration window as follows:  
Click **Administration>software-upgrade> Deactivate New Features**.  
A confirmation dialog box appears.
- 2 Click **Yes** to deactivate or **No** to leave features active.
- 3 You have completed this procedure. Proceed to the next section ([Cleanup](#)).

## Cleanup

The cleanup stage, deletes some of the upgrade files that were used during the upgrade.

### Running the cleanup

#### *At the OAMP workstation*

- 1 Click **Administration>software-upgrade**.
- 2 Ensure that the new features are activated.
- 3 Click **Next**.
- 4 Click **Run Cleanup**.  
A confirmation dialog box appears.
- 5 Click **Yes**.
- 6 Proceed to the next section ([Complete the upgrade](#)).

## Complete the upgrade

The complete stage stops the upgrade, shuts down the wizard, creates a data snapshot, restores access privileges, and checks the donor switch for SS7 alarms.

### Stopping the upgrade

#### *At the OAMP workstation*

- 1 Click **Administration>software-upgrade**
- 2 Click **Stop Upgrade**. A confirmation dialog box appears. To inform the system that the upgrade has completed successfully, click **Yes**.
- 3 Click the X at the top right corner of the wizard action panel to close the wizard.

- 4 Set user privileges back to pre-upgrade settings and re-enable any user accounts that were disabled during the upgrade. Refer to the file you created in "Limit user access" section, step [7](#) for the correct user status. Refer to the sections Security: User accounts and Security: User session in the USP Administration and Security guide for additional information.
- 5 Create a data snapshot, copy it to the alternate boot server and set the alternate boot server snapshot. Refer to procedure [Creating an alternate boot data snapshot on page 22](#).
- 6 If it was determined prior to the upgrade that the site is using a route master configuration, check the donor switch for SS7 alarms.
- 7 Determine whether the USP is installed on the IEMS. Launch the IEMS Java Web Start Client (refer to "Launching IEMS Java Web Start Client" in *IEMS Basics*, NN10329-111).
- 8 Select the Network Elements topology panel in the IEMS Topologies tree.
- 9 In the list of network elements that displays, determine whether the USP is present.
- 10 Use the following table to determine your next step.

| If the USP is          | Do                      |
|------------------------|-------------------------|
| configured in IEMS     | step <a href="#">11</a> |
| not configured in IEMS | step <a href="#">12</a> |

- 11 Update the software version in the Device Version field by editing the Managed Object Properties in IEMS for the USP that you just upgraded to reflect the new software version.  
Refer to either of the following procedures to update the Device Version field:
  - "Editing and viewing object properties using Java Web Start Client" in *Nortel Carrier Voice over IP Network Upgrades and Patches*, NN10440-450.
  - "Editing and viewing object properties using Web Client" in *Nortel Carrier Voice over IP Network Upgrades and Patches*, NN10440-450.
- 12 Exit from the IEMS Java Web Start Client.

**13** You have completed this procedure.

| <b>If</b>                                                                                             | <b>Do</b>                                                                                       |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| you have a Nortel Ethernet Routing Switch 8600 in your solution and you want to enable auto-negotiate | <a href="#">Configure the Nortel Ethernet Routing Switch port to auto-negotiate on page 116</a> |
| otherwise                                                                                             | <a href="#">Post-upgrade checklist on page 120</a>                                              |

## Configure the Nortel Ethernet Routing Switch port to auto-negotiate

### ATTENTION

Perform this procedure if you have a Nortel Ethernet Routing Switch 8600 in your solution, and you want to enable auto-negotiation.

If you are not using auto-negotiation, skip this procedure and proceed to [Post-upgrade checklist on page 120](#).

To enable auto-negotiation of the Ethernet port speed and duplex state, perform the following steps at the command line interface to the Nortel Ethernet Routing switch.

**Note:** After you execute [step 1](#) of this procedure and you confirm that you will need to modify auto-negotiate, lock the IPS7 card before you make the 8600 port change. After the port change, load and unlock the card. Perform these steps at the USP OAMP workstation.

## Configuring the Nortel Ethernet Routing Switch port

### At the CLI for the Nortel Ethernet Routing Switch

- 1 Determine the slot and port on the Nortel Ethernet Routing Switch that connects to the device:

```
> show ip arp info <ip_address>
```

**ip\_address**

is the physical IP address of the IPS7 GW card.

*The slot and port are reported.*

```
prompt:cpu> show ip arp info 172.30.242.25
```

```
=====
 Ip Arp
=====
 IP_ADDRESS MAC_ADDRESS VLAN PORT TYPE TTL

172.30.242.25 00:90:69:1a:d4:fc 200 1/2 DYNAMIC 272
=====
```

If the response indicates MLT instead of the slot and port, perform this operation from the mate Nortel Ethernet Routing Switch unit. If the response indicates that no arp entry is found, ping the IP address from the CLI, and retry the command.

- 2 Determine if the ports are already set to auto-negotiate by typing:

```
> show port info config port <slot>/<port>
```

and pressing the Enter key.

where

**<slot>**

is the slot number from the previous step

**<port>**

is the port number from the previous step

```
prompt:cpu> show port info config port 1/2
```

```

=====
Port Config
=====
PORT AUTO SFFD ADMIN OPERATE DIFF-SERV QOS MLT
NUM TYPE NEG. DUPLX SPD DUPLX SPD EN TYPE LVL ID

1/2 100BaseTX false false half 100 full 100 fals core 1 0

```

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

| If the ports                      | Do                      |
|-----------------------------------|-------------------------|
| are already set to auto-negotiate | <a href="#">step 10</a> |
| are not set to auto-negotiate     | <a href="#">step 4</a>  |

**At the OAMP workstation**

- 4 Lock the IPS7 card connected to the 8600 port as follows:
- Click **Configuration>platform>node**.
  - Click the **Graphical View** tab.
  - Double-click the slot of the IPS7 card you want to lock.
  - Click **Lock**. A confirmation dialog box appears.
  - Click **Yes**.

**At the CLI for the Nortel Ethernet Routing Switch**

- 5 Set the slot and port to auto-negotiate:

```
> config ethernet <slot>/<port> auto-negotiate enable
```

*The slot and port are reconfigured to auto-negotiate and the prompt returns.*

```
prompt:cpu> config ethernet 1/2 auto-negotiate enable
prompt:cpu>
```

6 Verify the port configuration:

```
> show port info config port <slot>/<port>
```

*The slot and port configuration is displayed.*

```
prompt:cpu> show port info config port 1/2
```

```
=====
Port Config
=====
```

| PORT<br>NUM | TYPE      | AUTO<br>NEG. | SFFD  | ADMIN<br>DUPLX | SPD | OPERATE<br>DUPLX | SPD | DIFF-SERV<br>EN | QOS<br>TYPE | MLT<br>LVL | ID |
|-------------|-----------|--------------|-------|----------------|-----|------------------|-----|-----------------|-------------|------------|----|
| 1/2         | 100BaseTX | true         | false | half           | 100 | full             | 100 | fals            | core        | 1          | 0  |

7 Commit the change:

```
> save config
```

**At the OAMP workstation**

8 Load the IPS7 card as follows:

- Click **Configuration>platform>node**.
- Click **Graphical View**.
- Double-click the slot of the IPS7 card you want to load.
- Click **Load**. A confirmation dialog box appears.
- Click **Yes**.

9 Unlock the IPS7 card as follows:

- Click **Configuration>platform>node**.
- Click the **Graphical View** tab.
- Double-click the slot of the IPS7 card you want to unlock.
- Click **Unlock**. A confirmation dialog box appears.
- Click **Yes**.

10 This procedure is complete. Proceed to the next section ([Post-upgrade checklist](#)).

## Post-upgrade checklist

This checklist provides system cleanup on your upgraded USP. Perform this checklist on your alternate boot server. To complete the post-upgrade checklist, perform the following steps:

**Note:** Wait 24 hours after completing all of the upgrade procedures.

### Performing the post-upgrade checklist

#### At the OAMP workstation

- 1 Begin a new log time period to end the upgrade log tracking time period as follows:

Click **Fault>Log>New Period**.

- 2 Delete all snapshots associated with the previous USP release from both RTC system nodes as follows:

**Note:** If you have changed your boot image file for a new release, Nortel Networks recommends that you delete the out-of-date image file from your system using the File Manager function.

- a In the File Manager panel, select the data snapshot to be deleted from the Snapshot field in the RTC portion of the window.

**Note:** You cannot delete the boot data snapshot. If you attempt to delete the boot data snapshot, you will receive an error message.

- b Expand the Snapshot folder.
- c Expand the folder for the previous version of the software.
- d Click **Delete** to delete the snapshot. An hourglass appears while the data snapshot is deleted. When the deletion operation is complete, snapshot is removed from the RTC side of the File Manager panel.

- 3 Delete old loads from the Alternate Boot Server:

- a Open the ABS configuration manager application. If your ABS is on a PC, then open the configuration manager from the Windows **Start** menu and perform substeps [d](#) to [f](#). If your ABS is on the CMT, then proceed to substep [b](#).



- 5 Perform a hard disk defragmentation on your alternate boot PC. On a Windows 2000 machine, open the Disk Defragmenter utility (**Start>Programs>Accessories>System Tools>Disk Defragmenter**). Select the **Analyze** option. If Windows recommends that the disk be Defragmented, run the utility.
- 6 This procedure is complete. Return to [Upgrading the USP on page 13](#) to determine your next step.

## Migrating the Alternate Boot Server (ABS) from USP PC to CS 2000 Management Tools

The purpose of this method is to provide information and instructions for migrating the Alternate Boot Server (ABS) from the USP EM PC to the CS 2000 Management Tools (CMT) server on the SPFS platform

### Material requirements

The following is a list of material requirements.

#### Required documents

The required documents are listed as follows:

- Job Site Information Package
- Customer Information Documentation (CI or CNCD)
- Installation Safety Manual (ISM/IM0). This document can be requested from the Regional Tool Facility.
- EHS (European Health and Safety) EHS\_MAN\_002
- WMS (Workmanship Standards) WMS-001

#### Tools

The tools listed in the following table are required.

| U.S. tools | Canadian tools | Description               |
|------------|----------------|---------------------------|
| E003389    | E003389        | Installation Data Toolkit |

#### Software

Software for USP11.0.0, USP Compact, or BBSTP on CD is required.

### Precautions

Observe the general safety precautions against personal injury and equipment damage outlined in the ISM/IM0 at all times.

Due to the nature of the BOOTP protocol, the BOOTP server must either be located on the same IP subnet as the USP or be used with a BOOTP server and router that support BOOTP forwarding.

Do not power down a terminal if connected to a console port on the T240. Powering down the terminal will take the T240 down.

Do not disconnect a serial connection to the Netra T240 before closing any application that was previously using the port. This will cause the

server to lock-up and will have to be powered down to gain access once again.

Prior to integrating any equipment into the network it is critical to verify the IP Address assigned to the new equipment is not already assigned to existing equipment on the network. Perform a Ping test prior to assigning IP Addresses to any equipment to verify the IP Address is not currently assigned. Verify no response is received when performing the Ping test prior to integrating any equipment into the network.

## Preparations

Prior to starting the operations presented in this method, arrange all materials, tools, and test equipment at the work location so as to minimize fatigue and inconvenience.

For the installation, you can use either a graphical interface (Hummingbird suite) or a command line interface. If you require it, ensure the FT laptop has Hummingbird installed and contains FTP and Exceed. If you use Exceed, make sure the application is configured to support the upgrade. See [Configuring Exceed for an upgrade on page 58](#).

The following information must be provided by the customer or site specific documentation. Use the following table to help insert the customer provided information throughout the method. The following table will be used for an initial install.

| System variable                                                                                                                          | Actual value |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Client PC Information (Current ABS)</b>                                                                                               |              |
| PC HostName                                                                                                                              |              |
| PC IP Address                                                                                                                            |              |
| List all PC usernames and passwords that will be needed<br>DISTINCT BOOTP/FTP/NFS Server passwords<br>ABS Configuration Manager password |              |
| Configured Sites                                                                                                                         |              |
| Alternate Boot Loads<br>RTC-12<br>RTC-15                                                                                                 |              |

| System variable                                 | Actual value                                                      |
|-------------------------------------------------|-------------------------------------------------------------------|
| ABS Snapshot                                    |                                                                   |
| <b>CS2000 Management Tools Server (new ABS)</b> |                                                                   |
| CMT HostName                                    |                                                                   |
| CMT IP Address                                  |                                                                   |
| Root user                                       | root                                                              |
| Root password                                   | (root password is set to root during factory loading of the SPFS) |
| User account                                    | FIELD                                                             |
| Password                                        | SERVICE                                                           |
| <b>BOOTP settings</b>                           |                                                                   |
| SiteName                                        |                                                                   |
| Gateway IP Address                              |                                                                   |
| RTC-12 MAC address                              | Note: Do not include the :'s                                      |
| RTC-15 MAC address                              | Note: Do not include the :'s                                      |
| Host IP Address                                 | Note: This is the RTC IP address                                  |
| Server IP Address                               | Note: This is the CMT IP address                                  |
| Subnet Mask                                     |                                                                   |

## Overview

In the Carrier Voice over IP Solution, a customer has the option of moving the existing PC ABS function to the CS 2000 Management Tools (CMT) server. The following method will provide the procedures to complete the migration of the ABS and install the USP EM on the CMT server.

This method contains the following procedures:

- [Preparing the PC ABS workstation on page 126](#)
- [Creating a user account for the CMT Server on page 127](#)

- Install/configure the ABS application using only one of the following procedures:
  - [Install and configure the ABS application using Exceed on page 128](#)
  - [Install and configure the ABS application using a console on page 129](#)
- [Access verification and pre-migration completion on page 131](#)
- [CMT Server migration on page 133](#)
- [Verification procedure on page 141](#)

## PC ABS workstation

To prepare the PC ABS workstation for installation and configuration procedures, perform the following steps.

### Preparing the PC ABS workstation

#### *From the ABS PC workstation*

- 1 To reduce the amount of data that will need to be moved, uninstall any unused releases from the ABS Manager. To do this, perform the following steps:
  - Note:** The tool checks to ensure that no existing USP sites are using the release loads files and snapshots.
  - a Log in to the ABS Configuration Manager: Click **File>Login**.
  - b Type **SERVICE** for the password and click **OK**.
- 2 Select **File>Uninstall Release**.
- 3 Click on the release that you want to uninstall and select **apply**.
  - Note:** Do not remove the current release.
- 4 Close the Uninstall window when all unused releases have been removed.
- 5 Delete any old snapshots from the existing USP sites if they are no longer required.

