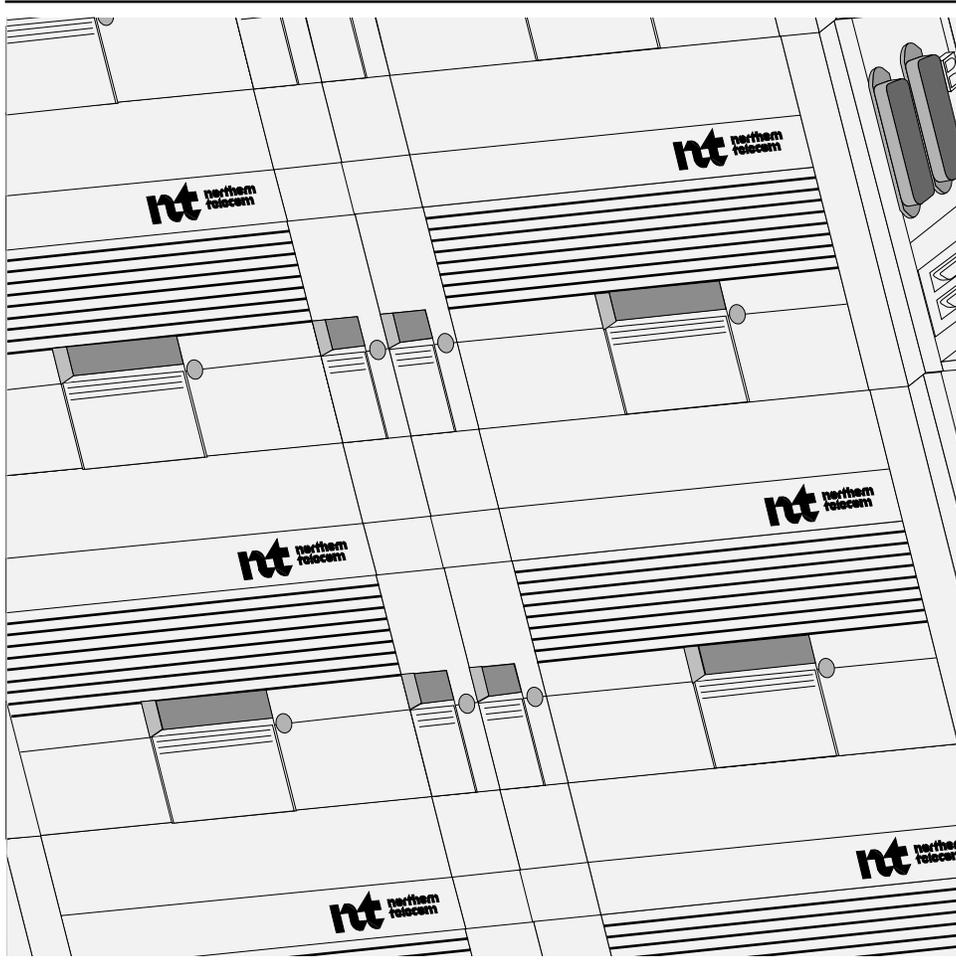SONET Products

AccessNode

Span of Control Consolidation

Issue 1.0   February 1999

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AccessNode

Span of Control Consolidation

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Release-independent Standard Issue 1.0 of the document.

Note: This document is release-independent. It will be rereleased only when technical changes occur.

Contents

Verification and clean up   **13-1**

Appendix A: Recovery procedures   **14-1**

Appendix B: Technical support information   **15-1**

Index   **16-1**

Introduction

This user guide describes the steps required to transfer network elements (NE) from one OPC span of control to another. This process is referred to as OPC Span of Control Consolidation.

In this document, the original OPC span of control from which the transferred NEs are removed is referred to as Span A and the new span of control is addressed as Span B.

Limitations

- This user guide applies only to AccessNode OPC and NEs running the AccessNode software.
- This user guide allows the transfer of one of the following topologies at a time:
    — one VTBM BLSR ring
    — one point-to-point system (FCOT and RFT pair)
    — one DS1-fed RFT (DFA)
    — one Single-Ended RFT

  Note: If you are transferring more than one topology from one span of control to another, you must repeat the instructions in this user guide for each transfer.

- No provisioning change can be done on any of the NEs under the OPC span of control from the moment the user guide starts. Otherwise, this process can be service affecting.
- Both OPC spans of control must be alarm free and correctly configured before performing this process.
- The OPC in Span B must be prepared to offer Control Network connection to the new NEs. For a DS1-fed, if the NE is to be served by OMC links, the facilities that offer these links must be available before performing this process. In the other cases, CNET connections should be available on the existing NEs under the span of control to allow inter-shelf connection.

Furthermore, the modified Control Network bus must comply with CNET specifications (for example, 400 feet (120 m) max. overall length, termination plugs)

- DS0 circuits ID cannot contain any non-alpha-numeric characters because they interfere with the TL-1 reprovisioning tool, although the Provisioning Manager allows them. The only exceptions are the underscore character ("_") and the blank character.

If any of these characters exist, you must remove them before the consolidation and restore them afterward.

Targeted audience

Knowledge of the AccessNode operation, provisioning, and maintenance is required:

- This procedure requires the user to be familiar with the OPC user interface. This includes logging procedures, basic navigation skills (opening and closing tools, accessing menus, logging to a network element...), and provisioning skills (selecting proper fields, chooser menus, entering or editing data.)

- This procedure requires the user to be familiar with the NE user interface. This includes logging procedures, basic navigation skills (using MAPCI menus, aborting commands...), and provisioning skills (adding, deleting, or editing data).

- This procedure is intended to be supervised by Nortel Networks trained personnel, familiar with the AccessNode, Unix and TL-1 reprovisioning tools.

Terms and symbols

The symbol ⏎ or **<return>** means that you need to press the carriage return key.

Service impact

CAUTION
Possible service affect
This procedure is not service affecting. However, during some portion of the consolidation, OAM&P capabilities are lost for the NEs being transferred.

Technical support

During the user guide execution, if a problem occurs, call your Nortel Networks technical representative. Refer to the last section of this document for the support numbers.

Related documentation

Refer to the AccessNode NTPs listed in Table 1-1 for more information on the product.

Table 1-1
Related AccessNode documentation

Titles	Volume
Engineering, Configuration, and Ordering Guide	Vol. 1
Description	Vol. 2
Commissioning and Testing	Vol. 3
Operations, Administration, and Provisioning	Vol. 4
Maintenance	Vol. 5

Procedure sequence

Read this user guide in its entirety and understand the instructions before performing the steps.

OPC span of control consolidation planning

This chapter gives an overview of the entire procedure and describes the actions that you can perform in advance to minimize the duration of the operation.

This chapter also discusses the possible cases of OPC Span of Control Consolidation and provides a picture of a system before and after consolidation.

Preparation task list

Use Table 2-1 to guide you through your consolidation planning. Use it to record your progress.

Table 2-1
Preparation task list

Preparation tasks	Description	√
1	Overview	
2	Material and access privilege requirements	
3	Provisioning freeze	
4	Selecting a terminal	
5	Removing backup OPC(s) from span A & B	
6	Telemetry	

Overview

The OPC Span of Control Consolidation allows customers to take advantage of the 16 NE OPC spans of control that were introduced with an early AccessNode software release. This operation allows two OPC spans, Span A and B, to be merged together through several procedures including data recording, TL-1 reprovisioning, and UNIX commands execution.

This process involves passing NEs from Span A to Span B on a topology basis:

- VTBM BLSR ring
- point-to-point (FCOT and RFT pair)
- DS1 Feeder (DFA RFT)
- single-Ended RFT

    Note: If you are transferring more than one topology from one span of control to another, you must repeat the instructions in this user guide for each transfer.

Several reasons can motivate a customer to transfer a topology from one span of control to another. This may lead to either partial or complete Span of Control Consolidation.

In the first case, you may want to transfer only some NEs from Span A (old span) to Span B(new span). After you complete the transfer, the two spans need to become independent as they were originally. Both OPCs remain active controlling a modified set of network elements.

On the other hand, the complete OPC Span of Control Consolidation refers to the transfer of all the network elements of Span A to Span B. After the operation is completed, the OPC of Span A shuts down and is removed. It is no longer a Primary OPC for any of the NEs now transferred to Span B.

In both cases, observe the following rules:

- A Backup OPC (if present) must temporarily be removed from the span.
- The transfer of NEs is done on a topology basis: VTBM ring, Point-to-point, DS1 Feeder or Single-Ended.
- No trace of an NE must remain in Span A after it is transferred to Span B.

Consolidation example

Figure 2-1 and Figure 2-2 show a Span A that is completely consolidated into Span B. Notice the presence of a CNET in Figure 2-2 and the removal of the Span A OPC from the configuration.

Figure 2-1
Spans A and B before consolidation
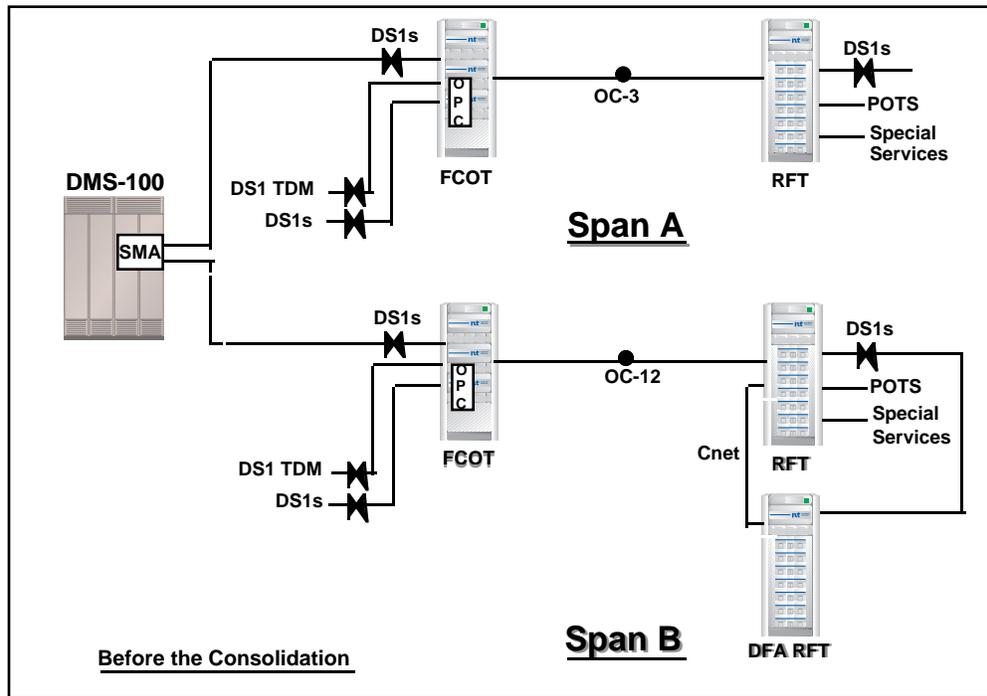
Figure 2-2
Spans A and B after consolidation
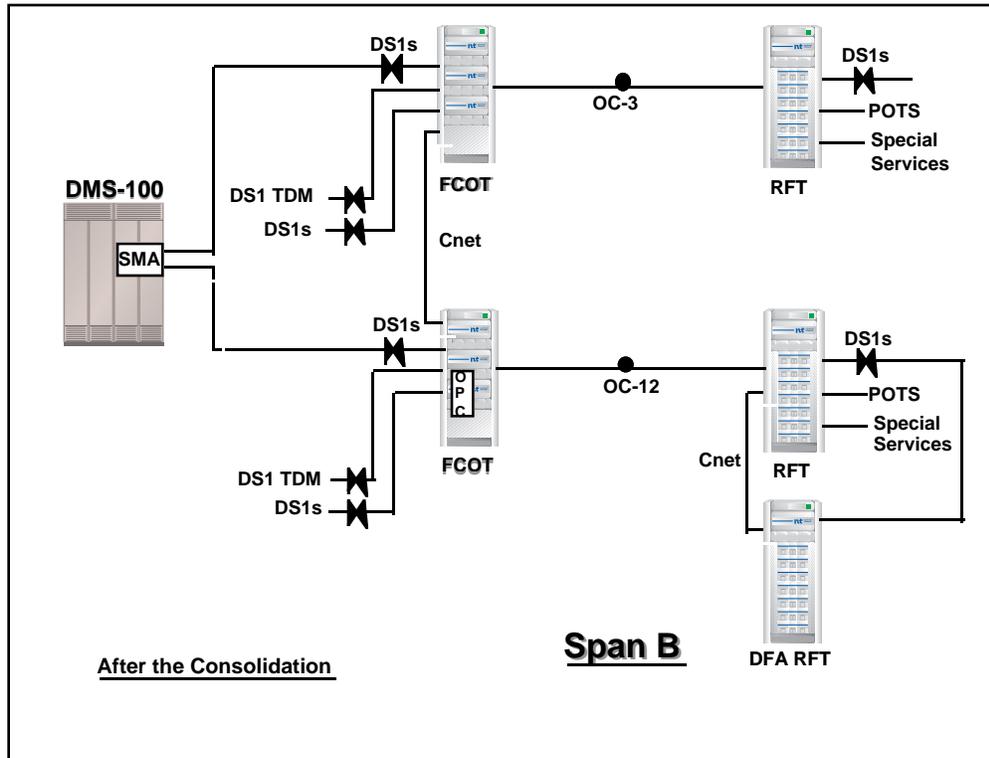
Table 2-2 lists the actions involved in the preparation chapter of this user guide.