To open the ABS Configuration Window, select **File>ABS Configuration**.
- 6 Select each Site using the drop-down menu. Using the drop-down menu, select the Snapshot record you want to delete.
- 7 Click **Delete**.
  - Note:** You will only be able to delete snapshots that begin with **bv\*\*\*\*\***. Keep at least one recent snapshot.

- 8 Click **OK** when all old snapshots have been removed.
- 9 Repeat for all sites in office.
- 10 In the ABS Configuration window, record all the sites that are configured along with their Alternate Boot loads and Snapshot records. (See the table provided on page [124](#).)
- 11 Log out of the ABS Configuration Manager.
- 12 Click **YES** to confirm and minimize window.
- 13 Record the BOOTP settings for reference when setting up the CMT as follows:
  - a Open the Distinct BootP Server window.

**Note:** You may have to log in using **File>Login** (FIELD passwd SERVICE).
  - b Click **Configure>Server**.
  - c Click on each of the Address and Networks tabs.
  - d Capture data.
- 14 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## CMT Server user account

Complete the setup of the FIELD user account on the SPFS server. By default, the FIELD account is created in the Carrier Voice over IP group. However, the password now needs to be set.

### Creating a user account for the CMT Server

#### *Setup UserID and Password for ABS Server on CMT*

- 1 Open a Telnet session. To do this, click **Start>Run**.
- 2 Enter the <CMT IP address>:  
**Telnet <CMT IP address>**
- 3 Click **OK**.  
The session opens.
- 4 Log in as maint:  
Type: **maint**  
Type: **<maint password>**
- 5 Switch user to root:  
Type: **su -root**

Type: **<root password>**

**Note:** The FIELD user is created as part of the SPFS install.

- 6 Change the password to SERVICE:

Type: **passwd FIELD**

- 7 Type: **SERVICE**

You will be prompted to re-enter your new password.

- 8 Do not close the Telnet window.

## Install and configure the ABS application using Exceed

### ATTENTION

The procedures in this section assume that you are using the software distribution CD.

When installing the BPS/USP EM on the SPFS server, you will have to export the display to your PC. If you prefer to use a command line interface for this installation, see [Install and configure the ABS application using a console on page 129](#). The SPFS is a headless server (no keyboard or monitor) and therefore a GUI install must be re-routed to a PC with a display.

In this procedure, use Exceed to assist in the installation of the USP EM.

### Installing and configuring the ABS application using Exceed

#### *From the FT Laptop PC*

- 1 Make sure Exceed is configured to support the upgrade. See the Preparations section of this procedure and [Configuring Exceed for an upgrade on page 58](#).

- 2 To start an Exceed session, click **Programs>Hummingbird Suite>Exceed>Exceed**.

The program will be running and minimized to the task bar.

- 3 Return to your Telnet session.

Type: **DISPLAY=<IP address of your PC>:0.0**

**Note:** To find the IP address of the PC you are using, type: ipconfig from a DOS window.

- 4 Type: **export DISPLAY**

- 5 Type: **echo \$DISPLAY**

- You will see <IP address of your PC>:0.0.
- 6 Type: **cd /cdrom/cdrom0**  
Type: **ls**  
Ensure that you see the file install.bin.
  - 7 Type: **./install.bin**  
This can take several minutes to launch. You will see the following response:
    - Preparing to install...
    - Extracting the JRE from the installer archive...
    - Unpacking the JRE...
    - Extracting the installation resources from the installer archive...
    - Configuring the installer for this system's environment...
    - Launching installer...
    - .....
    - (new PC window)A new window will appear on your PC (from the Exceed session).
  - 8 Click **Next** and you will see the selection of components to install.
  - 9 Select the components you want to install using the **Choose** button.
  - 10 Click **Next** and you will see a warning for disk space.
  - 11 Click **OK**.
  - 12 When the installation is complete, close the window by selecting **Done**.
  - 13 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Install and configure the ABS application using a console

If you have already performed this installation with Exceed in the last procedure, skip this procedure.

## Installing and configuring the ABS application using a console

### *From the FT Laptop PC*

- 1 To switch to the CDROM, enter **cd /cdrom**.  
This command can be slightly different depending on the system you are using.
- 2 To ensure that the file is there, type **ls**.  
Check that you see the file `install.bin`.
- 3 Enter **./install.bin -i console**.  
You will now see preparations for console mode installation. This can take a few minutes.
- 4 Press **Enter** to continue.
- 5 Use the following table to determine your next step.

| If you are                                                  | Do                     |
|-------------------------------------------------------------|------------------------|
| using the CS 2000 Management Tools webstart application     | <a href="#">step 6</a> |
| not using the CS 2000 Management Tools webstart application | <a href="#">step 8</a> |

- 6 Change the selected packages. Type **1** to select item 1 **USP Software Loads and ABS Manager**.  
*Example of Package Selection panel*

```

1 - [X] USP Software loads and ABS Manager
2 - [X] USP Graphical Interface Client
3 - [X] USP User Manuals and Documentation Suite
Enter software component numbers and press
<Enter> to continue.
```
- 7 Press **Enter** and go to [step 10](#).
- 8 Change the selected packages.
  - Type **1** to select item 1 **USP Software Loads and ABS Manager**.
  - Type **2** to deselect item 2 **USP Graphical Interface Client***Example of Package Selection panel*

```

1 - [X] USP Software loads and ABS Manager
2 - [] USP Graphical Interface Client
```

3 - [X] USP User Manuals and Documentation Suite  
Enter software component numbers and press  
<Enter> to continue.

- 9 Press **Enter** to continue.
- 10 You will be asked to confirm your selection.  
For non-CMT platforms, press **Enter** to see the default USP directory. You can change this if you wish.
- 11 Press **Enter** again to start the installation. You will be updated with the installation progress.
- 12 Press **Enter** to exit.
- 13 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Access verification and pre-migration completion

This procedure will verify the access to the ABS Configuration Manager and ensure that there are no sites at this time.

This procedure will also locate the ntssgusp/abs directory in preparation for the migration.

### Verifying access and completing pre-migration steps

#### *From the FT laptop PC*

- 1 Type: **su -root**  
password <root password>
- 2 Type: **cd /<USP install path>/ntssgusp/**  
Type: **chown -R FIELD:maint2 abs**  
Type: **chmod -R 775 abs**
- 3 Check to ensure permissions are set correctly.  
Type: **ls -l**  
Response:  
*drwxrwxr-x 2 FIELD maint2 \*date\* \*time\* abs*
- 4 Exit from the root user shell. Type: **exit**
- 5 Move to the abs directory. Type: **cd abs**
- 6 There are two versions of the ABS Configuration Manager available on the CMT. One is graphically-based and the other is console-based. If you want to use the graphically-based ABS

- Configuration Manager, perform steps [7](#) to [12](#). If you want to use the console-based ABS Configuration Manager, perform steps [13](#) to [16](#).
- 7** Ensure that DISPLAY is set correctly.
  - 8** The following command will start the ABS Configuration Manager and export the display back to the IP assigned in the previous steps.  
Type: **./ABS**  
You will be prompted to set your password.
  - 9** Enter the Password twice:  
Type: **SERVICE**  
Type: **SERVICE**  
Click **OK**.
  - 10** Log in to the ABS Configuration Manager. To do this, click **File>Login**.
  - 11** Enter **SERVICE** as the password and click **Login**.
  - 12** If you successfully logged into the ABS Configuration Manager, you have verified access.  
**Note:** The window will appear blank. Click on the File pull-down menu. If logout is highlighted then you are logged in.  
You can minimize the ABS window.
  - 13** Enter **./console\_abs** to launch the console-based ABS Configuration Manager application.  
You will be prompted with **ABSCM>** prompt.
  - 14** Set your password. Enter **ABSCM>passwd set**.  
Supply password as **SERVICE** and re-enter the same again for confirmation.
  - 15** Log in to the ABS to go through.  
Type: **ABSCM> login**.  
Supply password as **SERVICE**.
  - 16** If you successfully logged into the ABS Configuration Manager, you have verified access.
  - 17** This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## CMT Server migration

To migrate to the CMT Server, perform the following procedures:

- Configure the FTP and NFS servers on the CMT to allow the transfer of files from existing PC ABS. See [Configuring the FTP and NFS servers on page 133](#).
- Set permissions on the ABS files. See [Setting permissions on the ABS files \(CMT\) on page 136](#).
- Verify the data transfer. See [Verifying the data transfer on page 137](#).
- Enable and configure the BOOTP server on the CMT ABS. See [Enabling and configuring the BOOTP server on the CMT ABS on page 138](#).
- Disable the BOOTP server on the PC ABS. See [Disabling the BOOTP server on the PC ABS on page 139](#).
- Verify correct settings for the USP (RTC). See [Verifying correct settings for the USP \(RTC\) on page 140](#).

### Configuring the FTP and NFS servers

#### *From the FT Laptop PC*

- 1 Open a new Telnet session to the CMT Server.  
**maint**  
**<maint password>**
- 2 Switch to user root.  
**su -root**  
**<root password>**  
Root privileges are required for SPFS modifications.
- 3 From the # prompt,  
Type: **cli**
- 4 Enter the number next to the Configuration menu option.
- 5 Enter the number next to the NFS Configuration menu option.
- 6 Enter the number next to the **usp\_nfs\_on** (turn on the USP NFS configuration) menu option.  
  
You will see this message, followed by the NFS Configuration options:

```
=== Executing "usp_nfs_on"
USP NFS successfully turned on
=== "usp_nfs_on" completed successfully
```

**Note 1:** You need root privileges to enable/disable NFS on the CMT.

**Note 2:** Before executing `usp_NFS_on`, log in again after running the USP installer.

**Note 3:** After executing `usp_NFS_on`, select `list_nfs` to check if the directory used to install the USP is mounted.

- 7 Select **X** three times to exit the CLI tool.
- 8 Minimize the Telnet session.

**Note:** The next several steps will move the existing ABS data from the USP EM PC over to the CMT Server. These steps will be performed from the Field Technician's laptop. An `abstemp` folder will need to be created on the FT laptop to temporarily hold the data during the transfer.
- 9 Open a DOS prompt. To do this, click **Start >Run**. Type `cmd` and click **OK**.
- 10 Type: `cd \`.
- 11 Type: `mkdir abstemp`.
- 12 Type: `dir /w`.
- 13 Ensure that the `abstemp` folder is present, and close the DOS window.
- 14 Before any transfer of data, the FT laptop **MUST** disable the CyberArmor Personal Firewall.

Mouse over the CyberArmor icon in the task bar (right lower corner of the screen).

  - a Right-click on the CyberArmor.
  - b Select **Stop Profile** from the pop-up menu.
  - c When prompted to stop the profile, click **Yes**.
- 15 To open an FTP session, click: **Start>Programs>Hummingbird suite>Host Access>FTP for windows Explorer**.

The Hummingbird Neighborhood window appears.
- 16 To connect to the USP EM PC, click: **File>New FTP Profile**.
- 17 Complete the FTP Site Properties in the General tab window:  
Host Address: **<USP PC IPaddress>**

User Name: **ntssg**

Password: **1ntssgstp** (note: 1 is the #1)

Account:

Initial Directory: **/c/ntssgusp/abs**

**18** In the FTP Site Properties window, select the **Advanced** tab.

**19** De-select **Enable Directory Caching**.

**20** De-select **Passive Mode**.

**21** In the FTP Site Properties window, select the **Other** tab.

Use the drop-box to select **Binary** for Uploading and Downloading.

**22** Click **OK**.

**23** Save the FTP profile:

Type: **USP PC**

Click **OK**.

**24** Double-click the **USP PC**.

A new Explorer window appears.

**25** Ensure that the FT Laptop PC FTP window has the c:\abstemp directory expanded (use the + to expand the directory structure).

Ensure that the USP PC has the ntssgusp\abs directory expanded.

**26** Copy the releases folder from the USP PC to the FT laptop PC.

Right-click on the releases folder and drag it to the C:\abstemp folder. Select **Copy Here**.

You will see the file transfer window while copying the files.

**27** Copy the sites folder from the USP PC to the FT laptop PC.

**28** Right-click on the sites folder and drag it to the C:\abstemp folder. Select **Copy Here**.

**29** Check the C:\abstemp folder to ensure that the releases and sites folders exist (and sub-folders).

**30** Close the Explorer window.

**31** Double-click the **CMT server**.

A new Explorer window appears.

**Note:** The CMT Server profile was created in [Creating a user account for the CMT Server on page 127](#).

- 32 Ensure that the FT Laptop PC has the abstemp directory expanded and that the CMT has the /opt/usp directory expanded.
- 33 Copy folders from the FT Laptop PC to the CMT Server by holding down the Ctrl key and selecting all releases that are not currently present on the CMT Server. Drag and drop these folders by right-clicking **Copy Here**.
- 34 Ensure that the FT Laptop PC has the abstemp\sites directory expanded. Ensure that the CMT has the /opt/usp directory expanded.
- 35 Copy all files and folders from the FT Laptop PC to the CMT Server.
- 36 Right-click and drag and drop the entire Sites folder onto the /opt/usp/ntssgusp/abs directory.
- 37 Check to ensure that all data was transferred correctly by expanding the CMT server /opt/usp/ntssgusp/abs directory.
- 38 Expand each of the releases and sites folders to ensure correct data.
- 39 Close the Explorer window and the Hummingbird FTP program.
- 40 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Setting permissions on the ABS files (CMT)

#### *From the FT Laptop PC*

- 1 Open/restore a Telnet session to the CMT Server.
- 2 Ensure that you are logged in as root.  
**su -root**
- 3 Type: **cd /**  
Type: **chmod -R 775 /<USP install path>**
- 4 Ensure permissions are set correctly.  
Type: **cd /<USP install path>/../**  
Type: **ls -l**  
Look for the following line:  
*drwxrwxr-x 5 FIELD maint2 \*date\* \*time\* usp*
- 5 Minimize the Telnet session.
- 6 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Verifying the data transfer

### *From the FT Laptop PC*

- 1 Restore or open the ABS Configuration Manager on the CMT Server. There are two versions of the ABS Configuration Manager available on the CMT. One is graphically-based and the other is console-based. If you restored or opened the graphically-based ABS Configuration Manager, perform steps [2](#) to [6](#). If you restored or opened the console-based ABS Configuration Manager, perform steps [7](#) to [13](#).
- 2 Click on **File>ABS Configuration**.  
The Alternate Boot Server window appears.
- 3 Verify that all required sites and releases are present.
- 4 Select each site in the drop down menu and verify the following:
  - RTC loads
  - Snapshots
- 5 Click the **Apply** button for each site. When you click the Apply button, the ABS Configuration Manager will rebuild the site-specific configuration files based on the CMT directory structure.
- 6 Minimize the ABS Configuration Manager window.
- 7 Enter the **ABSCM>site show <site-name>** command to view the site's details.
- 8 To view all the available loads, enter **ABSCM>load show all**
- 9 To view all the snapshots for a specified site, enter:  
**ABSCM>snapshot show <site-name>**
- 10 To modify the RTC12-load of the specified site, enter:  
**ABSCM>site mod <site-name> rtc12-load <new-rtc12-load-name>**
- 11 To modify the RTC15-load of the specified site, enter:  
**ABSCM>site mod <site-name> rtc15-load <new-rtc15-load-name>**
- 12 To modify the snapshot name of the specified site, enter:  
**ABSCM>site mod <site-name> snapshot <new-snapshot-name>**
- 13 When the site mod command is executed, the ABS Configuration Manager will rebuild the site-specific configuration files based on the CMT directory structure.