Table 2-2
Preparation chapters - overview

Chapter	Action description	Time estimate
Chapter 3 Recording Span A OPC data	• Record: — OPC commissioning data — STS/VT connections — E2A Alarm — TBOS information — Userids and passwords — OS connections	30 min.
Chapter 4 Saving database for Span A and Span B	• Generate NE database backup to the OPC • Generate OPC/NE database backup on tape (if a recovery is required)	up to 45 min.

Table 2-3 lists the actions to be performed in the Consolidation chapters of this user guide:

Table 2-3
Consolidation chapters - overview

Chapter	Action description	Time estimate
Chapter 5 Recording and deleting virtual circuits and circuit mismatches	• Locate virtual circuits • Locate line card mismatches • Record and delete the circuits	20 min.
Chapter 6 Capturing Span A OPC provisioning data	• Retrieve DS-0 cross-connections provisioning data	10 min.
—continued—		

Table 2-3
Consolidation chapters - overview (continued)

Chapter	Action description	Time estimate
Chapter 7 Removing the selected NE(s) from span A	• Terminate the association between NE(s) and Span A OPC	20 min.
Chapter 8 Transferring NE(s) from Span A OPC to Span B OPC	• Enter NE(s) commissioning data • Enter topology information in the Configuration Manager • Connect the NE(s) to Span B OPC	30 min.
Chapter 9 Provisioning critical OPC data in Span B OPC	• Verify Point-to-point Alarm Management • Provision STS/VT connections	15 min.
Chapter 10 Restore Span A OPC data in Span B OPC	• Save Span A DS-0 database on tape • Transfer Span A DS-0 database on Span B OPC • Restore Span A DS-0 database on Span B OPC	35 min.
Chapter 11 Provisioning non-critical OPC data in Span B	• Provision E2A Alarm data • Provision TBOS data • Restore User IDs and passwords	up to 25 min.
Chapter 12 Delete transferred NE(s) from Span A OPC	• Delete DS-0 cross-connections in Span A OPC • Delete STS/VT connections in Span A OPC • Remove NE(s) from Span A OCP database • Re-create Span of Control tables	30 min.
Chapter 13 Verification and clean-up	• Alarm status • Traffic • Database backup and Backup OPC datasynch	20 min.
Chapter 14 - Appendix A Recovery procedures (if necessary)	• Restore both Span A and Span B OPC to their original state from the database backups	up to 45 min.
—end—		

Material and access privilege requirements

Perform this procedure from the Span B Primary OPC site. Before going to the site, verify that all the items listed in Table 2-4 are available.

Note: Make a copy of this user guide for each subnetwork (VTBM BLSR ring, FCOT and RFT pair, DFA RFT, or Single-Ended RFT) that requires a Span of Control Consolidation.

Table 2-4
Material and access privileges requirements

		√
Tools and Materials	Qty: 2 Blank DDS (Digital Data Storage) tape for database backup of OPCs in Span A and Span B	
	Qty: 1 Blank DDS (Digital Data Storage) tape for transfer of data between Span A and Span B	
	Qty: 1 Anti-static strap or equivalent per person	
	Qty: number variable with configuration CNET cables required to connect Span A to Span B NT7E44JB (1 m), NT7E44JC (5 m), NT7E44JK (10 m)	
	Qty: number variable with configuration CNET termination plug (NT7E5072)	
System Access	Access to the OPC via a VT-100 compatible terminal *Note:* This process cannot be executed from an X-Terminal *Note:* Lampar VT-100 compatible terminals are not fully compatible, Therefore, they should not be used to perform this process.	
	OPCs: root user ID and password required	
	NEs: admin user ID and password required to each NE	
Documentation	Volume 3 (Commissioning & Testing)	
	Volume 4 Part A to C (Operations, Administration, & Provisioning)	

Provisioning freeze

> ⚠️ **CAUTION**
> **Risk of service loss**
> Advise all appropriate personnel that an OPC Span of Control Consolidation will occur on two predetermined spans. No provisioning change can be done on any NEs under Span A OPC from the time the consolidation process starts. Otherwise, service can be affected as the new provisioning information would not be stored.

Selecting a terminal

To perform this process, you must access the OPC user interfaces through a VT-100 compatible terminal connected directly to the OPC port 1 or b, on the primary OPC. If this port is configured for anything other than a VT-100 terminal, it must be configured to support a Terminal.

Note 1: This process cannot be executed from an X-Terminal.

Note 2: To connect a VT-100 terminal to the OPC, refer to *Commissioning and Testing,* Volume 3.

Note 3: Lampar VT-100 compatible terminals are not fully compatible, Therefore, they should not be used to perform this process.

Telemetry

Depending of the system telemetry configuration, some E2A and TBOS telemetry assignments may be incorrect after the span of control consolidation. These telemetry points must be reassigned using the appropriate tools at the OPC and the NEs (see Chapter 11).

Removing backup OPC(s) from span A & B

If the Span A and/or Span B have backup OPCs, then these OPCs must be shut down and removed from their spans until the OPC Span of Control Consolidation is completed. See Chapter 4,

Procedure 2-1
Verifying the system status

Both span of controls must be alarm free and correctly configured before executing this procedure. Although the first condition is verified later (before you start the main procedures), verify both of them in advance, so that appropriate time is available to solve any problem.

Action

Step	Action
1	Verify the system state by opening the **Alarm Monitor** under the Network Surv. tool box, and check for conditions such as an active protection state, a missing card, card mismatches or any other trouble. Resolve any issues before proceeding with the OPC Span of Control Consolidation.
2	**Exit** the Alarm Monitor.
3	Verify that no association problems exist:
	a. Open the **Reboot/Load Manager** under the SLAT tool box and verify that a question mark ("?") does not appear beside each listed NE. Resolve the association loss, if any.
	b. Open the **Event Browser** under the Network Surv. tool box, look for logs that would indicate multiple "association loss" events in the last 2 days. Resolve the "association loss" events, if any.
4	Use the **Reboot/Load Manager** to determine that the Default and Start Up loads are correct for the current release.
5	**Exit** the Reboot/Load Manager.
6	In the User Session Manager, tab to the Available Tools list, move to the Connection Manager tool, then press **Ctrl_A** (or Keypad **0**).
	The main Connection Manager window appears.
7	Display the Utilities menu by pressing **Ctrl_L T** then **+** (or Keypad **,** then Keypad **9**).
	The Utilities menu appears.
8	Move to the **Audit connections** command, then press **Space** (or Keypad **0**).
9	Exclude all nodes that are not part of the ring where the new node is being added; repeat the following steps for these NEs.
	a. Move to the NE to be excluded from the audit, then press **Ctrl_A** (or Keypad **0**).
	b. Press **Ctrl_L** (or Keypad **2**) and tab to Remove from audit.
	c. Press **spacebar** (or Keypad **0**).

—continued—

Procedure 2-1 (continued)
Verifying the system status

Step	Action

10   Tab to the **OK** button, then press **Ctrl_A** (or Keypad **0**).

The Connection Audit dialog closes. The connection data for the specified OC-12 TBM network elements is audited.

> ⚠ **CAUTION**
> **Mismatch message**
> If mismatches are found for any number of network elements and you select the **Yes** option to correct the mismatches, a traffic interruption can occur.

If the audit finds	Then
no discrepancies between the OPC and OC-12 TBM network element connection data, the message "`successful`" appears	go to the next step
discrepancies, the message `failed: mismatch found` appears	select the **NO** option and call your next level of support or your Nortel Networks support group

11   In the Results dialog, select the **OK** button by pressing **Ctrl_A** (or Keypad **0**).

The Results dialog closes.

12   To close the Connection Manager tool:

   a.   Display the window menu by pressing **Ctrl_L W** (or Keypad **6**).

      The window menu appears.

   b.   Select the **Exit** command by pressing **Space** (or Keypad **0**).

      The tool closes.

13   **Exit** the Configuration Manager.

   a.   Verify DS1-Tandem and TR-08 circuits to ensure that no circuit ID are using illegal characters. The only legal characters are: a-z A-Z 0-9 _ (underscore) and space. Use the Provisioning Manager to perform this operation.

   b.   Close the tool using the **Exit** option.

14   Proceed to Chapter 3.

—**end**—

Recording Span A OPC data

This chapter allows you to record all OPC provisioning data of Span A related to the network elements to be moved (with the exception of the data inside the Provisioning Manager, which is covered in a later chapter).

How to use this chapter

Perform all the procedures listed in Table 3-1. Use the checklist column to indicate when a procedure is completed.

You must record the OPC provisioning data associated to the network element(s) to be transferred only. You do not have to note provisioning related to other network elements.

The following procedures require that you type Unix commands. Type them exactly as shown. Unix is case sensitive.

Table 3-1
Procedure sequence

Task	Subtask	√
Procedure 3-1: Recording Span A OPC commissioning data	NE Topology	
	NE Commissioning data	
	NE Configuration data	
Procedure 3-2: Recording STS/VT connections data		
Procedure 3-3: Recording E2A alarm data		
Procedure 3-4: Recording TBOS data		
Procedure 3-5: Recording userids		
Procedure 3-6: OS connection profile		

Procedure 3-1
Recording Span A OPC commissioning data

Use this procedure to record the OPC commissioning data for Span A.

Action

Step	Action
1	Log in to Span A OPC using the **root** userid and password. Access the User Session Manager.
2	From the SLAT toolset, open the Commissioning Manager and the Configuration Manager tools.
3	Use the Commissioning Manager and the Configuration Manager to determine the topology of the NEs to be transferred and put a cross under the NEs topology in Table 3-2.

Note 1: To help you determine the right topology:

- The **VTBM BLSR ring** topology appears in the Configuration Manager

- The **Point-to-Point** topology appears in the Configuration Manager.

- The **DS-1 Fed RFT** has its Transmission rate set to DS1 (or None, if it is an OPC Shelf) in the Commissioning Manager. This includes any C-server and HDT (with or without AccessNode Express) type of NE.

- The **Single-Ended RFT** has its Transmission rate set to OC-3 in the Commissioning Manager and does not show in the Configuration Manager.

Note 2: To view the Transmission rate, use the **Edit** menu item on the proper NE in the **Commissioned Network Elements** list.

Table 3-2
Network elements topology

VTBM BLSR Ring	Point-to-point	DS1-Fed	Single-Ended

Step	Action
4	If your topology is a DS1-Fed RFT or a Single-Ended RFT, write the number of the Network Element to be transferred in Table 3-3 and go to step 8.
5	For the VTBM BLSR ring and the Point-to-point topologies, use the **Configuration Manager** to determine which Network Elements actually belong to the topology to be transferred, by performing an **Edit/Delete Configuration**.
6	Write the number of all the NEs of the configuration in Table 3-3.

—continued—

Procedure 3-1 (continued)
Recording Span A OPC commissioning data

Step	Action
7	Close the Configuration Manager: Point-to-point or the Configuration Manager: Ring tool.
8	From the Commissioned Network Element list in the Commissioning Manager, select an NE from the topology to be moved and record the data in Table 3-3.