- 14 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

**Note:** Refer to the *ABS\_Specification.pdf* document for the complete details of all the console-based ABS Configuration Manager commands.

## Enabling and configuring the BOOTP server on the CMT ABS

### *From the FT Laptop PC*

- 1 Open a new Telnet session to the CMT Server.
- 2 Ensure that you are logged in as root:  
**su -root**  
Root privileges are required for SPFS modifications.
- 3 From the # prompt,  
Type: **cli**
- 4 Enter the number next to the Configuration menu option.
- 5 Enter the number next to the Bootp Configuration menu option.
- 6 Enter the number next to the **bootp\_add** menu option.  
*=== Executing "bootp\_add"*  
**Note:** RTC 12 or 15
- 7 Enter the bootfile value [bf] for bootp entry.
- 8 The following value is for RTC12. Type:  
**/<USP install path>/ntssgusp/abs/sites/<sitename>/rtc1/rtcboot**  
For RTC 15, type:  
**/<USP install path>/ntssgusp/abs/sites/<sitename>/rtc2/rtcboot**
- 9 Enter the gateway IP address [gw] for bootp entry.  
Type: **<gateway IP address>**
- 10 Enter the home directory [hd] for bootp entry.  
Type: **.**  
**Note:** The character is a period [.]
- 11 Enter the hardware type [ht] for bootp entry.  
Type: **ethernet**

- 12 Enter the hardware address [ha] for bootp entry.  
**Note:** Do not include the colon [:] character. The following is an example: (010080E944056B)  
Type: **<MAC address>**
- 13 Enter the host IP address [ip] for bootp entry.  
Type: **<Host IP address>**  
**Note:** RTC IP Address
- 14 Enter the server IP address [sa] for bootp entry.  
Type: **<Server IP address>**  
**Note:** CMT IP Address
- 15 Enter the subnet mask value [sm] for bootpentry.  
Type: <subnet mask> Bootfile: \*\*\*\*\*  
Gateway IP Address: \*\*\*\*\*  
Home Directory: .  
Hardware Type: **ethernet**  
Hardware Address: \*\*\*\*\*  
Host IP Address:\*\*\*\*\*  
Server IP Address: \*\*\*\*\*  
Subnet Mask: \*\*\*\*\*  
Type **ok** to accept current settings.
- 16 Ensure that all data you entered is correct. If not, type anything other than OK and press Enter. Re-enter the data.  
Type: **ok**
- 17 Repeat [step 1](#) to [step 15](#) for RTC#2 which is called RTC15.
- 18 Type: **X**  
You will see the Configuration options.
- 19 Select **X** three times to exit the CLI tool.
- 20 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Disabling the BOOTP server on the PC ABS

#### *From the USP EM PC*

- 1 Restore the (PC) Distinct BOOTP Server window.

- 2 Click **Configure>Disabled**.
- 3 Exit the Distinct BOOTP Server window. To do this, click **File>Exit**. Click **Yes**.
- 4 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Verifying correct settings for the USP (RTC)

#### *From the BOOTP server*

- 1 You can use the USP EM PC to perform [step 1](#) to [step 5](#) or log in to the CMT and perform the steps.
- 2 Telnet to RTC-12 or RTC-15.
- 3 Log in with a valid username and password.
- 4 Type: **admin abs test rtc-12**  
Verify the prompt is returned after issuing the command. This can take a couple of seconds to respond.  
The following response indicates that there were no issues.  
*CMD>*
- 5 Type: **admin abs test rtc-15**  
Verify the prompt is returned after issuing the command. This can take a couple seconds to respond.  
The following response indicates that there were no issues.  
*CMD>*
- 6 Type: **admin abs show all**  
Verify that the abs-ipaddress is the address of the CMT ABS and that the correct RTC loads and snapshot are selected.  
(Example response ONLY for a site named Ireland):  
*~CMD>admin abs show all*  
*rtc-12-loadname = ss7rtc\_ppc750\_09\_00\_03\_47c*  
*rtc-15-loadname = ss7rtc\_ppc750\_09\_00\_03\_47c*  
*snapshot-version = v9.0.3*  
*snapshot-name = bv2\_0-6277d3091d27*  
*snapshot-date = 07/29/2004 09:39:39*  
*snapshot-description = usp9.0.3.47c\_02\_purge*  
*abs-ipaddress = 47.142.142.26*  
*abs-path = /opt/usp/ntssgusp /abs/sites/Ireland/rtc2/rtcboot*  
*virtual-index = 1*  
*~CMD>*

- 7 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Verification procedure



### CAUTION

Do not perform [step 17](#) to [step 35](#) if this is an in-service site.

## Verifying and testing your work

### *From the USP EM PC*

- 1 Launch the Application Launch Point.
- 2 Launch the USP GUI.
- 3 Click **File>session-login**.
- 4 Log in to the site:  
**FIELD**  
**SERVICE**
- 5 Click **Administration**, then select **alternate-boot-server**.  
Verify that the BootP response displays the IP address of the CMT Server. Also verify that the bootP path matches what was set during the procedure [Enabling and configuring the BOOTP server on the CMT ABS](#).
- 6 Click **Test**.  
Click **OK**.
- 7 Check the logs using the **Logs** button on the USP GUI. The Site log window appears.
- 8 Verify that the test completed successfully for each RTC and that there are no ABS related alarms.  
In the information field you should see abs test: success.
- 9 In the Alternate Boot settings window, click **Modify** and verify that the ABS settings are successfully applied (no adverse logs, alarms or pop-ups).  
In the log information field you should see abs mod:success.
- 10 From the USP GUI, click **Administration>Backup**.

- 11 Enter a snapshot description of CMT ABS Test Snapshot. Click **Backup**.  
**Note:** This action can take up to 10 minutes.  
When the action is complete, a Successful snapshot window will open.
- 12 Click **OK** and close the backup window.
- 13 From the USP GUI, click **Administration>File Manager**.  
After a couple of minutes, the File Manager panel opens.
- 14 In the right-hand side of the screen (RTC \*\*), double-click **snapshots**.  
Double-click the appropriate v11.0.x release folder and locate the snapshot that was just created.  
**Note:** Highlight each snapshot and view the description field to find the snapshot called CMT ABS Test snapshot or use the date field.
- 15 Select the snapshot and click the left arrow in the middle of the screen to transfer the snapshot to the CMT ABS.  
The transfer will be completed when Ready is displayed in the bottom left corner of the GUI.
- 16 In the left-hand side of the screen (Alternate Boot Server), double-click **snapshots**.  
Double-click the appropriate v11.0.x release folder and locate the snapshot that was just transferred.  
**Note:** Use the description field to ensure that you are using the correct snapshot.
- 17 Select the snapshot on the ABS (located on the left side of the file manager screen). Click the **delete** button.  
Verify that the snapshot is deleted (no adverse logs, alarms or pop-ups). Use the Log manager to verify the logs.
- 18 Select the snapshot on the RTC side (located on the right side of the file manager screen). Click the **delete** button.  
Verify that the snapshot is deleted (no adverse logs, alarms or pop-ups). Use the Log manager to verify the logs.
- 19 Close the window.  
**Note:** Do not perform [step 20](#) to [step 37](#) if this is an in-service site. If this is an in-service site, skip to [step 37](#).

**From the FT laptop PC**

- 20** Establish an Exceed connection to the CMT Server and launch the ABS Configuration Manager (refer to the procedure [Verifying the data transfer](#) to open the ABS Configuration Manager from the CMT Server). There are two versions of the ABS Configuration Manager available on the CMT. One is graphically-based and the other is console-based. To use the graphically-based ABS Configuration Manager, perform steps [21](#) and [22](#). If you want to use the console-based ABS Configuration Manager, perform steps [23](#) and [24](#).
- 21** Select **File>Login**. Enter the password **SERVICE**.
- 22** Select **File>SSMON**.  
The Signaling Server Monitor window will open.
- 23** Log in to the console-based ABS Configuration manager.  
Type: **ABSCM> login**. Enter the password **SERVICE**.
- 24** To read ssmon logs from the ssmon.log file type either of the following commands:  
**ABSCM>ssmonlog show all**  
or  
**ssmonlog show last-num-logs <no-of-logs>**
- Note:** The console-based ABS Configuration Manager does not display ssmon logs in real time. Instead, it reads from the ssmon.log file and display logs. Refer to the *ABS\_Specification.pdf* document for complete details.
- 25** Leave the Signaling Server Monitor window open on the FT laptop and perform the next steps from the USP EM PC.

**From the USP EM PC**

- 26** Start the USP EM GUI and log in.
- 27** Click **System Mgmt**.  
The Site System Management window will open.
- 28** Click the first shelf on the top left.  
The control shelf window will open.
- 29** Look at the graphical representation of the RTC cards in slot 12 and slot 15. The active RTC will have a check mark in a small box. You must perform this test on the inactive RTC.

- Click the inactive RTC to open the screen and note the IP address for this card. This IP address is used in the next step as the <Inactive IP address>.
- 30 Click **Start>Run** and type: **FTP <Inactive IP address>**.
  - 31 Log in using the FIELD username with password SERVICE account.
  - 32 Type: **cd /sd0 \*\*\* Changed directory to "/sdo"**.
  - 33 Type: **del sysconf**.
  - 34 From the USP GUI, click the lock button on the inactive RTC that is currently open. Click **Yes**.  
The RTC changes to LOCK status.
  - 35 From the USP GUI, click the load button on the inactive RTC that is currently open. Click **Yes**.  
**Note:** Several pop-ups can be generated indicating a loss of connection to the RTC (This step can several minutes).
  - 36 Monitor the SSMON window for status messages as the RTC performs an alternate boot. The entire process can take up to 15 to 30 minutes.
  - 37 When connectivity to the RTC is restored (a pop-up message will open). Click **OK**.
  - 38 Click the unlock button on the inactive RTC that is currently open.
  - 39 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## In-Service Introduction of Inter-CAM Communication Media (ICCMs)

**CAUTION****Service interruption**

To reduce the risk of service-affecting issues, Nortel recommends that you perform the procedure during low traffic periods in the maintenance time frame.

**CAUTION****Service degradation**

If your system has a mate system, do not perform maintenance activities on the mate while you perform the conversion procedure on the first node. Performing maintenance activities during an inservice conversion can affect service.

**ATTENTION**

Make sure that the dual-shelf system is working properly before starting the conversion procedure. Check alarm information to make sure there are no alarms pointing to problems with CC cards, RTC cards, fibre-optic cable states, loss of communication redundancy (LOCR), isolation, or shelf states. Make sure that all connecting nodes and network connections are in service. Review and coordinate the conversion procedure with other operating companies in the network.

Use this procedure for an in-service conversion of the USP from a dual-shelf system, that links directly through OC-3 cables, to a system where the shelves link through two Inter-CAM Communication Media (ICCM). The system can be expanded to a multi-shelf system with up to eight Communications Application Module (CAM) shelves.

One shelf remains designated as the control CAM shelf and the additional shelves are designated as extension CAM shelves. Each extension shelf contains two CCs and a maximum of 16 additional system nodes.

To maintain the existing redundancy and availability of the Signaling Server platform, two ICCMs are deployed in the system configuration. One CC node on each shelf is connected to the first ICCM. The other CC node on each shelf is connected to the second ICCM. This configuration allows full redundancy of SS7 messaging as well as the inservice upgrade capability of the ICCMs. The servicing of one ICCM can take place while the second ICCM carries traffic. This ensures no service impact to SS7 traffic on the link cards.

## Prerequisites

This procedure has the following prerequisites:

- The USP software upgrade must be complete, and all nodes in the system must be running the same load.
- The USP must be provisioned with all hardware required for a dual-shelf system.
- The RTC must be provisioned with a CE3 (Computing Engine 3 with PP4), running a PP4 750-based load.
- Two ICCMs and associated cabling must be available on-site.

## Hardware requirements

The following tables describe the additional minimum hardware requirements needed for the in-service conversion.

### Additional minimum hardware required for dual-shelf in-service conversion

| Name                                  | PEC      | Quantity                |
|---------------------------------------|----------|-------------------------|
| ICCM (Marconi TNX-210 ATM Switch)     | NTST87AA | 2 for the system        |
| RTC CE3 (Computing Engine 3 with PP4) | NTST11BA | 2 for the control shelf |
| OC-3 Fibre Cables                     | NTST88AA | 4 (2 for each shelf)    |

**Additional minimum hardware required for four-shelf in-service conversion**

| Name                                  | PEC      | Quantity                |
|---------------------------------------|----------|-------------------------|
| ICCM (Marconi TNX-210 ATM Switch)     | NTST87AA | 2 for the system        |
| RTC CE3 (Computing Engine 3 with PP4) | NTST11BA | 2 for the control shelf |
| OC-3 Fibre Cables                     | NTST88AA | 8 (2 for each shelf)    |

**Additional minimum hardware required for five-shelf in-service conversion**

| Name                                  | PEC      | Quantity                |
|---------------------------------------|----------|-------------------------|
| ICCM (Marconi TNX-210 ATM Switch)     | NTST87AA | 2 for the system        |
| RTC CE3 (Computing Engine 3 with PP4) | NTST11BA | 2 for the control shelf |
| OC-3 Fibre Cables                     | NTST88AA | 10 (2 for each shelf)   |

**Additional minimum hardware required for eight-shelf in-service conversion**

| Name                                  | PEC      | Quantity                |
|---------------------------------------|----------|-------------------------|
| ICCM (Marconi TNX-210 ATM Switch)     | NTST87AA | 2 for the system        |
| RTC CE3 (Computing Engine 3 with PP4) | NTST11BA | 2 for the control shelf |
| OC-3 Fibre Cables                     | NTST88AA | 16 (2 for each shelf)   |

Each ICCM provides room for expansion to up to 16 OC-3 ports. The ICCM terminates the OC-3 links from the CAM shelves and provides routing between the CAM shelves on the system.

Nortel arranges the provisioning of the ICCMs to allow the CAM shelves to communicate properly. Once the ICCMs are powered up, they are ready to route ATM messages. If a routing error occurs, contact your next level of support.

The OC-3 fibre cable between the CCs and the ICCMs is a standard multi-node fibre cable with SC connectors. This cable is custom-built for the application. The same OC-3 cable is used for connection of dual-shelf systems. Nortel Networks recommends that you have extra OC-3 cables on site in case of fibre optic cable failure.

For additional information on provisioning the hardware, contact your installation prime.

## In-service introduction of ICCMs process



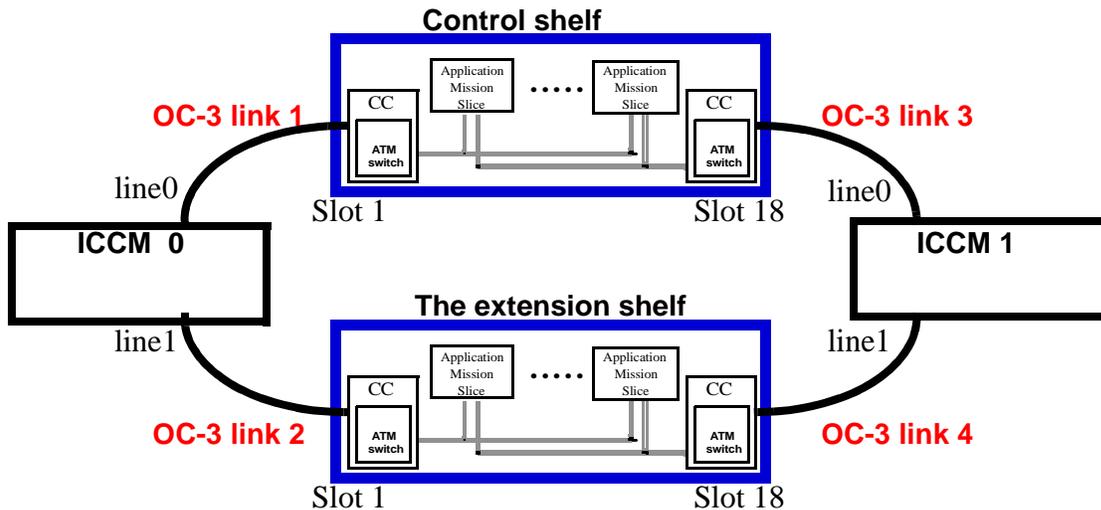
### **CAUTION**

#### **Non-redundant system**

During most of the conversion procedure, the system operates without redundancy. Nortel recommends that the conversion take place during low traffic periods in the maintenance window in order to avoid loss of service.

This section describes the step-by-step in-service conversion procedure for converting a system from a dual-shelf system, that links directly through OC-3 fibre optic cables, to a system where the CAM shelves link through ICCMs.

## ICCM connectivity with system shelves



A dual-shelf system with ICCMs uses four OC-3 cable links. The following is a summary of the cable connections:

- OC-3 link 1 connects the CC in slot 1 on the control CAM shelf to line 0 on line card 0 of ICCM 0.
- OC-3 link 2 connects the CC in slot 1 on the extension CAM shelf to line 1 on line card 0 of ICCM 0.
- OC-3 link 3 connects the CC in slot 18 on the control CAM shelf to line 0 on line card 0 of ICCM 1.
- OC-3 link 4 connects the CC in slot 18 on the extension CAM shelf to line 1 on line card 0 of ICCM 1.

In order for the pre-configured ICCMs to operate correctly with the CAM shelves, the system must be connected as specified in this document.

To avoid disruption to service, only one set of the CCs is disabled at one time, and all traffic is carried on the other set of CCs during the conversion procedure. In this document, conversion of the CCs in slot 1 occurs first, followed by the conversion of the CCs in slot 18.

### In-service introduction of ICCMs procedures

In-service introduction of ICCMs in a dual-shelf system requires the completion of the following separate procedures:

1. Upgrade USP software.
2. Log in and check alarms.
3. Disable and offline the CC in slot 1 on the extension CAM shelf.

4. Disable and offline the CC in slot 1 on the control CAM shelf.
5. Remove OC-3 cable connections for the CCs in slot 1 and connect the CCs to ICCM 0.
6. Enable the CC in slot 1 on the control CAM shelf.
7. Enable the CC in slot 1 on the extension CAM shelf.
8. Check OMs to ensure messaging goes through ICCM 0.
9. Soak the system after conversion of the CCs in slot 1.
10. Disable and offline the CC in slot 18 on the extension CAM shelf.
11. Disable and offline the CC in slot 18 on the control CAM shelf.
12. Remove OC-3 cable connections for the CCs in slot 18 and connect the CCs to ICCM 08.
13. Enable the CC in slot 18 on the control CAM shelf.
14. Enable the CC in slot 18 on the extension CAM shelf.
15. Check OMs to ensure messaging goes through ICCM 1.
16. Add ICCMs to the system GUI.
17. Soak the dual-shelf system.

### **Upgrading the USP software**

Use the procedures in this document.

### **Logging in and checking alarms**

#### ***At the OAMP workstation***

- 1 Double-click the system icon on your OAMP workstation to display the login window.
- 2 To log in to the system GUI, select a site and enter a user identification and password.
- 3 Check alarm information to make sure there are no alarms pointing to problems with CC cards, RTC cards, fibre-optic cable states, loss of communication redundancy (LOCR), isolation, or shelf states. To view alarms, click the alarm banner. The Alarms window appears.
- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## **Disabling and offlining the CC in slot 1 on the extension CAM shelf**

### ***On the system GUI***

- 1** Click Configuration>platform>node>Graphical View.
- 2** Click the icon for the extension shelf to open the shelf\_name window for the extension CAM shelf.
- 3** Click the icon for the CC in slot 1 to open the CC in slot 1 on the graphical view window for the extension CAM shelf.
- 4** Click Lock to lock the CC in slot 1. A pop-up window appears. Click Yes to confirm the change. Check the Administrative state (the word Locked should be highlighted).
- 5** Click Offline to offline the CC in slot 1. A pop-up window appears. Click Yes to confirm the change. Click OK to continue. Check the Availability status in the Maintenance portion of the window. The word Offline should be highlighted.
- 6** Click Close to return to the shelf\_name window for the extension CAM shelf. Click Close to return to the System Configuration window.
- 7** You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## **Disabling and offlining the CC in slot 1 on the control CAM shelf**

### ***On the system GUI***

- 1** Click Configuration>platform>node>graphical view.
- 2** Click the icon for the control CAM shelf to open the shelf\_name window for the control CAM shelf.
- 3** Click the icon for the CC in slot 1 to open the CC in slot 1 on the maintenance and provisioning window for the control CAM shelf.
- 4** Click Lock to lock the CC in slot 1. A pop-up window appears. Click Yes to confirm the change. Check the Administrative state in the Maintenance portion of the window. The word Locked should be highlighted.
- 5** Click Offline to offline the CC in slot 1. A pop-up window appears. Click Yes to confirm the change. Click OK to continue. Check the Availability status in the Maintenance portion of the window. The word Offline should be highlighted.
- 6** Click Close to return to the shelf\_name window for the control CAM shelf. Click Close to return to the System Configuration window.

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

## Removing OC-3 cable connections for the CCs in slot 1 and connecting the CCs to ICCM 0



### **CAUTION** **Service interruption**

When you remove the OC-3 cable, make sure that you remove the cable from the CCs in slot 1. Removal of the OC-3 cable from the CCs in slot 18 can disrupt service. Make sure that the LED on the CC TM is OFF before you remove the OC-3 cable. If the LED is ON, the CC is enabled, and loss of service can occur.

### ***On the system***

- 1 Remove the OC-3 cable connecting the CC in slot 1 on the control CAM shelf to the CC in slot 1 on the extension CAM shelf.
- 2 Use the OC-3 cable to connect the CC in slot 1 on the control CAM shelf to line 0 on line card 0 of the ICCM 0. Check the lights on the ICCM 0 for line 0. A green light indicates the cable connection is correct. If the red light is on, a line error occurred. If a problem occurs, perform the steps in the [Troubleshooting an OC-3 cable connection on page 161](#).
- 3 Use an OC-3 cable to connect the CC in slot 1 on the extension CAM to line 1 on line card 0 of the ICCM 0. Check the lights on the ICCM 0 for line 0. A green light indicates the cable connection is correct. If the red light is on, a line error occurred. If a problem occurs, perform the steps in the [Troubleshooting an OC-3 cable connection on page 161](#).
- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### **Enabling the CC in slot 1 on the control CAM shelf**

#### ***On the system GUI***

- 1 Click Configuration>platform>node>graphical view.
- 2 Click the icon for the control CAM shelf to open the shelf\_name window for the control CAM shelf.
- 3 Click the icon for CC in slot 1 to open the CC in slot 1 on the maintenance and provisioning window for the control CAM shelf.

- 4 Click Load to load the CC in slot 1. A pop-up window appears. Click Yes to confirm the change. Check the Operational state in the Maintenance portion of the window to verify the changes. The word Unlocked should be highlighted.
- 5 Click Unlock to unlock the CC in slot 1. A pop-up window appears. Click Yes to confirm the change. Check the Administrative state in the Maintenance window. The word Unlocked should be highlighted.
- 6 Click **Close** to return to the shelf\_name window for the control CAM shelf. Click Close to return to the System Configuration window.
- 7 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### **Enabling the CC in slot 1 on the extension CAM shelf**

#### ***On the system GUI***

- 1 Click Configuration>platform>node>graphical view.
- 2 Click the icon for the extension CAM shelf to open the shelf\_name window for the extension CAM shelf.
- 3 Click the icon for CC in slot 1 to open the CC in slot 1 on the maintenance and provisioning window for the extension CAM shelf.
- 4 Click Load to load the CC in slot 1. A pop-up window appears. Click Yes to confirm the change. Check the Operational state in the Maintenance portion of the window to verify the changes. The word Unlocked should be highlighted.
- 5 Click Unlock to unlock the CC in slot 1. A pop-up window appears. Click Yes to confirm the change. Check the Administrative state in the Maintenance window. The word Unlocked should be highlighted.
- 6 Click **Close** to return to the shelf\_name window for the extension CAM shelf. Click Close to return to the System Configuration window.
- 7 Wait for at least 10 minutes after enabling the CC in slot 1 on the extension shelf. Check the system logs and OMs for any unusual events.
- 8 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Checking OMs to ensure messaging goes through LCCM 1

### *On the system GUI*

- 1 Click **Performance>om**.
- 2 Click **Search**.
- 3 In the criteria box select:
  - application-name from the **Field** drop-down menu
  - equal from the **Condition** drop-down menu
  - ATM Driver Messaging from the **Value** drop-down menu
- 4 Click **Retrieve**.
- 5 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Soaking the system after the conversion of CCs in slot 1

### *At the OAMP workstation*

- 1 Allow the system to soak for one hour after the conversion of the CCs in slot 1.
- 2 Check the logs for the system. Click Logs on the main menu to open the Logs window.
- 3 Check the alarms for the system. To view alarms, click the alarm banner. The Alarms window appears. Check alarm information to make sure there are no alarms pointing to problems with CC cards, RTC cards, fibre-optic cable states, loss of communication redundancy (LOCR), isolation or shelf states.

If a problem or failure occurs at any time during soak do not proceed until the problem is resolved and the alarm clears. If you cannot resolve the problem, contact your next level of support.
- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Disabling and offlining the CC in slot 18 on the extension CAM shelf

### *On the system GUI*

- 1 Click Configuration>platform>node>graphical view.
- 2 Click the icon for the extension CAM shelf to open the shelf\_name window for the extension CAM shelf.

- 3 Click the icon for the CC in slot 18 to open the CC in slot 18 on the maintenance and provisioning window for the extension CAM shelf.
- 4 Click Lock to lock the CC in slot 18. A pop-up window appears. Click Yes to confirm the change. Check the Administrative state in the Maintenance portion of the window. The word Locked should be highlighted.
- 5 Click Offline to offline the CC in slot 18. A pop-up window appears. Click Yes to confirm the change. Click OK to continue. Check the Availability state in the Maintenance portion of the window. The word Offline should be highlighted.
- 6 Click Close to return to the shelf\_name window for the extension CAM shelf. Click Close to return to the System Configuration window.
- 7 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### **Disabling and offlining the CC in slot 18 on the control CAM shelf**

#### ***On the system GUI***

- 1 Click Configuration>platform>node>graphical view.
- 2 Click the icon for the control CAM shelf to open the shelf\_name window for the control CAM shelf.
- 3 Click the icon for the CC in slot 18 to open the CC in slot 18 on the maintenance and provisioning window for the control CAM shelf.
- 4 Click Lock to lock the CC in slot 18. A pop-up window appears. Click Yes to confirm the change. Check the Administrative state in the Maintenance portion of the window. The word Locked should be highlighted.
- 5 Click Offline to offline the CC in slot 18. A pop-up window appears. Click Yes to confirm the change. Click OK to continue. Check the Availability state in the Maintenance portion of the window. The word Offline should be highlighted.
- 6 Click Close to return to the shelf\_name window for the control CAM shelf. Click Close to return to the System Configuration window.
- 7 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Removing the OC-3 cable connections for the CCs in slot 18 and connecting the CCs to ICCM 1



### **CAUTION** **Service interruption**

When you remove the OC-3 cable, make sure that you remove the cable from the CCs in slot 18. Removal of the OC-3 cable from the CCs in slot 1 can disrupt service. Make sure that the LED on the CC TM is OFF before you remove the OC-3 cable. If the LED is ON, the CC is enabled, and loss of service can occur.