Table 3-3
Network element commissioning data

NE number	Shelf type	Shelf function	Transmission rate	Shelf serial number	S/W release	This NE contains (OPC)

9	Repeat step 8 for every NE listed in Table 3-3.

—**continued**—

Procedure 3-1 (continued)
Recording Span A OPC commissioning data

Step	Action
10	If the topology is a DS1-Fed RFT or a Single-Ended RFT, go to step 19.
	If the topology is a VTBM BLSR ring or Point-to-point, record in Table 3-4 the name of the configuration to be transferred from the main screen of the Configuration Manager.
	Note: Write carefully all the characters in the configuration name, such as underscore (_), uppercase 'o' (O) and zero (0).The command that uses the configuration name is case sensitive.

Table 3-4
Configuration name

Configuration name

11	If the topology is VTBM BLSR ring, go to step 14.
	If the topology is Point-to-point, get the details of the configuration by selecting Edit/Delete Configuration of the topology to be transferred. Record this information in Table 3-5.
12	Determine the Alarm Management data for the NEs to be transferred. Record this information in Table 3-5.

Table 3-5
Point-to-point Alarm Management data

FCOT NE Number	RFT NE Number	Alarm management (NE or System level)

13	If your topology is Point-to-point, continue with step 19.
14	From the **OPC Admin** toolset, open a **Unix Shell** session, if one is not already open.
15	At the `opc>` prompt, go back to the root directory by typing:
	cd /↵
16	To record the ring Network Elements in the right order, remove the display sorting file:
	rm /.scmrc↵
17	Return to the Configuration Manager main screen. Get the configuration details by selecting **Edit/Delete Configuration** for the topology to be transferred.

—**continued**—

Procedure 3-1 (continued)
Recording Span A OPC commissioning data

Step	Action
18	If the topology is VTBM BLSR ring, for each Ring ADM listed in the Configured ADMs list, select the Details menu item and record the data in Table 3-3.

> ***Note 1:*** Record the ring ADMs in Table 3-6 in the exact same order in which they appear in the Configured ADMs list.

> ***Note 2:*** Make sure you are recording all the ring ADMs. Use the view bar on the right to scroll through the list.

Table 3-6
VTBM BLSR ring configuration data

Network element	Ring ADM APS ID	OC-12 CPG G1 neighbor		OC-12 CPG G2 neighbor	
		ADM	CPG	ADM	CPG

—continued—

Procedure 3-1 (continued)
Recording Span A OPC commissioning data

Step	Action
19	Exit the Configuration Manager tool of the OPC in Span A.
20	Exit the Commissioning Manager tool of the OPC in Span A.
21	Update the checklist in Table 3-1 and go to the next procedure.

—**end**—

Procedure 3-2
Recording STS/VT connections data

Use this procedure to record STS/VT connections data.

Action

Step	Action
1	If the topology is DS1-Fed RFT or Single-Ended RFT, go to step 11.
2	Open the **Connection Manager** and verify that for the Point-to-Point or the VTBM ring configuration no connections are in the unequipped state. (STS-1/VT connections with no tributary). Correct any issues and then close the tool.
3	If the topology is a VTBM BLSR ring or point-to-point, make sure that the Connection Manager tool is closed.
4	Open a Unix Shell session from the OPC Admin toolset in Span A OPC, if none are already open.
5	At the `opc>` prompt, go back to the root directory by typing: **cd /**↵
6	If a problem occurs when you delete the STS/VT connections, create a file that contains all the current STS/VT connections on the OPC: **stsdump save_connections** ↵ *The following completion message appears:* `All connections saved in` `/conn.`*XXXX (where XXXX is a process number).*
7	Record the name of the file that contains all the STS/VT connections in Table 3-7.

Table 3-7
OPC STS/VT connection filename

Filename
/conn.

—**continued**—

Procedure 3-2 (continued)
Recording STS/VT connections data

Step	Action

8 Create the file that will contain the STS/VT connections that belong to the topology to be transferred:

stsdump save_connections "Configuration_name"↵

> where

> "configuration name"   is the name (in double quotes) of the configuration to be transferred, as recorded in Table 3-4 on page 3-4

> **Note:** The stsdump command is case sensitive. Therefore, enter the name of the configuration (in double quotes) exactly as it was recorded earlier. Otherwise, STS/VT reprovisioning in Span B OPC can fail, which can be service affecting.

> *The following completion message appears:* Saving connections for configuration *<Configuration_name>* in /conn.XXXX. *Trucntrl successful message delivery!*

9 Record the filename in Table 3-8.

Table 3-8
Configuration STS/VT connection filename

Filename
/conn.

10 To verify that the retrieval worked properly, display the content of the newly created file by typing:

more /conn. <XXXX>

> where

> <XXXX>   is the configuration filename recorded in Table 3-8

11 If the message "Configuration <Configuration_name> not found appears at the beginning of the file, verify the configuration name and repeat from step 7.

> If not, exit the more tool by pressing the **q** key and proceed with the next step.

12 Update the check list in Table 3-1 and go to the next procedure.

—**end**—

Procedure 3-3
Recording E2A alarm data

Use this procedure to record E2A alarm data.

Action

Step	Action
1	From the Network Admin toolset, open the **E2A Alarm Manager** tool**.**
2	On the top window, select the first NE from your topology (according to Table 3-3) and do a Detail on it. Record the SDP Assignments in Table 3-9 on page 3-10.
	Note 1: Use the view bar on the right to display all the SDP data.
	Note 2: Do not forget to indicate the NE number at the top of each table.
	Note 3: Use Table 3-9 through Table 3-12 beginning on page 3-13 and make photocopies if necessary to have one table for each NE in your topology.
3	Repeat from step 2 for each NE that is part of the topology.
4	Exit from the E2A Alarm Manager tool.
5	Update the check list in Table 3-1 and go to Procedure 3-4.

—end—

Table 3-9
Signal Distribution Point Assignment

Network Element Number: _____		
	Status	**Assigned alarm**
SDP1		
SDP2		
SDP3		
SDP4		
SDP5		
SDP6		
SDP7		
SDP8		
SDP9		
SDP10		
SDP11		
SDP12		
SDP13		
SDP14		
SDP15		
SDP16		
SDP17		
SDP18		

Table 3-10
Signal Distribution Point Assignment

Network Element Number: _____		
	Status	**Assigned alarm**
SDP1		
SDP2		
SDP3		
SDP4		
SDP5		
SDP6		
SDP7		
SDP8		
SDP9		
SDP10		
SDP11		
SDP12		
SDP13		
SDP14		
SDP15		
SDP16		
SDP17		
SDP18		

Table 3-11
Signal Distribution Point Assignment

Network Element Number: _____		
	Status	**Assigned alarm**
SDP1		
SDP2		
SDP3		
SDP4		
SDP5		
SDP6		
SDP7		
SDP8		
SDP9		
SDP10		
SDP11		
SDP12		
SDP13		
SDP14		
SDP15		
SDP16		
SDP17		
SDP18		

Table 3-12
Signal Distribution Point Assignment

Network Element Number: _____		
	Status	**Assigned alarm**
SDP1		
SDP2		
SDP3		
SDP4		
SDP5		
SDP6		
SDP7		
SDP8		
SDP9		
SDP10		
SDP11		
SDP12		
SDP13		
SDP14		
SDP15		
SDP16		
SDP17		
SDP18		

Procedure 3-4
Recording TBOS data

Use this procedure to record TBOS data.

Action

Step	Action
1	From the Network Admin toolset, open the **Telemetry - TBOS** tool.
2	Verify if the network elements in your topology (see Table 3-3 on page 3-3) appear in the top window (a list of all network elements with active TBOS ports). If so, go to step 3.
	If no data is recorded for the NEs in the topology to be transferred, update the checklist of Table 3-1 and go to the next procedure.
3	Use Table 3-13 to record all the active TBOS ports in your topology.

Table 3-13
Network elements with active TBOS ports

Network Element	Type	Port ID

Step	Action
4	In Table 3-14 through Table 3-17, record the port details associated to each of your active ports. They appear in the lower window when you select it in the active TBOS list and request a Detail.
	Note: Make a photocopy of these tables as required.
5	When completed, **Exit** form the **Telemetry - TBOS** tool.
6	Update the check list in Table 3-1 and go to Procedure 3-5.

—end—

Table 3-14
TBOS Port details

Network Element Name: _____			Port ID: _____	
Slot	**NE name (see note)**	**Type**	**Source**	**Destination**
1				
2				
3				
4				
5				
6				
7				
8				
Note: Be careful with the NE name associated to each slot. It is not necessarily the name of the NE itself but the name of the NE "source".				

Table 3-15
TBOS Port details

Network Element Name: _____			Port ID: _____	
Slot	**NE Name (see note)**	**Type**	**Source**	**Destination**
1				
2				
3				
4				
5				
6				
7				
8				
Note: Be careful with the NE name associated to each slot. It is not necessary the name of the NE itself but the name of the NE "source".				

Table 3-16
TBOS Port details

Network Element Name: _____			Port ID: _____	
Slot	**Name (see note)**	**Type**	**Source**	**Destination**
1				
2				
3				
4				
5				
6				
7				
8				
Note: Be careful with the NE name associated to each slot. It is not necessary the name of the NE itself but the name of the NE "source".				

Table 3-17
TBOS Port details

Network Element Name: _____			Port ID: _____	
Slot	**Name (see note)**	**Type**	**Source**	**Destination**
1				
2				
3				
4				
5				
6				
7				
8				
Note: Be careful with the NE name associated to each slot. It is not necessary the name of the NE itself but the name of the NE "source".				

Procedure 3-5
Recording userids

Use this procedure to obtain a list of all the userids used by the topology that will be submitted to the OPC Span of Control Consolidation. This list is necessary since the userids that provide access to the network elements may not exist after the NEs are transferred to Span B.

Note: Passwords have to be changed or assigned for each userid assigned to the new NEs transferred to Span B.

Action

Step	Action
1	From the OPC Admin toolset, access the **Central User Admin** tool.
2	Select each userid and select the **Open…** option to display all the user attributes.
3	Determine if this userid is used to log in to the NEs you are transferring to Span B. Refer to field Network Element and Accessibility.
	If it is, record the userid data in Table 3-18 on page 3-18.
	If it is not, proceed to the next userid.
	Note 1: If more that 11 userids are found, make a photocopy of Table 3-18.
	Note 2: Use the scroll bar to ensure all appropriate userids were viewed and recorded.
4	Repeat step 3 for each userid, then **Exit** the **Central User Admin** tool.
5	Update the check list in Table 3-1 and go to the next procedure.

—**end**—

Table 3-18
Userid attributes

Group and User Setup/Centralized User Administration						
User Id	Group	User User name	Comment detail	Network element	Accessibility Yes/No	Access class R/W/A
				——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———
				——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———
				——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———
				——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———
				——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———	——— ——— ——— ——— ——— ———
—continued—						

Table 3-18
Userid attributes (continued)

Group and User Setup/Centralized User Administration						
User Id	**Group**	**User User name**	**Comment detail**	**Network element**	**Accessibility Yes/No**	**Access class R/W/A**
				_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
				_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
				_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
				_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
				_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
—end—						

Procedure 3-6
OS connection profile

The Span A and Span B OPCs may not have the same OS connections established. Make note of the Span A information to re-create it in Span B if required.

Action

Step	Action
1	From the Slat toolset, open the **OS Connection Manager**.
2	OS connection may not be setup on the system. If so, the following message appears: "The OS Connection Manager has been temporarily disabled...". Go to step 7.
3	Go to the first OS connection, select it and perform and **Edit** on it.
4	From the OS Connection Profile screen, complete Table 3-19.

Table 3-19
OS connection information

User Name	Remote Address	Virtual Circuit Type	Initialization Type	OS Type	Physical OPC

Step	Action
5	Select the **Cancel** button to close the OS Connection Profile screen.
6	Repeat steps 2 to 4 for each connection.
7	Update the checklist in Table 3-1 and go to the next chapter.