### ***On the system***

- 1 Remove the OC-3 cable connecting the CC in slot 18 on the control CAM shelf to the CC in slot 18 on the extension CAM shelf.
- 2 Use the OC-3 cable to connect the CC in slot 18 on the control CAM shelf to line 0 on line card 0 of the ICCM 1. Check the lights on the ICCM 1 for line 0. A green light indicates the cable connection is correct. If the red light is on, a line error occurred. If a problem occurs, perform the steps in the [Troubleshooting an OC-3 cable connection on page 161](#).
- 3 Use an OC-3 cable to connect the CC in slot 18 on the extension CAM to line 1 on line card 0 of the ICCM 1. Check the lights on the ICCM 1 for line 0. A green light indicates the cable connection is correct. If the red light is on, a line error occurred. If a problem occurs, perform the steps in the [Troubleshooting an OC-3 cable connection on page 161](#).
- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### **Enabling the CC in slot 18 on the control CAM shelf**

#### ***On the system GUI***

- 1 Click Configuration>platform>node>graphical view.
- 2 Click the icon for the control CAM shelf to open the shelf\_name window for the control CAM shelf.
- 3 Click the icon for CC in slot 18 to open the CC in slot 18 on the maintenance and provisioning window for the control CAM shelf.

- 4 Click Load to load the CC in slot 18. A pop-up window appears. Click Yes to confirm the change. Check the Operational state in the Maintenance portion of the window to verify the changes. The word Unlocked should be highlighted.
- 5 Click Unlock to unlock the CC in slot 18. A pop-up window appears. Click Yes to confirm the change. Check the Administrative state in the Maintenance window. The word Unlocked should be highlighted.
- 6 Click **Close** to return to the shelf\_name window for the control CAM shelf. Click Close to return to the System Configuration window.
- 7 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### **Enabling the CC in slot 18 on the extension CAM shelf**

#### ***On the system GUI***

- 1 Click Configuration>platform>node>graphical view.
- 2 Click the icon for the extension CAM shelf to open the shelf\_name window for the extension CAM shelf.
- 3 Click the icon for CC in slot 18 to open the CC in slot 18 on the maintenance and provisioning window for the extension CAM shelf.
- 4 Click Load to load the CC in slot 18. A pop-up window appears. Click Yes to confirm the change. Check the Operational state in the Maintenance portion of the window to verify the changes. The word Unlocked should be highlighted.
- 5 Click Unlock to unlock the CC in slot 18. A pop-up window appears. Click Yes to confirm the change. Check the Administrative state in the Maintenance window. The word Unlocked should be highlighted.
- 6 Click **Close** to return to the shelf\_name window for the extension CAM shelf. Click Close to return to the System Configuration window.
- 7 Wait for at least 10 minutes after enabling the CC in slot 18 on the extension shelf.
- 8 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Checking OMs to ensure messaging goes through ICCM 1

### *On the system GUI*

- 1 Click OMs on the main menu to open the Operation Measurements window.
- 2 Set the interval to five minutes in the Interval Type field. Click Query Interval Data to open the OMBrowser Interval Selection window.
- 3 Click on the bottom line of the window to select the last five-minute interval. Click Get Selected Intervals. A pop-up window appears. Click Yes to confirm your change.
- 4 Click Open Filter Selection Window to open the Operational Measurements Filter window.
- 5 Select ATM Driver Messaging in the Application Filter list.
- 6 Select the CC in slot 18 on the extension shelf in the Element Filter list.
- 7 Click Close to return to the Operational Measurements window.
- 8 In the Register portion of the window, locate “Plane 1 Message Count” and “Plane 2 Message Count”. The OM Value should be the same for each count. If the OM value is not the same for the two counts, contact your next level of support.
- 9 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Adding ICCMs on the system GUI

### *On the system GUI*

- 1 Click System mgmt on the main menu to open the System Configuration window.
- 2 Click Add ICCM. A pop-up window appears. Click Yes to confirm the change. Click OK to continue. Two ICCMs appear on the GUI.
- 3 Check the OC-3 link state indicator on the GUI to make sure all the OC-3 links are up.  
  
If an OC-3 link is down, the OC-3 link indicator changes to show a broken link in the black square below the shelf.
- 4 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Soaking the dual-shelf system

### ATTENTION

If a failure occurs at any time during this phase, refer to [Conversion failure management on page 161](#). If you cannot resolve the problem, contact your next level of support.

### ATTENTION

When you complete this procedure, you can now install additional shelves on the system. Refer to the section “Adding an Extension Shelf” in the Configuration Management guide.

### *At the OAMP workstation*

- 1 Allow the system to soak for one hour after the conversion to a system with two ICCMs.
- 2 Check the logs for the system. Click Logs on the main menu to open the Logs window.
- 3 Check the alarms for the system. To view alarms, click the alarm banner. The Alarms window appears. Check for alarms pointing to problems with CC cards, RTC cards, fibre-optic cable states, loss of communication redundancy (LOCR), isolation or shelf states.
- 4 Check the OC-3 link state indicator on the system GUI. Make sure all of the OC-3 links are up.
- 5 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Troubleshooting and system recovery

This section provides the procedures for troubleshooting and recovering a system from problems encountered during the conversion process.

Each line on the ICCM has a green light and a red light. A green light indicates a correct OC-3 cable connection. A red light indicates a problem with the connection. After you connect the CAM shelves to the ICCMs using OC-3 cables, check the lights. If the red light is on, perform the following steps:

## Troubleshooting an OC-3 cable connection

### *At the ICCM*

- 1 A reversal of the RX and TX nodes on the OC-3 cable can be the problem. To solve the problem, unplug the cable, switch the RX and TX nodes, and plug the cable in again. If the green light is on, continue with the conversion procedure. Otherwise, perform the next step.
- 2 Use another OC-3 cable to replace the current cable. Make sure that you connect the RX and TX nodes correctly.
- 3 You have completed this procedure. If the green light is on, continue with the conversion procedure. If the problem continues, contact your next level of support.

## Conversion failure management

To abort the conversion, perform the following backout procedures:

1. Remove ICCMs on the system GUI.
2. Perform a back out for the ICCM 1.
3. Remove the ICCM and connect the CCs with direct OC-3 cable links.
4. Perform a back out for the ICCM 0.

## Removing ICCMs from the system GUI

### **ATTENTION**

If you added ICCMs on the system GUI, perform the following steps to remove them. If no ICCMs were added, skip this procedure.

### *At the OAMP workstation*

- 1 On the system GUI, open the System Configuration window. To do this, click Configuration>platform>system.
- 2 Click **Delete ICCM**. A pop-up window appears. Click **Yes** to confirm. Click **OK** to continue. The system removes the ICCMs from the GUI.
- 3 You have completed this procedure. Continue the backout procedure or contact your next level of support

## Performing a back out for ICCM 1

### *At the OAMP workstation*

- 1 Disable and offline the CC in slot 18 on the extension shelf. See [Disabling and offlining the CC in slot 18 on the extension CAM shelf on page 155](#).
- 2 Disable and offline the CC in slot 18 on the control shelf. See [Disabling and offlining the CC in slot 18 on the control CAM shelf on page 156](#).
- 3 Remove ICCM 1 and connect the CCs in slot 18 with direct OC-3 cable links. See [Removing the OC-3 cable connections for the CCs in slot 18 and connecting the CCs to ICCM 1 on page 157](#).
- 4 Enable the CC in slot 18 on the control shelf. See [Enabling the CC in slot 18 on the control CAM shelf on page 157](#).
- 5 Enable the CC in slot 18 on the extension shelf. See [Enabling the CC in slot 18 on the extension CAM shelf on page 158](#).
- 6 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Removing the ICCM and connecting the CCs with direct OC-3 cable links



#### **CAUTION** **Service interruption**

When you remove the OC-3 cables, make sure that you remove the OC-3 cables from the CCs in slot 18 connecting to ICCM 1. Removal of the OC-3 cables from the CCs in slot 1 connecting to ICCM 0 can result in loss of service. Make sure that the LED on the CC TM card is OFF before removing the OC-3 cables. If the LED is ON, the CC is enabled and service can be disrupted.

### *At the system*

- 1 Remove the OC-3 cable connecting the CC on the control CAM shelf to the line card of the ICCM.
- 2 Remove the OC-3 cable connecting the CC on the extension CAM shelf to the line card of the ICCM.
- 3 Use an OC-3 cable to connect the CC on the control CAM shelf to the CC on the extension CAM shelf.

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

### **Performing a back out for ICCM 0**

#### ***At the system***

- 1 Disable and offline the CC in slot 1 on the extension shelf. See [Disabling and offlining the CC in slot 1 on the extension CAM shelf on page 151](#).
- 2 Disable and offline the CC in slot 1 on the control shelf. See [Disabling and offlining the CC in slot 1 on the control CAM shelf on page 151](#).
- 3 Remove ICCM 0 and connect the CCs in slot 1 with direct OC-3 cable links. See [Removing OC-3 cable connections for the CCs in slot 1 and connecting the CCs to ICCM 0 on page 153](#).
- 4 Enable the CC in slot 1 on the control shelf. See [Enabling the CC in slot 1 on the control CAM shelf on page 153](#).
- 5 Enable the CC in slot 1 on the extension shelf. See [Enabling the CC in slot 1 on the extension CAM shelf on page 154](#).
- 6 You have completed this procedure. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## USP High-Speed Link Cutover Procedure



### CAUTION

Conduct the cutover during a maintenance window, where the low speed link traffic is below 0.2 erlang.

To cutover from 16 LSL to two HSLs, the low speed link traffic must be less than 0.1 erlang.

This section details procedures for converting a Common Channel Signaling System 7 (SS7) low-speed link (LSL) linkset into an high-speed link (HSL) linkset.

Throughout this document, links originating on DS0A, V.35 or Channelized E1/T1 link system nodes are referred to as low-speed links (LSLs). Links originating on high-speed link or SS7 IP link system nodes are referred to as high-speed links (HSL). The ATM high-speed link system node physically consists of the T1/E1 Transition Module (TM) and a link mission card. The computing engine mission card consists of a Power/SCSI/Ethernet (PSE) TM, an SS7 IP link mission card, and an MTP2 E1 HSL.

This section also provides the procedures to transition from low-speed link (LSL) linksets to high-speed link (HSL) linksets.

## Hardware requirements

The following hardware is required for ATM high-speed links:

- T1/E1 Transition Module NTST81BA, or NTST81AB
- Link Mission Card
  - NTST10BA (base link card)

The following hardware is required for E1 MTP2 high-speed links:

- T1/E1 Transition Module NTST81BA
- Link Mission Card
  - NTST10CA

The following hardware is required for SS7 IP High Speed links:

- PSE TM NTST09AA, NTST09AB, or NTST09AC
- IP Link Mission Card which includes:
  - NTST11BA (LE3)

For further information about issues related to hardware installations involving high-speed links (HSL), contact the installation prime.

## Software requirements

Software release USP8.0 or later is required for this cutover.

## HSL cutover process

### ATTENTION

Ensure that the network to be converted and all connecting nodes and network connections are in service.

Ensure that all alarms have been cleared before proceeding with the cutover procedure.

Review and coordinate the cutover procedure with other operating companies in the network that are involved in the cutover procedure.

Up to 16 ATM/E1 or MTP2 HSL system nodes can be commissioned on an extension shelf (12 on a control shelf). For IP HSLs, up to eight HSL, can be commissioned on each shelf. On a fully populated system, an LSL link system node must be decommissioned before installing each HSL system node. Existing links on the LSL system node must be moved to other link system nodes or decommissioned. If your system is fully populated, contact your next level of support.

The cutover procedure requires operating company personnel to be present at each office that is affected by a link change during any step of the procedure. Nortel Networks recommends that you appoint a cutover project manager to coordinate all the steps for the cutover.

### HSL cutover guidelines

Note the following guidelines when performing the HSL cutover:

- The high-speed link system node can support HSLs for C-links, B/D links, or A-links.
- Carry out the C-linkset cutover before the signaling transfer point (STP) quad B/D-linkset cutover because only two nodes are involved in the C-linkset cutover.
- An HSL system node provides a single port in the same space that an LSL system node provides four or eight ports. Therefore, on a full system, four or eight LSL ports must be decommissioned for each HSL added.

The HSL cutover applies to:

- C-linkset cutover for a signaling transfer point (STP) pair
- B-linkset cutover for an STP quad
- D-linkset cutover for an STP quad

- A-links-to-service control point (SCP) cutover
- A-links-to-SSP cutover

**Note:** Nortel Networks recommends performing the C-linkset cutover for an STP pair before attempting the B-linkset and D-linkset cutover for an STP quad.

### HSL cutover procedures

**ATTENTION**

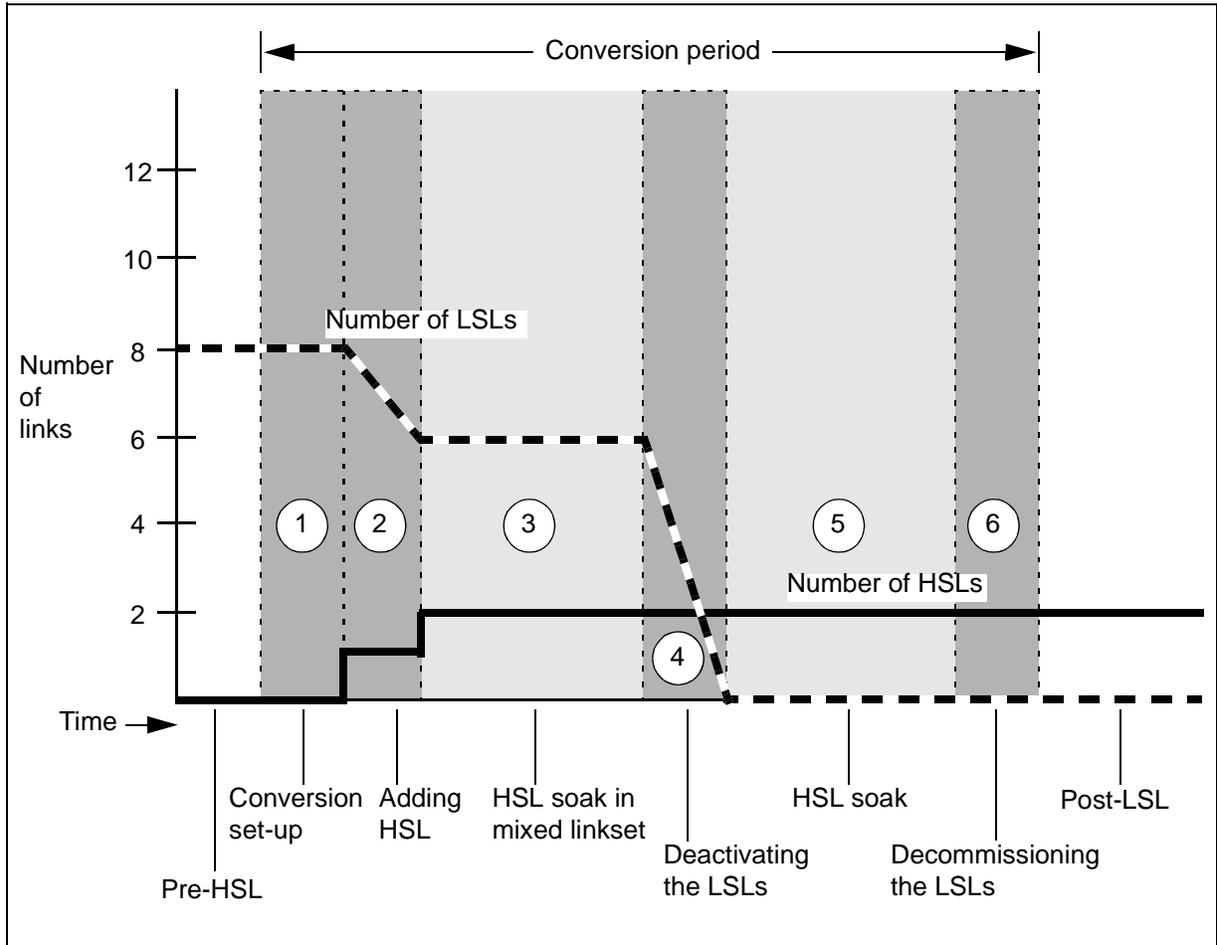
During cutover, HSLs and LSLs are supported in the same mixed linkset. The USP supports mixed HSL and LSL linksets only during the cutover procedure. After the cutover is complete, linksets will be homogeneous.

**ATTENTION**

Contact your next level of support to determine the correct version of the engineering bulletin and to determine if any other engineering bulletins apply.

The following figure shows the cutover steps.

### Link count during cutover



The HSL cutover requires completing the following procedures:

1. Cutover setup.
  - a. Configure the HSL system node. Refer to the procedure “Provisioning Links” in the Operational Configuration section of the customer documentation.
  - b. Configure ports. Refer to the procedure “Provisioning Links” in the Operational Configuration section of the customer documentation.

**Note:** For MTP2 E1 HSLs the cable must be connected to RJ45 cable.
  - c. Load the HSL system nodes. Refer to the procedures “Provisioning Links” in the Operational Configuration section of the customer documentation.
2. Add HSLs.
  - a. Configure SAAL timers. Refer to the procedure “Adding a SAAL Timer or Parameter Index” in the Operational Configuration section of the customer documentation.
  - b. Configure SAAL parameters. Refer to the procedure “Adding a SAAL Timer or Parameter Index” in the Operational Configuration section of the customer documentation.
  - c. Deactivate LSLs. Refer to the procedure “Activating and Deactivating Links” in the Operational Configuration section of the customer documentation.
  - d. Delete LSLs. Refer to the procedure “De-provisioning links” in the Operational Configuration section of the customer documentation.
  - e. Configure HSLs. Refer to the applicable ATM, E1 MTP2, or IP HSL procedure in the Operational Configuration section of the customer documentation.
  - f. Perform BERT on ATM and E1 MTP2 before RTSing the links, “Perform BERT” in the Security and Administration guide.
  - g. RTS the link. Refer to the procedure “Activating and deactivating links” in the Operational Configuration section of the customer documentation.
3. Soak the HSLs in a mixed linkset. Refer to the procedure [Soaking the HSLs on page 171](#).

4. Offline the LSLs.
  - a. Calculate LSL traffic. Refer to the procedure “Performing USP traffic calculations” in the Operational Configuration section of the customer documentation.

**Note:** If the Erlang level is above 0.2 E, contact the personnel responsible for your next level of support. Use Operational Measurements to calculate traffic and to determine if you can proceed with the cutover.
  - b. Calculate LSL traffic on the mate node. Refer to the procedure “Performing USP traffic calculations” in the Operational Configuration section of the customer documentation.

**Note:** If the Erlang level is above 0.2 E, contact the personnel responsible for your next level of support. Use Operational Measurements to calculate traffic and to determine if you can proceed with the cutover.
  - c. Deactivate the LSL. Refer to the procedure “Activating and deactivating links” in the Operational Configuration section of the customer documentation.
  - d. Deactivate all remaining LSLs in the linkset. Refer to the procedure “Activating and deactivating links” in the Operational Configuration section of the customer documentation.
  - e. Deactivate the LSL on the mate node. Refer to the procedure “Activating and deactivating links” in the Operational Configuration section of the customer documentation.
  - f. Deactivate all remaining LSLs in the linkset on the mate node. Refer to the procedure “Activating and deactivating links” in the Operational Configuration section of the customer documentation.

5. Soak the HSLs. Refer to the procedure [Soaking the HSLs on page 171](#).
6. Decommission the LSLs.
  - a. Delete the datafill for the LSLs. Refer to the procedure “De-provisioning links” in the Operational Configuration section of the customer documentation.
  - b. Delete LSLs for remaining links in the linkset. Refer to the procedure “De-provisioning links” in the Operational Configuration section of the customer documentation.
  - c. Delete the datafill for the LSLs on the mate node. Refer to the procedure “De-provisioning links” in the Operational Configuration section of the customer documentation.
  - d. Delete LSLs for remaining links in the linkset on the mate node. Refer to the procedure “De-provisioning links” in the Operational Configuration section of the customer documentation.

### Soaking the HSLs

#### ATTENTION

If a failure occurs at any time during this phase, refer to [Performing the recovery procedure for HSL failure on page 172](#).

- 1 Allow the system to soak for one hour.
- 2 Check the logs for the system. Click **Fault>Logs** on the main menu to open the Logs window.
- 3 Check the alarms for the system. To view alarms, click the alarm banner. The Alarms window appears. Check for alarms.
- 4 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Recovery procedure for HSL failure

If an HSL fails during either phase, traffic is redistributed over the remaining links in the linkset or combined linkset. The following steps describe the HSL recovery procedure.

## Performing the recovery procedure for HSL failure

### *At the OAMP workstation*

- 1 Deactivate and offline the failed HSL. Refer to the procedure “Activating and deactivating links” in the Operational Configuration section of the customer documentation.
- 2 Perform a remote Loopback at the far end of the link. Refer to the procedure “Remote Loopback” in the Fault Management section of the customer documentation. On the local end of the link, perform a BERT Operation. Refer to the procedure “Performing Bert” in the Security and Administration guide. Clear any faults before proceeding.
- 3 RTS the HSL. To RTS the link, refer to the procedure “Activating and deactivating links” in the Operational Configuration section of the customer documentation.
- 4 Select one of the following options.:

| If                           | Do                                   |
|------------------------------|--------------------------------------|
| the failure condition exists | continue to step <a href="#">5</a> . |
| the failure condition clears | step <a href="#">8</a>               |
- 5 Provision LSLs. Refer to the procedure “Provisioning links” in the Operational Configuration section of the customer documentation.
- 6 RTS the LSLs. To RTS the link, refer to the procedure “Activating and deactivating links” in the Operational Configuration section of the customer documentation.
- 7 Contact your next level of support.
- 8 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Aborting an Upgrade

The following sections describe the procedures used to abort a software upgrade before it has been completed. When you have completed this process, your system runs the previous software version.

To abort an upgrade, downgrade only the system nodes that have been upgraded.



### CAUTION

Once you complete the upgrade of the RTC in slot 12, the only way to return to the previous configuration is to perform an alternate boot from a data snapshot created prior to the upgrade. Do not upgrade the RTC in slot 12 until you perform test calls and ensure the system is ready for completion of the upgrade.



### CAUTION

Before you begin any downgrade procedure, make sure that you have a recent data snapshot on the alternate boot server.

### *At the OAMP workstation*

- 1 Use the following table to determine the procedure you need to start with to downgrade your system.

| <b>If</b>                                                  | <b>Do</b>                                                                |
|------------------------------------------------------------|--------------------------------------------------------------------------|
| RTC 12 has been upgraded                                   | <a href="#">Downgrade the USP from a data snapshot on page 174</a>       |
| RTC 12 is not upgraded, but other cards have been upgraded | <a href="#">Downgrading Using the Wizard on page 174</a>                 |
| RTC 15 has been upgraded                                   | <a href="#">Downgrading the inactive RTC node in slot 15 on page 184</a> |

- 2 When all the cards in the system are running the original release loads, complete the following sections:
  - [Stop the upgrade and delete the upgrade package on page 194](#)
  - [Downgrade the GUI on page 196](#)
- 3 You have completed this procedure.

## Downgrade the USP from a data snapshot

If you upgraded RTC12, you can only return to the previous software version by restoring the data snapshot created before you upgraded the GUI. The downgrade process contains the following procedures:

### *At the OAMP workstation*

- 1 Restore the data snapshot you created before beginning the upgrade. For the restore procedure, refer to *USP Security and Administration*, NN10159-611.  
  
For the procedure to create a data snapshot, refer to [Creating an alternate boot data snapshot on page 22](#).
- 2 You have completed this procedure. If applicable, return to the higher level task or procedure that directed you to this procedure.

## Downgrading Using the Wizard

Perform the following procedures to prepare the system for the software downgrade using the Wizard.

### Downgrade the system nodes

Run the Wizard node downgrade to perform the software downgrade for a specific node. You can also select multiple nodes to downgrade using the Shift+Ctrl keys or Ctrl+click with a mouse.

### Downgrade order

#### **ATTENTION**

If you have not yet upgraded RTC12 prior to this downgrade, then follow the downgrade order listed below. Otherwise, refer to [Downgrade the USP from a data snapshot on page 174](#).

Downgrade the system nodes in the following order:

1. CC in slot 18 on control CAM shelf, see [To downgrade a CC node: on page 175](#).
2. CCs in slot 18 on extension CAM shelves, see [To downgrade a CC node: on page 175](#).
3. NPC, NPS and NPE nodes on control and extension CAM shelves, see [To downgrade NPC, NPS, and NPE nodes: on page 176](#).
4. Link system nodes on control and extension CAM shelves, see [To downgrade a single Link node: on page 181](#).
5. CCs in slot 1 on extension CAM shelves, see [To downgrade a CC node: on page 175](#).
6. CC in slot 1 on control CAM shelf, see [To downgrade a CC node: on page 175](#).
7. Inactive RTC in slot 15, see [To downgrade the inactive RTC in slot 15: on page 184](#).

### Downgrading a CC node

The following procedure is used to downgrade a CC node using the wizard.

#### To downgrade a CC node:

##### *At the OAMP workstation*

- 1 Select the node to downgrade in the list of available nodes in the software upgrade wizard.
- 2 Click the **Downgrade** button. The system asks for confirmation.
- 3 Wait for the node downgrade to complete (the upgrade-status will change to not-upgraded on completion).

**Note:** In the event that the automatic node downgrade fails to complete successfully, perform the downgrade manually. See [Manually downgrading system nodes on page 185](#).

- 4 Monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node downgrade, contact your next level of support.
- 5 This procedure is complete. Continue to downgrade the next system node in the order appropriate to your system.

## Downgrading the NPC, NPS, and NPE nodes

The downgrade of an NPC, NPS and/or NPE node requires special handling to ensure that the local subsystem instances associated with an NPC, NPS and an NPE chain have been deactivated. Also, the downgrading node must not be the active NPC node. If it is, then a switch of activity must be performed prior to downgrading the node.



### CAUTION

#### Potential for NPDB corruption

If downgrading the NP nodes/chains, the connection to the LSMS will need to be released on the LSMS. Contact Nortel Networks Technical Support for more information. Failure in doing so will result in NPDB corruption.

### ATTENTION

Do not use the software upgrade wizard to downgrade NPC/NPS/NPE system nodes if there are NPE chains provisioned. Manually downgrade these nodes instead, as detailed in [Manually downgrading the NPC, NPS, and NPE system nodes on page 189](#).

## To downgrade NPC, NPS, and NPE nodes:

### *On LSMS*

- 1 Release all SMI connections to the UNPM. Refer to the LSMS operation manual for release methods.

### *At the OAMP workstation*

- 2 In the menu bar, click **Administration>Platform>Node**.
- 3 Select the NPC you want to downgrade.
- 4 Check the activity state of the NPC.

| If                  | Do                                                         |
|---------------------|------------------------------------------------------------|
| the NPC is active   | Perform a SWACT, then continue to <a href="#">step 5</a> . |
| the NPC is inactive | Continue to <a href="#">step 5</a> .                       |

- 5 Click **Lock**.

- 6 Deactivate the NP local subsystem instance running on the inactive NPC system node. To do this, click **configuration>scdp>shared-local-subsystem-instance** , select the NPx of interest and click **Deactivate**.
- 7 If an NPE chain has been provisioned with this NPC node as the master and with an alternate NPS system node, then deactivate the local subsystem instance running on the alternate NPS. To do this, click **configuration>scdp>shared-local-subsystem-instance**, select the NPx of interest and click **Deactivate**.
- 8 Using the software upgrade wizard, select the NPC node to downgrade in the list of available nodes.
- 9 Click the **Downgrade node** button. The system asks for confirmation.
- 10 Wait for node downgrade to complete (the upgrade-status will change to not-upgraded on completion).

**Note:** In the event that the automatic node downgrade fails to complete successfully, perform the downgrade manually. See [Manually downgrading the NPC, NPS, and NPE system nodes on page 189](#).

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| If                                                       | Do                                                                                                                                          |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| an NPE chain is provisioned with this NPC node as master | repeat steps <a href="#">8</a> to <a href="#">10</a> for each NPE system node and the alternate NPS system node associated with this chain. |
| there is no NPE chain associated with this NPC node      | continue this procedure.                                                                                                                    |

- 12 Wait for the local subsystem instance to be deactivated/prohibited.
- 13 Re-activate the local subsystem instance running on the inactive NPC To do this, click **configuration>scdp>shared-local-subsystem-instance**, select the NPx of interest and click **Activate**.

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| If                                                                  | Do                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| an NPE chain is provisioned with an alternate NPS system node       | Wait for the local subsystem instance to be deactivated/prohibited. Re-activate the local subsystem instance running on the alternate NPS. To do this, click <b>Configuration&gt;SCCP&gt;local-subsystem</b> , select the NPx of interest and click <b>Activate</b> . |
| there is no NPE chain provisioned with an alternate NPS system node | continue this procedure.                                                                                                                                                                                                                                              |

15 Wait for the re-activated local subsystem instances to return to the activated/allowed state.

16 Monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node downgrade.

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| If                                                                                                 | Do                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NPS system nodes are provisioned without a chain, or NPS system nodes which are masters of a chain | select an NPS system node to be downgraded. This node cannot be an NPS system node already downgraded in the previous steps or the NPS system node associated with the currently active NPC chain. |
| there are no further NPS system nodes to be downgraded                                             | Proceed to <a href="#">step 30</a> .                                                                                                                                                               |

18 Deactivate the NP local subsystem instance running on the NPS system node. To do this, click **configuration>sccp>shared-local-subsystem-instance**, select the NPx of interest and click **Deactivate**.