—**end**—

Saving databases for Span A and B

This chapter describes how to create a backup tape to save all OPC data as well as network element (NE) databases on a tape for both Span A and Span B. These backups are only used to recover from an unexpected procedure failure and will allow the spans to be returned to their respective initial conditions (before you begin the OPC Span of Control Consolidation process).

This chapter also includes the steps to datasynch the backup OPC to the primary, if present. The backup OPC, if present, is removed from the configuration.

How to use this chapter

Perform all the procedures listed in Table 4-1. Use the checklist column to indicate when a procedure is completed.

Table 4-1
Procedure sequence

Task	√
Procedure 4-1: Updating NE database backups	
Procedure 4-2: Saving OPC database onto tape	
Procedure 4-3: Removing backup OPC	

Procedure 4-1
Updating NE database backups

Use this procedure to update NE database backups.

Action

Step	Action
1	Perform the next steps with Span A OPC.
2	Force a NE database backup on all NEs. To do this, type the following in a Unix Shell at the opc> prompt: **opc> /iws/upr/upr_manage_ne_backups**↵ *A database backup request appears for each NE.* *A message that the backup has been received appears for each NE.* *A successful completion message appears followed by the opc> prompt.*
3	For any NE where the database backup has failed, log in to that NE using the NE login Manager and manually perform a database backup: **eq sh** ↵ **backupdb** ↵ *A successful log is generated after a few minutes.*
4	Access the Software Admin tool set and select the **Backup/Restore Manager**.
5	Access the **Query All Backup** option and verify that each NE has a freshly created database backup. If not, repeat step 3. *Note:* The database backup can take up 2 minutes to be reflected on the Backup/Restore Manager - Query All Backup display.
6	Close the window using the **Done** button and then close the tool by selecting the **Exit** option.
7	Update the checklist in Table 4-1 and go to Procedure 4-2.

—end—

Procedure 4-2
Saving OPC database onto tape

Use this procedure to save OPC database onto tape.

Action

Step	Action
1	Insert a blank tape in Span A OPC. Ensure that the write protect tab is set to the write enabled position (to see the latch).
2	From the OPC Admin toolset, open the OPC Save and Restore tool.
3	Select the **Save OPC data to tape** button.
4	Acknowledge the confirmation messages.
5	After you complete the operation, remove the tape from the OPC and set the write protect tab to the write disabled position (not to see the latch).
6	Clearly identify the tape as follows: "Span A OPC backups *YY/MM/DD*".
7	**Exit** from the **OPC Save and Restore** tool.
8	Repeat Procedure 4-1 with Span B OPC.
9	Repeat Procedure 4-2 with Span B OPC.
10	Update the checklist in Table 4-1 and go to the next procedure.

—end—

Procedure 4-3
Removing backup OPC

Use this procedure to ensure that no backup OPCs exist in Span A or B for the rest of the OPC Span of Control Consolidation.

Action

Step	Action
1	From the Span A Primary OPC, open the **Commissioning Manager**, if not already done.
2	Select the **Edit system data** button. Determine the presence of a backup OPC by the presence of a **Backup OPC serial number**:
	a. If no backup OPC is present, close the Commissioning Manager. Go to step 3.
	b. If a backup OPC is present, select the **Transfer data to Backup OPC (from Primary OPC)** button to transfer the primary OPC data to the backup OPC.
	c. After you complete the transfer, ensure that the backup OPC is shut down and physically removed from the shelf where it is located. Then close the Commissioning Manager with the **Exit** option.
	d. After the backup OPC is shut down and removed from the NE, verify that no alarms are turned on because the OPC is missing. If so, delete the OPC from the NE (eq OPC <g1 or g2>).
3	Repeat this procedure with Span B Primary OPC.
4	Update the checklist in Table 4-1 and go to the next chapter.

—**end**—

Recording/deleting virtual circuits and mismatches - Span A

The purpose of this chapter is to:

- record and delete the provisioning data for the virtual circuits
- record and delete any mismatches between circuit provisioning and line card type. The mismatches should have been corrected earlier as part of the planning activity but it is important to delete new mismatches that might have been introduced since that time.

You must delete the virtual circuits as well as the mismatches before you go to the next chapter.

Note: This procedure does not apply to virtual line card owned by the DMS-100 (IRTULSR). DMS-100 IRTULSR is supported from NA002 and later software releases.

How to use this chapter

Perform sequentially the procedures listed in Table 5-1.

Table 5-1
Procedure sequence

Task	√
Procedure 5-1: Locating virtual circuits slot number	
Procedure 5-2: Locating mismatches	
Procedure 5-3: Recording/deleting virtual circuit provisioning data	
Procedure 5-4: Deleting provisioning mismatches	

Procedure 5-1
Locating virtual circuits slot number

Use this procedure to locate virtual circuits.

Action

Step	Action
1	If you did not complete the alarm status verification in Chapter 2, ensure that the system is alarm free. Use the Alarm Monitor.
2	If your topology is VBTM BLSR ring, DS1-Fed RFT, or Single-Ended RFT, go to step 8.
3	If your topology is Point-to-point, from the Span A OPC Utilities toolset, select the **NE Login Manager** tool.
4	Log in to the RFT for the topology to be transferred.
5	Quit the MAPCI environment and enter the sysmon tool environment: **quit all** ↵ **sysmon** ↵
6	Use the lcstats tool to browse all line cards slots and record the ones with the service type **IRTUPOTS.** Record the CDS and slot # in Table 5-2. **lcstats all udlc ilcpots** ↵ If no **IRTUPOTS** lines are displayed, go to step 7.

Table 5-2
Virtual circuit location at RFT

NE number:_____		
Card		**LC service**
CDS #	**Slot #**	
		IRTUPOTS
		IRTUPOTS
		IRTUPOTS
		IRTUPOTS

Step	Action
7	Update the checklist in Table 5-1 and go to Procedure 5-2.

—*end*—

Procedure 5-2
Locating mismatches

Use this procedure to locate mismatches between circuit provisioning and line card type.

Action

Step	Action
1	Log into one **RFT** or **RFT_BLSR** belonging to topology to be transferred (according to Table 3-3).
2	Quit the MAPCI environment and enter the sysmon tool environment: **quit all** ↵ **sysmon** ↵
3	Again, use the "lcstats" command to identify all slots in a mismatch state (provisioning not compatible with line card type). Look for **IANR mismatch** under the "Circuit Pk state". Record the **CDS** and **slot #** in Table 5-3. **lcstats all**↵

Table 5-3
RFT or RFT_BLSR LC mismatches

NE number:_____			Check list to be used when deleting provisioning.
CDS #	**Slot #**	**Circuit Pk state**	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	

4   Once all the information is recorded, at the CI: prompt, type: **fwp** ↵

—**continued**—

Procedure 5-2 (continued)
Locating mismatches

Step	Action
5	Repeat steps 1 to 4 for each **RFT or RFT_BLSR** listed in Table 5-7 (use the following tables to record the data).
	Note: Make a photocopy of the following tables if your VTBM BLSR ring has more than 4 RFT_BLSR in it.

Table 5-4
RFT or RFT_BLSR LC mismatches

NE Number:_____			Check list to be used when deleting provisioning.
CDS #	**Slot #**	**Circuit Pk state**	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	

Table 5-5
RFT or RFT_BLSR LC mismatches

NE Number:_____			Check list to be used when deleting provisioning.
CDS #	**Slot #**	**Circuit Pk state**	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	

—continued—

Procedure 5-2 (continued)
Locating mismatches

Step   Action

Table 5-6
RFT or RFT_BLSR LC mismatches

NE Number:_____			Check list to be used when deleting provisioning.
CDS #	**Slot #**	**Circuit Pk state**	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	

6   If the FCOT is a TBM or an ABM without line cards, or no FCOT exists in your topology, go to Procedure 5-3.

Otherwise, if an ABM FCOT is in your topology, its mismatches must also be recorded. From the OPC NE login Manager, log in to the FCOT and type the following commands: (record the mismatch in Table 5-7).

quit all ↵
sysmon ↵
lcstats all ↵

—continued—

Procedure 5-2 (continued)
Locating mismatches

Step   Action

Table 5-7
FCOT LC mismatches

NE Name:_____			Check list to be used when deleting provisioning.
CDS #	**Slot #**	**Circuit Pk state**	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	
		IANR mismatch	

7   After you record all the information, at the CI: prompt, type: **fwp** ↵

8   Update the checklist in Table 5-1 and go to Procedure 5-3.

—**end**—

Procedure 5-3
Recording/deleting virtual circuit provisioning data

Use this procedure to record and delete virtual circuit provisioning data.

Action

Step	Action
1	If you did not record any virtual circuits in Table 5-2, go to step 6.
2	From the OPC Prov Admin toolset, open the **Provisioning Manager** tool.
3	Select **Details** for each RFT slot containing a virtual circuit (see Table 5-2). Use Table 5-8 to record the detailed provisioning of each one.

Table 5-8
Virtual circuit provisioning data

RFT Number:_____

RFT				FCOT				
				DS1 TDM/DS1 VT Ch			CDS LC	
CDS #	Slot #	Test head	type	Slot/VT Grp.	Port/VT #	Chan.#	CDS #	LC slot

Step	Action
4	After you record the provisioning data for each virtual circuit, you must now delete it. From the Provisioning Manager, select **Delete** and enter a virtual circuit location (RFT- CDS-slot#, refer to Table 5-8). Acknowledge the confirmation messages.
5	Repeat step 3 and 4 for each virtual circuit in Table 5-2.
6	Update the checklist and go to Procedure 5-4.

—end—

Procedure 5-4
Deleting provisioning mismatches

The following procedure is used to delete provisioning mismatches.

Action

Step	Action
1	Look at Table 5-3 to Table 5-7 beginning on page 5-3. If your system does not have any provisioning mismatches, go to step 6.
	If your system has provisioning mismatches, perform the next steps.
2	Using the **Provisioning Manager** to **Delete** the first mismatched circuit recorded in Table 5-3 to Table 5-7. Acknowledge the confirmation messages.
3	Indicate that the circuit has been deleted in the proper table (Table 5-3 to Table 5-7).
4	Repeat for each mismatched circuit for NEs to be transferred from Span A to B.
	Note 1: Some FCOT mismatches may be removed while deleting the circuit at the RFT location, if the topology is point-to-point.
	Note 2: Mismatched IDLC circuits are deleted from the switch.
5	Once all mismatches have been deleted, **Exit** from the **Provisioning Manager** tool.
6	Update the check list in Table 5-1 and proceed to the next chapter.

—end—

Capturing provisioning data in Span A

This chapter describes how to extract all the cross-connection data contained in the OPC for UDLC,TR08 and DS1-Tandem service and store it in a file on the OPC. This facilitates reprovisioning of the connection information once the NEs are transferred to Span B.

The extraction of the provisioning information is performed by a special TL-1 reprovisioning tool and a TL-1 emulator. Both are part of the AccessNode software.

The general operation consists of executing a command in the reprovisioning tool, which requests the provisioning information to create a temporary database. Then in one of the following chapters, another command uses that database file to re-create the cross-connections in the Span B OPC.

	CAUTION **Risk of provisioning failure** It is important to ensure that the circuit IDs do not contain any non-alphanumeric characters, although the Provisioning Manager allows them. Otherwise TL-1 reprovisioning failure can occur.

	CAUTION **Risk of reprovisioning errors** It is important that you remove all virtual circuits and provisioning mismatches before performing this procedure. Otherwise, error messages appear during the reprovisioning activity which require some troubleshooting. Return to Chapter 5 to perform these tasks if required.

How to use this chapter

Perform sequentially all the procedures listed in Table 6-1. Use the check list column to indicate when a procedure is completed.

The procedures in this chapter require that you type Unix commands. Type them exactly as displayed in the document. Unix is case sensitive.

Table 6-1
Procedure sequence

Task	√
Procedure 6-1: Creating a datafile with UDLC/DS1-Tandem/TR-08 cross-connection data	
Procedure 6-2: Transferring Span A OPC data files to tape	

Procedure 6-1
Creating a datafile with UDLC/DS1-Tandem/TR-08 cross-connection data

Use this procedure to create a datafile with UDLC/DS1-Tandem/TR-08 cross-connection data.

Action

Step	Action
1	From the OPC Admin toolset in Span A OPC, open a **Unix Shell** session, if none is already open.
2	At the `opc>` prompt, go back to the root directory by typing: `cd /`↵
3	Execute the special TL-1 reprovisioning tool by typing: `rpv -s 1`↵ *A menu is displayed:* *Reprovisioning Menu* *-------------------* *1 OPTION (prompt level 1)* *2 BACKUP provisioning* *3 BACKUP shelf only for moving* *4 BACKUP info paths for SPOC consolidation* *5 SELECT backup* *Q QUIT* *Enter Choice:*
4	At the `Enter Choice:` prompt, select the `BACKUP info paths for SPOC consolidation` option, by typing: `4`↵ *The following message* `Backing up list of associated NEs` *appears followed by the first NE in a list with the following format:* *Backup NE* ***Ne_Number Ne_Name*** *(y/n)?*

—**continued**—

Procedure 6-1 (continued)
Creating a datafile with UDLC/DS1-Tandem/TR-08 cross-connection data

Step	Action

5   At the `(y/n)?` prompt, type `y`, or `n` depending on the situation:

If	Then
the NE displayed before the prompt is an **FCOT**, an **RFT** or an **RFT_BLSR** belonging to the topology to be transferred (refer to Table 3-3)	type: `y`↵
the NE displayed before the prompt is not an **FCOT**, an **RFT** or an **RFT_BLSR** belonging to the topology to be transferred	type: `n`↵

6   Repeat step 5 for the remaining NEs in Table 3-3 on page 3-3.

Once the list of NEs is completed, a confirmation message appears:

`Edit (vi) TL1 commands before they're executed (y/n)?`

7   Do not edit the TL1 commands, type:

`n`↵

Another confirmation message appears

Execute TL1 commands (y/n)?

8   Execute the TL1 commands:

`y`↵

Several progress messages appear. Wait until the following message appears.

xx successful
View results (y/n)?

9   At the `View results (y/n)?` prompt, type:

n↵

Note: The duration of this operation varies depending on the number of circuits provisioned at the NEs.

—**continued**—

Procedure 6-1 (continued)
Creating a datafile with UDLC/DS1-Tandem/TR-08 cross-connection data

Step	Action

The following message appears to indicate in what file the reprovisioning information will be stored, followed by the reprovisioning menu with new options:

```
Creating rpv.960403a.tar

Reprovisioning Menu
-------------------
1 OPTION (prompt level 1)
2 BACKUP provisioning
3 BACKUP shelf only for moving
4 BACKUP info paths for SPOC consolidation
5 SELECT backup (using 04/03/96-a)
6 DELETE old provisioning
7 CREATE new provisioning
8 RETRY failed commands (None)
9 MAPDS1 remap DS1 mappers
Q QUIT
Enter Choice:
```

where `rpv.YYMMDD#.tar` is the cross-connections filename (YYMMDD is today's date and # is a sequential letter).

10 Record in Table 6-2 the name of the provisioning file by looking at the filename that follows `Creating` above the new Reprovisioning menu.

Table 6-2
UDLC/DS1-Tandem/TR-08 cross-connections filename

Filename
rpv.   .tar

Note: Make sure to record the sequential letter right after the date.

11 View the text of the `8 RETRY failed commands` option:

If	Then go to
`None` appears at the end of the line (between parentheses)	step 18
None does not appear at the end of the line (between parentheses)	the next step

—continued—

Procedure 6-1 (continued)
Creating a datafile with UDLC/DS1-Tandem/TR-08 cross-connection data

Step	Action
12	At the `Enter Choice:` prompt, select the `RETRY failed commands` option: **8↵** *A menu appears:* *Retry Menu* *----------* *1 Retry denied commands* *2 View report of denied commands* *3 Write report to output file* *Q Quit*
13	At the `Enter Choice:` prompt, select the `RETRY denied commands` option: **1↵** *The following confirmation message appears:* *Edit (vi) TL1 commands before they're executed (y/n)?*
14	Do not edit the TL1 commands, type: **n↵** *Another confirmation message appears.* *Execute TL1 commands (y/n)?*
15	Execute the TL1 commands: **y↵** *Several progress messages appear. Wait until the following message appears.* *xx successful* *View results (y/n)?*
16	At the `View results (y/n)?` prompt, type: **n↵** *The Reprovisioning Menu appears again.*

—**continued**—

Procedure 6-1 (continued)
Creating a datafile with UDLC/DS1-Tandem/TR-08 cross-connection data

Step	**Action**

17   Again, view the text of the `8 RETRY failed commands` option:

If	Then
`None` appears at the end of the line (between parentheses)	go to the next step.
None does not appear at the end of the line (between parentheses)	do not proceed any further. Call your Nortel Networks technical representative.

18   Quit the special TL-1 reprovisioning tool by typing:

q↵

An update message is displayed: before returning to the `opc>` prompt

`Updating rpv.`*YYMMDD#.*`tar`

19   Update the checklist in Table 6-1 and go to the next procedure.

—**end**—

Procedure 6-2
Transferring Span A OPC data files to tape

Use this procedure to transfer Span A OPC data files to tape.

Action

Step	Action

1   Insert a blank tape in Span A OPC. Insure that the write protect tab is set to the write enabled position (to see the latch).

2   From the OPC Admin toolset, open a **Unix Shell** session, if none are already open.

3   At the `opc>` prompt, go back to the root directory by typing:

    `cd /`↵

4   Calculate the checksum of the UDLC/DS1-Tandem/TR-08 cross-connections file:

    `sum rpv.YYMMDD#.tar`↵

    where `rpv.YYMMDD#.tar` is the cross connection filename that you recorded in Table 6-2 on page 6-5.

    The filename preceded by 2 numbers appears. The checksum is the first number. Record it in Table 6-3.

Table 6-3
UDLC/DS1-Tandem/TR-08 cross-connection file checksum

Checksum

5   If your topology is Point-to-point or VTBM BLSR ring, go with step 10.

6   If your topology is DS1-Fed RFT or Single-Ended RFT, transfer the UDLC/DS1-Tandem/TR-08 cross-connection file to the tape:

    `tar cvf /dev/rdt/tape2 rpv.YYMMDD#.tar`↵

    where `rpv.YYMMDD#.tar` is the cross-connections filename that you recorded in Table 6-2.

7   Now verify that the file is transferred to tape:

    `tar tvf /dev/rdt/tape2`↵

    The OPC displays a line that shows the cross-connections file with the date it was created.

<div align="center">—continued—</div>

Procedure 6-2 (continued)
Transferring Span A OPC data files to tape

Step	Action
8	Double-check that the file was not tampered with during the transfer to tape by verifying that the creation date and time of the file on the tape matches exactly the creation date and time of the original file on the OPC, by typing: `ll rpv.`*YYMMDD#*`.tar`↵
9	Go to step 14.
10	If your topology is Point-to-point or VTBM BLSR ring, two files must be transferred to tape: the UDLC/DS1-Tandem/TR-08 cross-connections file and the Configuration STS/VT connections file (created in chapter 3). Calculate the checksum of the Configuration STS/VT connections file: `sum conn.`*XXXX*↵ where `conn.`*XXXX* is the Configuration STS/VT connection filename that you recorded in Table 3-8 on page 3-8. *The filename preceded by 2 numbers appears.* The checksum is the first number. Record it in Table 6-4.

Table 6-4
Configuration STS/VT connections file checksum

Checksum

Step	Action
11	Transfer the two files to the tape by typing: `tar cvf /dev/rdt/tape2 rpv.`*YYMMDD#*`.tar conn.`*XXXX*↵ where `rpv.`*YYMMDD#*`.tar` is the cross-connections filename as recorded in Table 6-2 on page 6-5 and `conn.`*XXXX* is the Configuration STS/VT connections filename that you recorded in Table 3-8 on page 3-8.
12	When the `opc>` prompt returns, verify that the files have transferred to tape: `tar tvf /dev/rdt/tape2`↵ *The OPC displays two lines that show each file with the date and time it was created.*
13	Double-check that the files were not tampered with during the transfer to tape by verifying that the creation date and time of the files on the tape matches exactly the creation date and time of the original files on the OPC: `ll rpv.`*YYMMDD#*`.tar`↵ `ll conn.`*XXXX*↵

<div align="center">**—continued—**</div>

Procedure 6-2 (continued)
Transferring Span A OPC data files to tape

Step	Action
14	Remove the tape from the OPC and set the write protect tab to the write disabled position (not to see the latch).
15	Clearly identify the tape as follows: "Span A OPC SPOC databases *YY/MM/DD*".
16	Update the checklist in Table 6-1 and go to the next chapter.

—**end**—

Remove the selected NEs from Span A

This chapter describes the steps to be performed to remove the selected NEs from OPC A Span of control.

How to use this chapter

Perform sequentially all the procedures listed in Table 7-1. Use the check list column to indicate when a procedure is completed.

Table 7-1
Procedure sequence

Task	Subtask	√
Procedure 7-1: Terminate the association to NEs to transfer in Span A	Terminate the association	
	Remove the Control Network connection	

Procedure 7-1
Terminate the association to NEs to transfer in Span A

Use this procedure to terminate the link between the OPC in Span A and the NEs that are transferred to the OPC of Span B.

The following procedure requires that you type Unix commands. Type them exactly as displayed in the document. Unix is case sensitive.

Action

Step	Action
1	From the OPC Admin toolset in Span A OPC, open a **Unix Shell** session, if none are already open.
2	At the `opc>` prompt, type:

2 (continued)

`spock↵`

The OPC MIB and the span of control file agree. line is the last line displayed by the response message.

If you have another message, do not proceed. A problem may exist with the Span of Control Table. Call your next level of support.

If this message is correctly displayed, go to the next step.

3 Terminate the association with the first NE to be transferred (refer to Table 3-3 on page 3-3) by typing:

`spock -d` ***NE_Number***`↵`

where NE_Number is the number of the NE as listed in Table 3-3.

Query completed appears. The association to this NE is lost, a "question mark" appears at the bottom of the screen or in the Reboot/Load Manager beside the NE within 1 minute.

4 Repeat step 3 for each NE recorded in Table 3-3.

5 If the topology to be transferred is VTBM BLSR ring, Point-to-point, or Single-Ended RFT, go with step 21.

6 If the topology is DS1-Fed RFT, check the type of connectivity that exists between the NE and the OPC.

If the NE is served by	Then, go to
OMC links	step 7
CNET cable	step 21

—**continued**—

Procedure 7-1 (continued)
Terminate the association to NEs to transfer in Span A

Step	Action
7	Connect a local terminal to the LCAP of the CServer and log into the network element.
8	Run the OMCCI tool. **omcci** ↵
9	Query all OMC channels. InTable 7-2 enter the results of the query and use the "connected to" column of that table to establish if an OMC link is assigned to the NE to be transferred to span B. If so, put a check mark in the last column. At the OMCCI > prompt, type: **omc query all** ↵

Table 7-2
OMC links status at span A Cserver

channel #	connected to	#DS0	State	D/L [√]	Name	NE to be transferred to span B [√]
1				[ ]		[ ]
2				[ ]		[ ]
3				[ ]		[ ]
4				[ ]		[ ]
5				[ ]		[ ]
6				[ ]		[ ]
7				[ ]		[ ]
8				[ ]		[ ]
9				[ ]		[ ]
10				[ ]		[ ]

—**continued**—

Procedure 7-1 (continued)
Terminate the association to NEs to transfer in Span A

Step	Action

10   Use the data gathered in Table 7-2 and delete all channels connected to the NE being transferred from span A to span B. At the CI > prompt, type:

omc delete *<link#>* ↵

where

     <link#>   is the number of an assigned channel checked in the last column of Table 7-2

11   Repeat the previous step for all OMC links connected to the NE being transferred from span A to span B.

12   Connect a local terminal to the LCAP of the DFA RFT to be transferred to Span B and log into the NE.

13   Run OMCCI tool:

omcci ↵

14   Query all OMC channels. In Table 7-3, write down any that are assigned. At the CI > prompt, type:

omc query all ↵

Table 7-3
OMC links status at NE to be transferred to span B.

channel #	connected to	#DS0	State	D/L [√]	Name

15   In Table 7-4, write down the number of channels used by the NE to be transferred:

Table 7-4
Number of OMC channels used in span A CServer

Number of channels

—continued—

Procedure 7-1 (continued)
Terminate the association to NEs to transfer in Span A

Step	Action

16   Use the information in Table 7-3 to delete the OMC channel used by this NE. At the CI > prompt, type:

omc delete *<link#>* ↵

where

<link#>   is the number of an assigned channel from the first column of Table 7-3

17   Repeat the previous step for all OMC links being used by this NE.

18   From the NEUI, change the state of the DS1 and TIC facilities that were used for the OMC links to OOS.

fa ds1 *<group#> <port#>* ↵

8 oos ↵

where

<group#> and *<port#>*   are the DS1 mapper slot and port number, respectively, read from the second column of Table 7-3

fa tic {1|2} ↵ (tic 2 if G4 is used)

8 oos *<port#> <port#>* ↵

where

<port#>   is the facility matching the previous DS1 port number {1..14 for mapper G1, 15..28 for mapper G2 and 15..28 for mapper G4}

19   Repeat the previous step until all facilities providing OMC links connected to the NE to be transferred to span B are out-of-service (OOS).