19 If an NPE chain has been provisioned with an alternate NPS for the selected NPS, deactivate the NP LSS instance running on the alternate NPS system node. To do this, click **configuration>sccp>shared-local-subsystem-instance**, select the NPx of interest and click **Deactivate**.

- 20** Using the software upgrade wizard, select the NPS node to downgrade in the list of available nodes
- 21** Click the **Downgrade node** button.
- 22** Wait for node downgrade to complete (upgrade-status will change to not-upgraded on completion).
- Note:** In the event that the automatic node downgrade fails to complete successfully, perform the downgrade manually. [Manually downgrading the NPC, NPS, and NPE system nodes on page 189.](#)
- 23**
- | If                                                  | Do                                                                                                                                           |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| an NPE chain has been provisioned for this NPS node | repeat steps <a href="#">20</a> to <a href="#">22</a> for each NPE system node and the alternate NPS system node associated with this chain. |
| there is no NPE chain associated with this NPS node | continue this procedure.                                                                                                                     |
- 24** Wait for the local subsystem instance to be deactivated/prohibited.
- 25** Re-activate the local subsystem instance running on the NPS. To do this, click **configuration>scgp>shared-local-subsystem-instance**, select the NPx of interest and click **Activate**.
- 26** If an NPE chain has been provisioned with an alternate NPS system node:
- a** Wait for the local subsystem instance to be activated/allowed.
  - b** Re-activate the NP local subsystem instance running on the alternate NPS. To do this, click **configuration>scgp>shared-local-subsystem-instance**, select the NPx of interest and click **Activate**.
- 27** Wait for the re-activated local subsystem instances to return to the activated/allowed state.
- 28** Monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node downgrade.
- 29** Repeat steps [17](#) to [28](#) for any remaining NPS system nodes in the system, otherwise proceed to step [30](#).

- 30 Swact the active NPC node. To do this, click **Administration>platform>node** for the currently active NPC node, then click the **Swact** button.
- 31 Deactivate the NP local subsystem instance running on the inactive NPC system node. To do this, click **configuration>sccp>shared-local-subsystem-instance**, select the NPx of interest and click **Deactivate**.
- 32 If an NPE chain has been provisioned with an alternate NPS system node, then deactivate the local subsystem instance running on the alternate NPS. To do this, click **configuration>sccp>shared-local-subsystem-instance**, select the NPx of interest and click **Deactivate**.
- 33 Using the software upgrade wizard, select the newly inactive NPC node to downgrade in the list of available nodes.
- 34 Click the **Downgrade node** button.
- 35 Wait for the node downgrade to complete (upgrade-status will change to not-upgraded on completion).  
*Note:* In the event that the automatic node downgrade fails to complete successfully, perform the downgrade manually. [Manually downgrading the NPC, NPS, and NPE system nodes on page 189.](#)
- 36 If an NPE chain has been provisioned for this NPC, repeat steps [33](#) to [35](#) for each NPE system node and the alternate NPS system node associated with this chain.
- 37 Wait for the local subsystem instance to be deactivated/prohibited, then, re-activate the local subsystem instance running on the inactive NPC. To do this, click **configuration>sccp>shared-local-subsystem-instance**, select the NPx of interest and click **Activate**.
- 38 If an NPE chain has been provisioned with an alternate NPS system node, wait for the local subsystem instance to be deactivated/prohibited, then re-activate the local subsystem instance running on the alternate NPS. To do this, click **configuration>sccp>shared-local-subsystem-instance**, select the NPx of interest and click **Activate**.
- 39 Wait for the re-activated local subsystem instances to return to the activated/allowed state.
- 40 Monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node downgrade.

- 41** Ensure that the activity state of the NPC is set to not-active. To do this click **Administration>shared>local-subsystem**.

**If****Do**

the NPC's activity state is currently active

continue to step [42](#).

the NPC's activity state is currently inactive

continue to step [43](#).

- 42** SWACT the currently active NPC node. To do this click **Administration>platform>node**.
- 43** Monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node downgrade.

**On LSMS**

- 44** Re-establish all SMI connections to the UNPM. Refer to the LSMS operation manual for release methods.
- 45** This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

**Downgrading a single Link node****ATTENTION**

To downgrade an NPC, NPS, or NPE node see [Downgrading the NPC, NPS, and NPE nodes on page 176](#).

The following procedure is used to downgrade a single system node using the wizard.

**To downgrade a single Link node:****At the OAMP workstation**

- 1** Select the node to downgrade in the list of available nodes in the software upgrade wizard.
- 2** Click the **Downgrade** button. The system asks for confirmation.

- 3 Wait for node downgrade to complete (upgrade-status will change to not-upgraded on completion).  
**Note:** If the automatic node downgrade fails to complete successfully, perform the downgrade manually. See [Manually downgrading system nodes on page 185](#).
- 4 Monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node downgrade.
- 5 Repeat this procedure for all remaining link nodes.
- 6 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Downgrading multiple Link nodes

### ATTENTION

To downgrade an NPC, NPS, or NPE node, see [Downgrading the NPC, NPS, and NPE nodes on page 176](#).

The following procedure is used to downgrade multiple system nodes using the wizard.

### To downgrade multiple Link nodes:

#### *At the OAMP workstation*

- 1 **Shift-click** or **ctrl-click** to select a range of nodes to downgrade in the list of available nodes in the software upgrade wizard.
- 2 Select the delay interval between each successive node downgrade. This will be used to soak the downgraded node before moving to the next system node.
- 3 Click the **Downgrade node** button. The system asks for confirmation.
- 4 Wait for the node downgrade to complete (upgrade-status will change to not-upgraded on completion).  
**Note:** If the automatic node downgrade fails to complete successfully, perform the downgrade manually. See [Manually downgrading system nodes on page 185](#).
- 5 The downgrade will now delay for the selected interval before continuing to the next node to downgrade. Downgrade of nodes can be cancelled at any time by clicking the **Stop** button. To skip the delay count down, click **No delay** and the next node will be downgraded immediately.
- 6 Monitor the USP to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs. If it does, do not continue with the node downgrade.
- 7 Repeat this procedure for all remaining link nodes.
- 8 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Downgrading the inactive RTC node in slot 15

The downgrade of the RTC in slot 15 can take up to 20 minutes to complete.

### To downgrade the inactive RTC in slot 15:

#### *At the OAMP workstation*

- 1 Verify that RTC15 is the inactive RTC.
  - a In the menu bar, click **Configuration>platform>node**.
  - b Click the **Graphical view** tab.
  - c Double-click the RTC in slot 15.

| If                             | Do                                                         |
|--------------------------------|------------------------------------------------------------|
| the Activity State is inactive | Continue to <a href="#">step 2</a> .                       |
| the Activity State is active   | Perform a SWACT, then continue to <a href="#">step 2</a> . |

- 2 Select the RTC15 node to downgrade from the list of available nodes in the software upgrade wizard.
- 3 Click the **Downgrade** button. A confirmation dialog box appears. Click **Yes** to continue.
- 4 Wait for node downgrade to complete (the upgrade-status will change to not-upgraded on completion).

**Note:** If the automatic node downgrade fails to complete successfully, perform the downgrade manually. See [Manually downgrading system nodes on page 185](#).

- 5 Monitor the USP to ensure it performs normally and does not report any LOG\_SWERRS or LOG\_TRAPS. If it does, contact your next level of support.
- 6 Set the alternate boot load for RTC system nodes to the downgrade load.
 

**Note:** The alternate boot settings are used when an RTC is not able to boot from disk.

  - a Click **Administration>alternate-boot-server**.
  - b Update RTC 12 to the old release version by selecting the old release from the ABS Active Loads drop-down menu.
  - c Update RTC 15 to the old release version by selecting the old release from the ABS Active Loads drop-down menu.



### **Manually downgrading a CC system node**

The following procedure is used to manually downgrade the CC system node.

#### **To manually downgrade a CC system node:**

##### ***At the OAMP workstation***

- 1** Click **Configuration>platform>node**.
- 2** Double-click the slot for this node to open the node in the **Administration** panel.
- 3** Click **Graphical View**.
- 4** Select the drop-down menu to set the boot image to the previous release version.
- 5** Lock and load the CC system node.
- 6** When the CC system node becomes enabled, unlock it.
- 7** Verify that the running load is the downgraded load. If not, double-check that the correct image is selected on the maintenance and provisioning window.
- 8** This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Manually downgrading the Link system nodes

Downgrade the Link system nodes one at a time, beginning with the lowest slot number and proceeding to the highest slot number.

### ATTENTION

To manually downgrade an NPC, NPS, or NPE node see [Manually downgrading the NPC, NPS, and NPE system nodes on page 189](#).

## To manually downgrade the Link system nodes:

### At the OAMP workstation

- 1 Click **Configuration>platform>node**.
- 2 Click **Graphical View**
- 3 Double-click the slot for the link node to open the node in the **Administration** panel.
- 4 Select the drop-down menu to set its boot image to the previous Link release version. Set the HA boot image to the previous HA release version, if applicable.  
**Note:** IP high-speed link (HSL) link cards do not require HA loads.
- 5 Inhibit all the links on the Link system node, if applicable.  
**Note 1:** You cannot inhibit IPS7 links.  
**Note 2:** If there is only one available link on a linkset, you cannot inhibit it. If there are other links on the linkset, make at least one of them available before attempting to inhibit the link. If it is a one-link linkset, proceed to step [6](#) without inhibiting the link.
- 6 Deactivate all of the links or paths on the Link system node, as applicable.
- 7 Lock and load the Link system node.
- 8 When the Link system node becomes enabled, unlock it.
- 9 Verify that the running load is the downgraded load. If not, double-check that the correct image is selected on the maintenance and provisioning window.
- 10 Activate and uninhibit all of the links on the Link system node.
- 11 Repeat steps [4](#) to [10](#) for the remaining Link system nodes.

- 12** This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Manually downgrading the NPC, NPS, and NPE system nodes

If your system includes the optional Universal Number Portability Master (UNPM) feature, you must downgrade the NPC, NPS, and NPE system nodes (on all shelves if you have a dual-shelf or multi-shelf system). If your system does not include the UNPM feature, skip this section.



### CAUTION

#### Potential for NPDB corruption

If downgrading the NP nodes/chains, the connection to the LSMS will need to be released on the LSMS. Refer to the LSMS operation manual for release methods. Contact Nortel Networks Technical Support. Failure in doing so will result in NPDB corruption.

## To manually downgrade the NPC, NPS, and NPE system nodes:

### *On LSMS*

- 1 Release all SMI connections to the UNPM. Refer to the LSMS operation manual for release methods.

### *At the OAMP workstation*

- 2 Click **Configuration>platform>node**.
- 3 Click **Graphical View**.
- 4 Double-click the slot for this node to open the node in the **Administration** panel.
- 5 Select the drop-down menu to set the boot image to the previous release version.
- 6 If an NPE chain has been provisioned for this NPC, repeat steps [2](#) to [5](#) for the NPE system nodes and the alternate NPS system node associated with this chain.
- 7 Deactivate the NP LSS instance running on the inactive NPC system node, using the Local Subsystem Instance window.
- 8 If an NPE chain has been provisioned with an alternate NPS, deactivate the NP LSS instance running on the alternate NPS system node, using the Local Subsystem Instance window.
- 9 Lock and load the inactive NPC system node.
- 10 If an NPE chain has been provisioned for this NPC, lock and load each NPE system node and the alternate NPS system node associated with this chain.

- 11 When the inactive NPC system node becomes enabled, unlock it.
- 12 If an NPE chain has been provisioned for this NPC, when each NPE system node and the alternate NPS system node becomes enabled, unlock each of these nodes.
- 13 Contact Nortel Networks Technical support to continue the downgrade.  
**Note:** NPDB raises a critical alarm, this is expected due to Nortel Networks technical support issuing commands on the NPDB.
- 14 Wait for the LSSI to be Deactivated/Prohibited, then re-activate the local subsystem instance running on the inactive NPC system node.
- 15 If an NPE chain has been provisioned with an alternate NPS, wait for the LSSI to be Deactivated/Prohibited, then re-activate the NP LSS instance running on the alternate NPS system node.
- 16 Verify that the load running for the inactivate NPC system node is the previous version. If not, make sure that the correct image is selected on the maintenance and provisioning window. If the right image is selected but the incorrect load is running, stop the downgrade procedures and contact Nortel Networks technical support.
- 17 When the re-activated local subsystem instance(s) enter the allowed/activated state, monitor the USP for 15 minutes to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs.
- 18 If NPS system nodes are provisioned, select an NPS system node to be downgraded. Note, that this can not be an NPS system node already downgraded in the previous steps. If there are no NPS system nodes to be downgraded, skip to step [31](#).
- 19 In the provisioning and maintenance window of the selected NPS system node, set its boot image to the previous NPS release version.
- 20 If an NPE chain has been provisioned for the selected NPS, repeat steps [2](#) to [5](#) for the NPE system nodes and the alternate NPS system node associated with this chain.
- 21 Deactivate the local subsystem (LSS) instance associated with the NPS system node.
- 22 If an NPE chain has been provisioned with an alternate NPS for the selected NPS, deactivate the NP LSS instance running on

- the alternate NPS system node, using the Local Subsystem Instance window.
- 23** Lock and load the selected NPS system node.
  - 24** If an NPE chain has been provisioned for this NPS, lock and load each NPE system node and the alternate NPS system node associated with this chain.
  - 25** When the NPS system node becomes enabled, unlock it.
  - 26** If an NPE chain has been provisioned for this NPS, when each NPE system node and the alternate NPS system node becomes enabled, unlock each of these nodes.
  - 27** Wait for the LSSI to be Deactivated/Prohibited, then re-activate the LSS instance on the NPS system node.
  - 28** If an NPE chain has been provisioned with an alternate NPS, wait for the LSSI to be Deactivated/Prohibited, then re-activate the NP LSS instance running on the alternate NPS system node.
  - 29** Verify that the running load is the previous version. If not, make sure that the correct image is selected on the provisioning and maintenance window.
  - 30** Repeat steps [17-29](#) for any remaining NPS system nodes in the system.
  - 31** Once the re-activated local subsystem instance(s) enter the allowed/activated state, monitor the USP for 15 minutes to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs.
  - 32** In the provisioning and maintenance window of the active NPC system node, click the SWACT button to switch the active NPC system node.
  - 33** In the provisioning and maintenance window of the newly inactive NPC system node, set its boot image to the previous NPC release version.
  - 34** If an NPE chain has been provisioned for this NPC, repeat steps [2](#) to [5](#) for the NPE system nodes and the alternate NPS system node associated with this chain.
  - 35** Deactivate the local subsystem instance on the newly inactive NPC system node.
  - 36** If an NPE chain has been provisioned with an alternate NPS, deactivate the NP LSS instance running on the alternate NPS system node, using the Local Subsystem Instance window.
  - 37** Lock and load the newly inactive NPC system node.