20   Proceed with step 22.

—**continued**—

Procedure 7-1 (continued)
Terminate the association to NEs to transfer in Span A

Step	**Action**
21	If the topology to be transferred is served by a CNET cable, remove this CNET cable at both Span A OPC and the proper NE of the topology. Install a CNET termination plug (NT7E5072) in both connectors that are left open.

> ⚠️ **CAUTION**
> **Risk of service interruption**
> Make sure that, when removing the CNET cable from the topology to be transferred, other topologies remain connected to Span A OPC.

Note: If the OPC is in one of the NEs transferred, you do not have to do anything for now.

22	Update the checklist in Table 7-1 and go to the next chapter.

—**end**—

Transfer NEs from Span A to Span B

This chapter describes the steps for commissioning the NEs related to the topology being transferred to Span B and to actually transfer the control of the specified NEs to the Span B OPC.

How to use this chapter

Perform sequentially all the procedures listed in Table 8-1. Use the checklist column to indicate when a procedure is completed.

Table 8-1
Procedure sequence

Task	Subtask	√
Procedure 8-1 Commission NE data		
Procedure 8-2 Topology configuration		
Procedure 8-3 Connecting the NEs to Span B	Establish NE association	

Procedure 8-1
Commission NE data

Use the following procedure to commission NE data

Action

Step	Action
1	In Span B OPC, open the Commissioning Manager, and select the Commission new network element button and select it.
2	Select the first NE in Table 3-3 on page 3-3 and fill the different fields with the same information. Select **OK** to validate your changes.
	Note: You may not be able to set the This network element contains field, in the NE Commissioning data screen, exactly as specified in Table 3-3 since the Primary and/or Backup OPC presence may already be set for another NE.
3	Repeat step 2 for all the NEs listed in Table 3-3.
4	**Exit** the Commissioning Manager.
5	After you add the NEs to the Span B OPC commissioning data, update the checklist in Table 8-1 and go to the next procedure.

—**end**—

Procedure 8-2
Topology configuration

Use the following procedure to configure topology.

Action

Step	Action

1 From the topology to be transferred (refer to Table 3-2):

If the topology is	Then, go to
DS-1 Fed RFT or Single-Ended RFT	step 18
Point-to-point	step 2
VTBM BLSR ring	step 7

2 If your topology is Point-to-point, access the **Configuration Manager** under the Slat toolset and open it.

3 Select the **Add** option to add the new Point-to-Point configuration to Span B. Select the **AccessNode: Point-to-Point** topology.

4 Enter the configuration name that you recorded in Table 3-4 on page 3-4.

5 Select the correct **FCOT** and **RFT** pair (refer to Table 3-5 on page 3-4) and tab to the **Save Configuration** button. Acknowledge the confirmation message.

6 Continue with step 18.

7 If your topology is VTBM BLSR ring, access the **Configuration Manager** under the Slat toolset and open it.

8 Select the **Add** option to add the new Ring configuration to Span B. Select the **AccessNode: Ring** topology.

9 Enter the configuration name as recorded in Table 3-4.

10 Select the **Configure a ring ADM** button. Enter the data of the first ring ADM that you recorded in Table 3-6 on page 3-5.

Note: The ring ADMs must be configured in the exact same order in which they appear in Table 3-6.

11 Repeat step 10 for each ADM listed in Table 3-6.

—**continued**—

Procedure 8-2 (continued)
Topology configuration

Step	Action
12	Select the **Save and send configuration data** button.
	The following confirmation message appears:
	You are about to:
	1. Save the configuration data to the OPC database.
	2. Send the configuration data to the ring ADMs.
	Do you wish to continue?
13	Select the **Yes** button.
	Another confirmation message appears.
	There is no association to the following ring ADMs:
	XXXX XXXX XXXX
	The configuration data across the network may become inconsistent if you continue.
	!WARNING!
	Ring ADMs cannot be deleted from the ring configuration until association with the NEs is up.
	Do you wish to continue?
14	Select the **Yes** button.
	The following message appears:
	Configuration data could not be sent to the following ring ADMs:
	XXXX
	XXXX
	XXXX
	Would you like to try again?
15	Select the **No** button.
16	Finally, exit the **Configuration Manager: Ring** tool.
	A last message appears.
	! WARNING!
	You have not completed all the required steps in the operation.
	Do you wish to close the tool?
17	Select the **Yes** button.
18	Do not close the Configuration Manager at this point, update the checklist in Table 8-1 and go to the next procedure.

—**end**—

Procedure 8-3
Connecting the NEs to Span B

Use this procedure to physically connect to Span B the NEs to be transferred, on which the association from Span A was terminated in a previous procedure.

Action

Step	Action

1   Determine which case applies to your situation.

If	Then, go to
the NE to be transferred is a DS1-Fed RFT and the primary OPC in Span B will be serving that RFT through OMC links	step 2
the primary OPC in Span B will be serving the topology to be transferred through a CNET cable.	step 19

2   From the OPC session, open the NEUI of the C-Server where the primary OPC is installed.

Note: For the following steps to be performed successfully, DS1s must be available between the C-Server in Span B and the NE to be transferred. The procedure to install, connect and test DS1 facilities is not covered in this guide. Contact your next level of support if those facilities are not available.

3   Run OMCCI tool. Type:

omcci ↵

Query all OMC channels. Check the ones that are in use and fill Table 8-2 with the appropriate information. Type:

omc query all ↵

—continued—

Procedure 8-3 (continued)
Connecting the NEs to Span B

Table 8-2
OMC links status at span B C-Server

channel	connected to	#DS0	State	D/L [√]	Name	channel available [√]
1				[ ]		[ ]
2				[ ]		[ ]
3				[ ]		[ ]
4				[ ]		[ ]
5				[ ]		[ ]
6				[ ]		[ ]
7				[ ]		[ ]
8				[ ]		[ ]
9				[ ]		[ ]
10				[ ]		[ ]

4   In Table 8-2 check, in the last column, the channels that are not already assigned.

5   From Table 8-2, select enough channels to equal the number of OMC links previously used (in Span A) for the NE to be transferred to Span B (see Table 7-4 on page 7-4) and write them in Table 8-3.

Note 1: If an NE to be transferred to Span B was previously connected to the OPC in Span A through a CNET cable then select 2 channels unless the following note applies.

Note 2: One OMC link (one channel) is sufficient to establish communication and provide OAM&P to the DFA. If only one channel is available on the C-Server, then only one channel can be assigned for the new NE even if 2 channels were previously assigned in Span A.

Table 8-3
OMC channels number used in Span B C-Server

First channel	Second channel

—**continued**—

Procedure 8-3 (continued)
Connecting the NEs to Span B

Step	Action

6   Select DS1 ports on the facility between the C-Server in Span B and the NE to be transferred that are not in use at either end and write it (them) down in Table 8-4.

Table 8-4
DS1 mappers and ports used for OMC links

DS1 Mapper (C-Server)	Port		DS1 Mapper (NE to be transferred)	Port
		connected to		
		connected to		

Note: Make sure that the selected DS1 mappers at the C-Server physically terminate on the selected DS1 mapper and also that the ports are the same at both ends for each channel.

7   From the NEUI at the C-Server, change the state of the DS1 and TIC facilities that will be used for the OMC links to IS:

fa ds1 *<group#> <port#>* ↵

where

<group#> and ***<port#>***   are the DS1 mapper slot and port number, respectively, read from the first two columns of Table 8-4

8 is↵

fa tic {1|2} ↵ (tic 2 if G4 is used)

8 is *<port#> <port#>* ↵

where

<port#>   is the facility matching the previous DS1 port number {1..14 for mapper G1, 15..28 for mapper G2 and 15..28 for mapper G4}

8   Repeat the previous step for each port being used for an OMC link (according to Table 8-4).

9   Add OMC links selected in Table 8-3.

omc add *<channel#><DS1 slot#><DS1 port#><#DS0> <name>*↵

—**continued**—

Procedure 8-3 (continued)
Connecting the NEs to Span B

Step	Action

where

<DS1 slot #> and **<DS1 port #>**	are the DS1 mappers {G1|G2|G4...} and port numbers {1..14} selected in Table 8-4 on page 8-7 (**C-Server**), respectively, **<#DS0>** is the bandwidth of the OMC link {3..6} and **<name>** is an optional name (up to 20 characters)

10   Repeat previous step for each channel being set as an OMC link (see Table 8-3 on page 8-6).

11   Set the download channel on the C-Server side to the first link assigned (if more than one) in Table 8-3.

omc setdlchan <channel#> ↵

12   Connect a local terminal to the LCAP of the DS1-Fed RFT to be transferred to Span B and log into the NE.

13   From the NEUI at the DS1-Fed RFT to be transferred to Span B, change the state of the DS1 and TIC facilities that will be used for the OMC links to IS.

fa ds1 <group#> <port#> ↵

where

<group#> and **<port#>**	are the DS1 mapper slot and port number, respectively, read from the last two columns of Table 8-4 on page 8-7

8 is ↵

fa tic {1|2} ↵ (tic 2 if G4 is used)

8 is <port#> <port#> ↵

where

port#>	is the facility matching the previous DS1 port number {1..14 for mapper G1, 15..28 for mapper G2 and 15..28 for mapper G4}

14   Repeat the previous step for each port being used for an OMC link (according to Table 8-4). Run OMCCI tool. Type:

omcci ↵

—continued—

Procedure 8-3 (continued)
Connecting the NEs to Span B

Step	Action
15	Add OMC links: **omc add *\<channel#>\<DS1 slot#>\<DS1 port#>\<#DS0> \<name>*↵**

where

\<DS1 slot #> and ***\<DS1 port #>***	are the DS1 mappers {G1|G2|G4...} and port numbers {1..14} selected in Table 8-4 on page 8-7 (**NE to be transferred**), respectively, ***\<#DS0>*** is the bandwidth of the OMC link {3..6} and ***\<name>*** is an optional name (up to 20 characters)

Step	Action
16	Repeat previous step for each port being set as an OMC link. ***Note:*** The number of OMC links at the DS1-Fed RFT must match the number of OMC links at the C-Server (see Table 8-3 on page 8-6).
17	Set the download channel on the NE side to the corresponding one as for the C-Server: **omc setdlchan *\<channel#>* ↵**
18	Go to step 25.
19	Verify if OPC B already has visibility over the transferred NEs. From the Reboot/Load Manager, verify a question mark is beside any of the transferred NEs in the NE list.

If	then
none or only some of the transferred NE have association with OPC B	go to next step
all of the transferred NE already have association with OPC B	go to step 25

Step	Action
20	From any of the transferred NEs, determine an available CNET port. This port should currently have a CNET termination plug (NT7E5072) attached to it.
21	From any of the NEs that belongs to Span B, determine an available CNET port. This port should currently have a CNET termination plug (NT7E5072) attached to it.
22	Remove the CNET termination plugs and connect a CNET cable [NT7E44JB (1 m) or NT7E44JC (5 m) or NT7E44JK (10 m)] between the 2 NEs.
23	Ensure each unused CNET port, all along the CNET bus, has a CNET termination plug (NT7E5072) attached to it. Otherwise, association problems can occur.

—continued—

Procedure 8-3 (continued)
Connecting the NEs to Span B

Step	Action
24	After you connect the 2 NEs together, the association between the OPC in Span B and the NEs transferred should come back within a period of about 15 minutes.
	The association loss disappears from the OPC in Span B when the "question mark" is cleared from the bottom left corner of the screen or when it clears from beside the NE list in the Reboot/Load Manager.
25	Once all association losses to the transferred NEs are cleared, update the checklist in Table 8-1 and go to the next Chapter.

<div align="center">**—end—**</div>

Provisioning critical data in Span B OPC

This chapter covers all the critical data to be reprovisioned on Span B OPC.

How to use this chapter

Perform sequentially the procedures listed in Table 9-1. Use the checklist column to indicate when a procedure is completed.

Table 9-1
Procedure sequence

Task	√
Procedure 9-1 Transferring Span A OPC data files from tape to Span B OPC	
Procedure 9-2 Verifying point-to-point alarm management status	
Procedure 9-3 Provisioning/verifying STS/VT connections	

Procedure 9-1
Transferring Span A OPC data files from tape to Span B OPC

Use this procedure to transfer Span A OPC data files from tape to Span B OPC.

Action

Step	Action
1	Insert the tape (created in chapter 6) identified "Span A OPC SPOC databases *YY/MM*/DD" in Span B OPC. Insure that the write protect tab is set to the write disabled position (not to see the latch).
2	From the OPC Admin toolset, open a **Unix Shell** session, if none are already open.
3	At the `opc>` prompt, go back to the root directory by typing: **cd /**↵
4	Retrieve the file(s) on the tape into the OPC: **tar xvf /dev/rdt/tape2**↵ *The file(s) are displayed with the size and the number of blocks.*
5	Verify that the checksum of the cross-connections file is the same as of the original file in Span A OPC (as recorded in Table 6-3 on page 6-8): **sum rpv.*YYMMDD#*.tar**↵ where `rpv.`*YYMMDD#* `tar` is the cross-connections filename that you recorded in Table 6-2 on page 6-5 ***Note:*** Remember that the checksum is the first number displayed before the filename.
6	If your topology is point-to-point or VTBM BLSR ring, verify that the checksum of the Configuration STS/VT connections file is the same as the original file in Span A OPC (as recorded in Table 6-4 on page 6-9): **sum conn.*XXXX***↵ where `conn.`*XXXX* is the Configuration STS/VT connections filename as recorded in Table 3-8 on page 3-8

—**continued**—

Procedure 9-1 (continued)
Transferring Span A OPC data files from tape to Span B OPC

Step	Action
7	If the checksum of any file is incorrect, retry transferring from Span A OPC to tape (Procedure 6-2 on page 6-8) and/or from tape to Span B OPC (this procedure) with new tapes. If the problem persists, contact your next level of support.
8	Update the check list in Table 9-1 and move to Procedure 9-2.

—**end**—

Procedure 9-2
Verifying point-to-point alarm management status

Use the following procedure to verify point-to-point alarm management status.

Action

Step	Action
1	If the topology to be transferred (refer to Table 3-2 on page 3-2) is VTBM BLSR ring, **DS1-fed RFT** or **single-ended RFT**, go to step 5.
	If the topology is point-to-point, proceed with the next steps.
2	From the open Configuration Manager of Span B OPC, compare the data from Table 3-5 on page 3-4 to the information displayed in **Configuration Manager: Edit/Delete Configuration** tool.
	If the information is the same go to step 5.
	If the information is different, go with the next step.
3	Select the Alarm Management level of the screen as indicated in Table 3-5.
4	Select the **Set Alarm Level** button.
5	Close the Configuration Manager tool.
6	Update the check list in Table 9-1 and go to Procedure 9-3.

—end—

Procedure 9-3
Provisioning/verifying STS/VT connections

Use this procedure to provision/verify STS/VT connections.

Action

Step	Action
1	If the topology to be transferred (refer to Table 3-2 on page 3-2) is point-to-point or VTBM BLSR ring, go to step 8. If the topology is DS1-fed RFT or single-ended RFT, proceed with the next steps.
2	For the DS1-fed RFT or single-ended RFT topology, open the **Connection Manager** tool in Span B OPC.
3	From the Options menu, select the **Manage default/STS-1 cross connects…** item.
4	From the Network Element item list, select the proper RFT (recorded in Table 3-3 on page 3-3).
5	Select the **Provision Nodal Default Connections** button, and acknowledge any confirmation message.
6	Exit the Provision Nodal Default Connections screen, by selecting the **Done** button.
7	Proceed with step 13.
8	For the point-to-point and VTBM BLSR ring topologies, make sure that the Connection Manager tool is closed.
9	Open a Unix Shell session from the OPC Admin toolset, if none are already open.
10	At the `opc>` prompt, go back to the root directory by typing: `cd /`↵
11	Verify that the Configuration STS/VT connections file is still there: `ll conn.XXXX`↵ where `conn.XXXX` is the Configuration STS/VT connections filename as recorded in Table 3-8 on page 3-8. *The file appears with other information, for example (date, and size).*

—continued—

Procedure 9-3 (continued)
Provisioning/verifying STS/VT connections

Step	Action
12	Reprovision the Configuration STS/VT connections by entering:

stpprov -n -o < conn.*XXXX*↵

where

conn.*XXXX*   is the Configuration STS/VT connections
                           filename as recorded in Table 3-8 on
                           page 3-8

Note: The less than (<) sign must be typed as well.

The following message appears:

stpprov: Done (XXX connection provisioned)

Step	Action
13	From the Connection Manager window's Options menu, select the **Audit connections…** item.
14	Make sure that all the NEs that belong to your configuration are Included during the audit.

Select the **OK** button.

CAUTION
Possible traffic interruption
When you perform the audit, if mismatches are found
for any NEs and you select the **Yes** option to correct
the mismatches, a traffic interruption can occur.

If the audit finds	**Then**
no discrepancies between the OPC and OC-12 TBM network element connection data, the message "successful" appears	go to the next step
discrepancies, the message failed: mismatch found appears	select the **NO** option and call your next level of support or your Nortel Networks support group

Step	Action
15	Update the checklist in Table 9-1 and go to the next chapter.

—**end**—

Restoring Span A data in Span B OPC

This chapter describes how to reprovision all UDLC, DS1-Tandem and TR-08 cross-connection data on the OPC, using the previously captured data from the Span A OPC.

How to use this chapter

Perform sequentially the procedures listed in Table 10-1.

The following procedures requires that you type Unix commands. Type them exactly as displayed in the document. Unix is case sensitive

Table 10-1
Procedure sequence

Task	√
Procedure 10-1 Restore UDLC/DS1 tandem/TR-08 cross-connection data in Span B OPC	

Procedure 10-1
Restore UDLC/DS1 tandem/TR-08 cross-connection data in Span B OPC

Use this procedure to restore UDLC/DS1 tandem/TR-08 cross-connection data in Span B OPC.

Action

Step	Action
1	From the OPC Admin toolset in Span B OPC, open a **Unix Shell** session, if none is already opened.
2	At the `opc>` prompt, go back to the root directory by typing: **cd /**↵
3	Execute the special TL-1 reprovisioning tool by typing: **rpv -s 1**↵ *A menu is displayed:* *Reprovisioning Menu* *-------------------* *1 OPTION (prompt level 1)* *2 BACKUP provisioning* *3 BACKUP shelf only for moving* *4 BACKUP info paths for SPOC consolidation* *5 SELECT backup* *Q QUIT*
4	At the `Enter Choice:` prompt, select the `SELECT backup` option: **5**↵

—continued—

Procedure 10-1 (continued)
Restore UDLC/DS1 tandem/TR-08 cross-connection data in Span B OPC

Step	Action
5	From the list of previous backups, select the backup with date and sequential letter that is part of the filename that you recorded in Table 6-2 on page 6-5.

The tool displays the following message and returns to the main menu:

```
Extracting from rpv.YYMMDD#.tar
SPOC backup

Reprovisioning Menu
-------------------
1 OPTION (prompt level 1)
2 BACKUP provisioning
3 BACKUP shelf only for moving
4 BACKUP info paths for SPOC consolidation
5 SELECT backup (using 04/03/96-a)
6 DELETE old provisioning
7 CREATE new provisioning
8 RETRY failed commands (None)
Q QUIT
```

Note: The date of the backup should appear right after SELECT backup (in parenthesis).

6   At the Enter Choice: prompt, select the CREATE new provisioning option:

7↵

The tool displays a new menu: Choose NEs to Create Information Paths for *which contains a list of NEs like:*

```
1 Create IPs for NE_Number NE_Name (NO)
```

7   Select the first Network Element that belongs to your topology and is an RFT or an RFT_BLSR (see Table 3-3 on page 3-3).

To select an NE, enter the number that appears at the beginning of the line containing that NE (followed by the return key) at the Enter choice: prompt.

The (NO) *that appeared at the end of the line changes to* (YES).

8   Repeat the previous step until each NE listed in Table 3-3 (that is an FCOT, an RFT, or an RFT_BLSR) is selected, that is with (YES) at the end.

9   At the Enter choice: prompt, select the Continue option:

c↵

A confirmation message appears:

Edit (vi) TL1 commands before they're executed (y/n)?

—continued—

Procedure 10-1 (continued)
Restore UDLC/DS1 tandem/TR-08 cross-connection data in Span B OPC

Step	Action

10   Do not edit the TL1 commands, type:

n↵

Another confirmation message appears:

Execute TL1 commands (y/n)?

11   Execute the TL1 commands:

y↵

Several progress messages appear. Wait until the following message appears:

xx successful
View results (y/n)?

Note: The duration of this operation varies depending on the number of circuits provisioned at the NEs.

12   At the `View results (y/n)?` prompt, type:

n↵

13   View the text of the `8 RETRY failed commands` option:

If	Then go to
`None` appears at the end of the line (between parentheses)	step 20
`None` does not appear at the end of the line (between parentheses)	the next step

14   At the `Enter Choice:` prompt, select the `RETRY failed commands` option:

8↵

A menu is displayed:

Retry Menu
----
1 Retry denied commands
2 View report of denied commands
3 Write report to output file
Q Quit

—continued—

Procedure 10-1 (continued)
Restore UDLC/DS1 tandem/TR-08 cross-connection data in Span B OPC

Step	Action
15	At the `Enter Choice:` prompt, select the `RETRY denied commands` option:

1↵

A confirmation message appears:

Edit (vi) TL1 commands before they're executed (y/n)?

16	Do not edit the TL1 commands, type:

n↵

Another confirmation message appears:

Execute TL1 commands (y/n)?

17	Execute the TL1 commands:

y↵

Several progress messages appear. Wait until the following message appears.

xx successful
View results (y/n)?

18	At the `View results (y/n)?` prompt, type:

n↵

Note: The duration of this operation varies depending on the number of circuits provisioned at the NEs.

The reprovisioning menu appears again.

19	View the text of the `8 RETRY failed commands` option:

If	Then
`None` appears at the end of the line (between parentheses)	go to the next step
`None` does not appear at the end of the line (between parentheses)	do not proceed any further. Call your Nortel Networks technical representative.

20	Quit the special TL-1 reprovisioning tool by typing:

q↵

An update message is displayed: before returning to the `opc>` *prompt*

`Updating rpv.YYMMDD#.tar`

21	Update the checklist in Table 10-1 and go to the next chapter.

—**end**—

Provisioning non-critical data in Span B OPC

This chapter completes the Span B OPC reprovisioning tasks. All the data captured in Chapter 3 that has not be reprovisioned yet is covered in this chapter.

How to use this chapter

Perform sequentially the procedures listed in Table 11-1. Use the checklist column to indicate when a procedure is completed.

Table 11-1
Procedure sequence

Task	Subtask	√
Procedure 11-1: Provisioning E2A alarm data		
Procedure 11-2: Provisioning TBOS data		
Procedure 11-3: Restoring userids and assigning passwords	Restoring Userids	
	Assigning Passwords	
Procedure 11-4: Reprovisioning virtual circuits		

Procedure 11-1
Provisioning E2A alarm data

Use this procedure to provision E2A alarm data.