- 38 If an NPE chain has been provisioned for this NPC, lock and load each NPE system node and the alternate NPS system node associated with this chain.
- 39 When the newly inactive NPC system node becomes enabled, unlock it.
- 40 If an NPE chain has been provisioned for this NPC, when each NPE system node and the alternate NPS system node becomes enabled, unlock each of these nodes.
- 41 Wait for the LSSI to be Deactivated/Prohibited, then re-activate the local subsystem instance on the newly inactive NPC system node.
- 42 If an NPE chain has been provisioned with an alternate NPS, wait for the LSSI to be Deactivated/Prohibited, then re-activate the NP LSS instance running on the alternate NPS system node.
- 43 Verify that the load running is the previous version. If not, make sure that the correct image is selected on the maintenance and provisioning window. If the right image is selected but the incorrect load is running, stop the downgrade procedures and contact Nortel Networks technical support.
- 44 In the provisioning and maintenance window of the newly inactive NPC system node, click the SWACT button to switch the active NPC system node.
- 45 Once the re-activated local subsystem instance(s) enter the allowed/activated state, Monitor the USP for 15 minutes to ensure it performs normally and does not report any LOG\_SWERRs or LOG\_TRAPs.

#### ***On LSMS***

- 46 Re-establish all SMI connections to the UNPM. Refer to the LSMS operation manual for release methods.
- 47 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### **Manually downgrading the RTC system node in slot 15**

The following procedure is used to manually downgrade the RTC system node in slot 15.

#### **To manually downgrade the RTC system node in slot 15:**

##### ***At the OAMP workstation***

- 1** Click **Configuration>platform>node**.
- 2** Click **Graphical View**.
- 3** Double-click the slot 15 for this RTC node to open the node in the **Administration** panel.
- 4** Select the drop-down menu to set the boot image to the previous release version.
- 5** Lock and load the inactive RTC system node.
- 6** When the inactive RTC system node becomes enabled, unlock it.
- 7** Verify that the running load is the downgraded version. If not, make sure that the correct image is selected on the Provisioning and Maintenance window. If the correct image is selected, but the incorrect image is running, stop the downgrade procedures and contact your next level of support.
- 8** Set the alternate boot load for both RTC 12 and RTC15 to the previous load.
- 9** After downgrading the RTC, perform a test call to make sure the call is routed correctly. If there are any errors, contact your next level of support.  
Proceed to the section [Stop the upgrade and delete the upgrade package on page 194](#).
- 10** This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Stop the upgrade and delete the upgrade package

When you abort a software upgrade procedure, perform the procedure: Stopping the upgrade.

Remove the upgrade package from both RTC system nodes. To do this, perform the procedure: Deleting the upgrade package.

You then must delete the new loads from RTC12 and RTC15, delete all snapshots associated with the unwanted USP release from both RTC system nodes, and delete the loads and snapshots from the Alternate Boot Server.

### Stopping the upgrade

#### *At the OAMP workstation*

- 1 Click Stop Upgrade. A confirmation dialog box appears.
- 2 Click Finish on the wizard action and navigation panel.
- 3 Create a data snapshot, copy it to the alternate boot server and set the alternate boot server snapshot
- 4 Set user privileges back to pre-upgrade settings and re-enable any user accounts that were disabled during the upgrade. Refer to the file you created in "Limit user access" section, step [7](#) for the correct user status. Refer to the sections Security: User accounts and Security: User session in the *USP Administration and Security* guide for additional information.
- 5 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

### Deleting the upgrade package

#### *At the OAMP workstation*

- 1 Open the File Manager panel. To do this, click **Administration>File Manager**.
- 2 Highlight RTC12 in the list.
- 3 Open the upgrade folder.
- 4 Open the required version folder.
- 5 Select the required upgrade file.
- 6 Click **Delete**.
- 7 Repeat steps [2](#) to [6](#) for the RTC in slot 15.
- 8 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Deleting the new loads from RTC12 and RTC15

### *At the OAMP workstation*

- 1 Open the File Manager panel. To do this, click **Administration>File Manager**.
- 2 Select the RTC system node from which you want to delete the load image file from the RTC drop box.
- 3 Expand the Loads folder.
- 4 Expand the folder for the new release.
- 5 Select the files to be deleted from the Loads.  
**Note:** Make sure you select the correct loads before deleting them.
- 6 Click **Delete**.
- 7 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Deleting snapshots from the RTCs

### *At the OAMP workstation*

- 1 Open the File Manager panel. To do this, click **Administration > File Manager**.
- 2 Select the RTC system node from which you want to delete the snapshot from the RTC drop box.  
**Note:** You cannot delete the boot data snapshot. If you attempt to delete the boot data snapshot, you will receive an error message.
- 3 Expand the Snapshot folder.
- 4 Expand the folder for the new release.
- 5 Click **Delete** to delete the snapshot. An hourglass appears while the data snapshot is deleted. When the deletion operation is complete, snapshot is removed from the RTC side of the File Manager window.
- 6 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Deleting loads from the alternate boot server

### *At the OAMP workstation*

- 1 Open the ABS configuration manager. There are two versions of ABS Configuration Manager available on the CMT. One is graphically-based and the other is console-based. If you opened the graphically-based ABS Configuration Manager, perform steps [2](#) to [4](#). If you opened the console-based ABS Configuration Manager, proceed to step [5](#).
- 2 Click on file, then select **uninstall release** from the drop-down menu. The uninstall existing release window appears.
- 3 Select the load to be deleted from the drop-down menu.
- 4 Click **Apply**, and proceed to [step 6](#).
- 5 Enter **ABSCM>release uninstall <release-name>**.
- 6 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Deleting old snapshots from the alternate boot server

### *At the OAMP workstation*

- 1 Open the File Manager panel. To do this: click **Administration>File Manager**.
- 2 Expand the Snapshot folder.
- 3 Expand the folder for the new release.
- 4 Click **Delete** to delete the snapshot. An hourglass appears while the data snapshot is deleted. When the deletion operation is complete, the snapshot is removed from the Alternate Boot Server side of the File Manager window.
- 5 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Downgrade the GUI

When aborting a software upgrade, you can choose to uninstall the new version of the USP GUI from your workstation(s) and then install the previous version.

However, downgrading the GUI is not required. The new version of the GUI is backward-compatible with the previous USP software.

If you choose to downgrade the GUI, uninstall the upgraded version and install the downgrade version on your alternate boot server first, and then repeat both procedures for the other OAMP workstations in your system, as necessary. To do this, see the procedure [Uninstalling the upgraded USP GUI on page 197](#)

If you uninstall the new version of the GUI, you must then install the previous version. To do this, see the procedure [Installing the previous version of the USP GUI on page 197](#). Finally, after you have downgraded the GUI and restarted the workstation, you must reset the alternate boot server to the original configuration. To do this, see the procedure [Modifying the alternate boot server on page 199](#).

## Uninstalling the upgraded USP GUI

### *At the OAMP workstation*

- 1 Close any open applications and exit all USP Distinct servers.
- 2 In Windows, click **Start** on your desktop.
- 3 On the Settings menu, select **Control Panel**.
- 4 In the Control Panel window, double-click the **Add/Remove Programs** icon.
- 5 In the Install/Uninstall tab window of the Add/Remove Programs Properties window, select Universal Signaling Point from the alphabetical list of programs.
- 6 Click **Change/Remove**. A pop-up menu asks if you are sure you want to completely remove the USP and all of its components.
- 7 Click **Next**.
- 8 Click **Complete UnInstall**.
- 9 Click **Yes** to confirm your choice. All of the files are removed.
- 10 Restart your computer.
- 11 This procedure is complete. After your computer restarts, proceed to the next section .

## Installing the previous version of the USP GUI

### **ATTENTION**

To install the previous version of the USP GUI, you will require a Window-based OAMP workstation.

**At the OAMP workstation**

- 1 Insert the previous version of the USP software CD-ROM disk into the CD-ROM drive.
- 2 Double-click the **My Computer** icon.
- 3 Double-click the CD-ROM disk icon.
- 4 Double-click **Setup.exe**.
- 5 A pop-up window appears with the warning that installing this software on a workstation other than a Nortel Networks-approved workstation can overwrite some system files used by other applications. If this is a Nortel Networks-approved workstation, click **Yes** to continue.
- 6 At the Welcome window for the setup program, click **Next**. The Copying Program Files window appears with a status bar while the files are copied.
- 7 A pop-up window asks if you want to configure this workstation as an alternate boot server. Each USP system needs one workstation configured as an alternate boot server. If this workstation is your alternate boot server, click **Yes**. If not, click **No**.

**Note:** Do not configure more than one alternate boot server for each USP system.

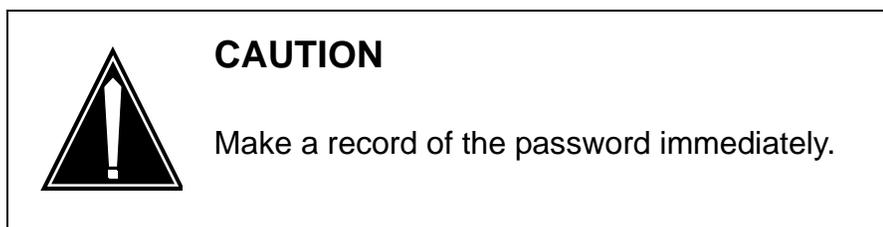
If you answer yes, then after completing these installation steps, follow the additional steps to configure the three distinct servers (the BOOTP server, the NFS server, and the FTP server).
- 8 If Adobe Acrobat Reader is already installed on this workstation, skip to step [12](#). If not, a Welcome window for Adobe Acrobat Reader Setup Program appears. Click **Next**.
- 9 The Acrobat Reader Licence Agreement appears. Click **Yes** to accept the terms of the agreement.
- 10 The Acrobat Reader Destination Location window appears. Click **Next**. Do not modify the destination path for Acrobat Reader.
- 11 The Acrobat Reader Setup Complete window appears. Click **Finish**. The Acrobat Reader Setup Complete window appears again. Click **OK**.
- 12 The Installation Setup Complete window appears.
- 13 Click the radio button next to the option “Yes, I want to restart my computer now”.
- 14 Click **Finish**. The computer restarts.

- 15 Remove the USP software disk from the drive. Keep the disk handy to the USP hardware.
- 16 This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

## Modifying the alternate boot server

### *At the OAMP workstation*

1



- A pop-up window prompts you to create a password for the Alternate Boot Server Configuration Manager.
- 2 Click the **Distinct BOOTP Server** button on the taskbar to maximize the Distinct BOOTP Server window.
  - 3 Click the Configure menu and select Administrator and then Login to display the Distinct BOOTP Login window.
  - 4 Enter your administrator password in the Enter the administrator password field and click **OK** to log into the server.  
The Distinct BOOTP Login window closes.
  - 5 Click the Configure menu and select Server to display the Configure BOOTP window.
  - 6 In the Addresses tab window, view the contents of the field at the bottom of the window, next to the Add, Modify, and Remove buttons. This field will contain the hexadecimal Ethernet hardware addresses of the RTC system nodes in your system.
  - 7 Select the Ethernet hardware address that matches the Ethernet hardware address for the RTC system node in slot 12 of your system. The information for that Ethernet hardware address will appear in the various fields.
  - 8 In the Boot File field, change the value to **/d/ntssgusp/abs/sites/<site\_name>/rtc12/rtcboot** (where site\_name is the name of your system as it appears in the site configuration information).
  - 9 Click **Modify** to save the changes.

- 10 Select the Ethernet hardware address that matches the Ethernet hardware address for the RTC system node in slot 15 of your system. The information for that Ethernet hardware address will appear in the various fields.
- 11 In the Boot File field, change the value to **/d/ntssgusp/abs/sites/<site\_name>/rtc15/rtcboot** (where *site\_name* is the name of your system as it appears in the site configuration information).
- 12 Click **Modify**, then **Apply** to save the changes.
- 13 Open the Alternate Boot Server Configuration Manager. There are two versions of the ABS Configuration Manager available on the CMT. One is graphically-based and the other is console-based. If you opened the graphically-based ABS Configuration Manager, perform steps [14](#) to [20](#). If you opened the console-based ABS Configuration Manager, perform steps [21](#) to [29](#).
- 14 Log in to the Alternate Boot Server Configuration Manager.
- 15 Under the File drop-down menu, select ABS Configuration.
- 16 Select a site from the Site list.
- 17 Confirm that the Alternate Boot Loads displayed for each RTC are for the pre-upgrade load.
- 18 Confirm that the Alternate Boot Snapshot display is the snapshot taken earlier in this procedure. A pre-upgrade snapshot
- 19 Click **Apply** to save the changes.
- 20 Log out of the Alternate Boot Server Configuration Manager and proceed to [step 30](#).
- 21 Log in to the console-based Alternate Boot Server Configuration Manager.  
Type: **ABSCM>login**
- 22 Enter the **ABSCM> site show <site-name>** command to view the site's details.
- 23 To view all the available loads, enter **ABSCM>load show all**.
- 24 To view all the snapshots for a specified site, enter:  
**ABSCM>snapshot show <site-name>**
- 25 To modify the RTC12-load of the specified site, enter:  
**ABSCM>site mod <site-name> rtc12-load <new-rtc12-load-name>**
- 26 To modify the RTC15-load of the specified site, enter:

**ABSCM>site mod <site-name> rtc15-load  
<new-rtc15-load-name>**

- 27** To modify the snapshot of the specified site, enter:

**ABSCM>site mod <site-name> snapshot  
<new-snapshot-name>**

- 28** Confirm that the Alternate Boot Snapshot display is the snapshot taken earlier in this procedure. It should be a pre-upgrade snapshot.
- 29** Log out of the Alternate Boot Server Configuration Manager.
- 30** This procedure is complete. If applicable, return to the higher level task flow or procedure that directed you to this procedure.

**Note:** Refer to the *ABS\_Specification.pdf* document for the complete details of all the console-based ABS Configuration Manager commands.