Action

Step	Action
1	From the Network Admin toolset, open the **E2A Alarm Manager** tool.
2	On the top window, select the first NE from the transferred topology (according to Table 3-3 on page 3-3) and do a **Detail** on it.
3	Verify that the displayed SDP assignments list matches what you recorded in Table 3-9 through Table 3-12 beginning on page 3-10.
	Note: Use the view bar on the right to display all the SDP data.
4	Repeat from step 2 for each NEs that is part of the transferred topology.
5	**Exit** from the E2A Alarm Manager tool.
6	Update the checklist in Table 11-1 and go to Procedure 11-2.

<p style="text-align:center">—**end**—</p>

Procedure 11-2
Provisioning TBOS data

Use this procedure to provision TBOS data.

Action

Step	Action
1	If Table 3-13 on page 3-14 indicates no active ports, go to step 6.
	If there are active ports, proceed with the next steps.
2	From the Network Admin toolset, open the **Telemetry - TBOS** tool.
3	Select the first NE from Table 3-13 on page 3-14. Perform a **Detail** and verify that the port details, in the lower window, matches the data previously recorded in Table 3-14 through Table 3-17 beginning on page 3-15. If it does not, you have to reprovision the ports (not necessarily with the same previously recorded data).

Note 1: See *Alarms and Surveillance Description*, 323-3001-104, in *Description*, Volume 2A, and *System Administration Procedures*, 323-3001-302, in *Operations, Administration, and Provisioning*, Volume 4A.

Note 2: You assign remote displays in this procedure, note the remote display numbers and update the SD points with the information related to the new assignments. Ensure that this information is updated at the NE, access the admin ip; dtlport screen and select the appropriate point.

Step	Action
4	Repeat step 3 for each Network Elements with an active TBOS port listed in Table 3-13.
5	**Exit** from the Telemetry - TBOS tool.
6	Update the checklist in Table 11-1 and go to Procedure 11-3.

—end—

Procedure 11-3
Restoring userids and assigning passwords

Use this procedure to restore userids and assign passwords.

Action

Step	Action
1	From the OPC Admin tool set, open the **Central User Admin**.
2	Add and/or update the userids and passwords that you transferred from the system. Refer to Table 3-18 on page 3-18 for userids that were used in Span A OPC.
3	Once all userids are correctly added/updated, run an audit on the system to ensure that all the NEs are updated. From the Central User Admin utility menu, select the **Audit user profile data...** command. Acknowledge the confirmation dialog.
4	Once the audit is completed, close the Central User Admin tool using the **Exit** option.
5	Update the checklist in Table 11-1 and go to Procedure 11-4.

—**end**—

Procedure 11-4
Reprovisioning virtual circuits

Use this procedure to reprovision virtual circuits

Action

Step	Action
1	For the virtual circuits that you recorded in Table 5-8 on page 5-7, use the Provisioning Manager to reprovision these circuits.
2	Update the checklist in Table 11-1 and go to the next chapter.

—**end**—

Deleting transferred NEs from Span A

This chapter describes how to delete the network elements (NE), that you transferred from the Span A OPC to Span B OPC.

How to use this chapter

Perform sequentially all the procedures listed in Table 12-1. Use the checklist column to indicate when a procedure is completed.

Table 12-1
Procedure sequence

Task	√
Procedure 12-1 Deleting UDLC/DS1 tandem/TR-08 cross-connection data in Span A OPC	
Procedure 12-2 Removing STS/VT connections from Span A OPC	
Procedure 12-3 Deleting the topology	
Procedure 12-4 Restoring the association link to the transferred NEs from Span A	
Procedure 12-5 Removing transferred NEs from the commissioning manager	

Procedure 12-1
Deleting UDLC/DS1 tandem/TR-08 cross-connection data in Span A OPC

Use this procedure to delete UDLC/DS1 tandem/TR-08 cross-connection data in Span A OPC.

Action

Step	Action
1	From the OPC Admin toolset in Span A OPC, open a **Unix Shell** session, if none are already open.
2	At the `opc>` prompt, go back to the root directory by typing: **`cd /`↵**
3	Execute the special TL-1 reprovisioning tool by typing: **`rpv -s 1`↵** *A menu is displayed:* *Reprovisioning Menu* *-------------------* *1 OPTION (prompt level 1)* *2 BACKUP provisioning* *3 BACKUP shelf only for moving* *4 BACKUP info paths for SPOC consolidation* *5 SELECT backup* *Q QUIT*
4	At the `Enter Choice:` prompt, select the `SELECT backup` option: **`5`↵**

—continued—

Procedure 12-1 (continued)
Deleting UDLC/DS1 tandem/TR-08 cross-connection data in Span A OPC

Step	Action
5	From the list of previous backups, select the backup with date and sequential letter that is part of the filename that you recorded in Table 6-2 on page 6-5.

The tool displays the following message and returns to the main menu:

Extracting from rpv.YYMMDD#.tar
SPOC backup

Reprovisioning Menu
----
1 OPTION (prompt level 1)
2 BACKUP provisioning
3 BACKUP shelf only for moving
4 BACKUP info paths for SPOC consolidation
5 SELECT backup (using 04/03/96-a)
6 DELETE old provisioning
7 CREATE new provisioning
8 RETRY failed commands (None)
Q QUIT

Note: Now the date of the backup should appear right after SELECT backup (in parenthesis).

| **6** | At the Enter Choice: prompt, select the DELETE old provisioning option: |

6↵

The tool displays a new menu: Choose NEs to Delete which contains a list of NEs.

1 Delete NE_Number NE_Name (NO)

| **7** | Select the first NE that belongs to your topology and is an FCOT, an RFT, or an RFT_BLSR (see Table 3-3 on page 3-3). |

To select an NE, enter the number that appears at the beginning of the line containing that NE (followed by the return key) at the Enter choice: prompt.

The (NO) that appeared at the end of the line changes to (YES).

| **8** | Repeat the previous step until each NE listed in Table 3-3 that is an FCOT, an RFT, or an RFT_BLSR is selected, that is with (YES) at the end. |

| **9** | At the Enter choice: prompt, select the Continue option: |

c↵

a confirmation message appears:

Edit (vi) TL1 commands before they're executed (y/n)?

—**continued**—

Procedure 12-1 (continued)
Deleting UDLC/DS1 tandem/TR-08 cross-connection data in Span A OPC

Step	Action

10   Do not edit the TL1 commands, type:

n↵

Another confirmation message appears.

Execute TL1 commands (y/n)?

11   Execute the TL1 commands:

y↵

Several progress messages appear. Wait until the following message appears.

xx successful
View results (y/n)?

12   At the `View results (y/n)?` prompt, type:

n↵

Note: The duration of this operation will vary depending on the number of circuits provisioned at the NEs.

The reprovisioning menu appears.

13   View the text of the `8 RETRY failed commands` option:

If	Then proceed with
`None` appears at the end of the line (between parentheses)	step 20
`None` does not appear at the end of the line (between parentheses)	the next step

14   At the `Enter Choice:` prompt, select the `RETRY failed commands` option:

8↵

A menu appears.

Retry Menu
----
1 Retry denied commands
2 View report of denied commands
3 Write report to output file
Q Quit

—continued—

Procedure 12-1 (continued)
Deleting UDLC/DS1 tandem/TR-08 cross-connection data in Span A OPC

Step	Action
15	At the `Enter Choice:` prompt, select the `RETRY denied commands` option:

15 At the `Enter Choice:` prompt, select the `RETRY denied commands` option:

1↵

A confirmation message appears.

Edit (vi) TL1 commands before they're executed (y/n)?

16 Do not edit the TL1 commands, type:

n↵

Another confirmation message appears.

Execute TL1 commands (y/n)?

17 Execute the TL1 commands:

y↵

Several progress messages appear. Wait until the following message appears:

xx successful
View results (y/n)?

18 At the `View results (y/n)?` prompt, type:

n↵

The reprovisioning menu appears.

19 Again, view the text of the `8 RETRY failed commands` option:

If	Then
`None` appears at the end of the line (between parentheses)	proceed with the next step
`None` does not appear at the end of the line (between parentheses)	do not proceed any further. Call your Nortel Networks technical representative.

20 Quit the special TL-1 reprovisioning tool by typing:

q↵

An update message appears: before returning to the `opc>` prompt

Updating rpv.YYMMDD#.tar

21 Update the checklist in Table 12-1 and go to Procedure 12-2.

—**end**—

Procedure 12-2
Removing STS/VT connections from Span A OPC

Use this procedure to remove STS/VT connections from Span A OPC.

Action

Step	Action
1	If the topology is a DS1-fed RFT or a single-ended RFT, skip to step 10.
2	If the topology is a VTBM BLSR ring or point-to-point, make sure that the **Connection Manager** is closed before proceeding with the next steps.
3	Open a **Unix Shell** session from the OPC Admin toolset in Span A OPC, if none are already open.
4	At the `opc>` prompt, go back to the root directory by typing:

cd /↵

| 5 | To enable the `delete_connections` option of the `stsdump` tool, set an environment variable: |

setenv DELETECONNECTIONS TRUE↵

To verify that it has been properly set, type the following command to see all the environment variables:

env↵

The line DELETECONNECTIONS=1 appears at the end of the list.

| 6 | Now, remove the STS/VT connections that belong to the configuration to be transferred: |

stsdump delete_connections ″*Configuration_name*″↵

    where

    Configuration_name   is the name of the configuration (in double quotes) to be transferred as recorded in Table 3-4 on page 3-4

Note: The `stsdump` command is case sensitive. Therefore, enter the name of the configuration (in double quotes) **exactly** as it was recorded earlier.

Not meeting the preceding requirement may result in other STS/VT connections de-provisioning in Span A OPC. See Appendix A for a complete provisioning recovery procedure.

—**continued**—

Procedure 12-2 (continued)
Removing STS/VT connections from Span A OPC

Step	Action
7	Acknowledge the confirmation message: `This could affect traffic. Are you sure (y/n)?` by typing: **y**↵ *A completion message is displayed:* `Deleted All connections for configuration` *<Configuration_name>* `from OPC.`
8	If the message `The delete_connections option has been disabled` is displayed, repeat from step 5, as the environment variable might have been entered incorrectly. If another message is displayed, do not continue. Call your Nortel Networks Technical Representative.
9	To disable the `delete_connections` option of the `stsdump` tool, you must unset the environment variable that you set: `unsetenv DELETECONNECTIONS`↵ To verify that it has been properly unset, type the following command to see all the environment variables (it should not appear in the list anymore): **env**↵ *The line DELETECONNECTIONS=1 does not appear at the end of the list.*
10	Update the checklist in Table 12-1 and go to Procedure 12-3.

—**end**—

Procedure 12-3
Deleting the topology

Use this procedure to delete the topology.

Action

Step	Action

1 From the topology to be transferred (refer to Table 3-2 on page 3-2):

If the topology is	Then, go to
DFA RFT or single-ended RFT	step 24
Point-to-point	step 2
VTBM BLSR ring	step 8

2 If your topology is **point-to-point**, access the **Configuration Manager** under the Slat toolset and open it.

3 Select the point-to-point topology that you are transferring and choose the **Edit/Delete Configuration** option.

4 Select the **Delete Configuration** in the options menu and acknowledge the confirmation messages.

5 **Exit** the Configuration Manager: Point to Point tool.

The list of configuration under the Span A OPC is automatically updated.

6 From the main window of the Configuration Manager, select the **Exit** option to close the tool.

7 Proceed with step 24.

8 If your topology is VTBM BLSR ring, from the main screen of the User Session Manager, select the **Logout** button, and acknowledge any confirmation message.

The OPC returns to the `opc>` *prompt.*

The following step must be executed with the OPC User Interface closed and cannot be executed from a Unix shell.

—continued—

Procedure 12-3 (continued)
Deleting the topology

Step	Action

9   To remove the ring configuration from the Configuration Manager, you must set another environmental variable:

setenv SOC_TRANSFER 1⏎

Note: The last character is the digit one.

To verify that the variable has been properly set, type the following command to see all the environment variables:

env⏎

10   Return to the OPC User Interface:

opcui⏎

11   In the Configuration Manager, select the VTBM BLSR ring topology that is being transferred and choose the **Edit/Delete Configuration** option.

12   From the Configured ring ADMs list, select the first ring ADM and choose the **Delete** option from the item menu. Acknowledge any confirmation message.

Note: The confirmation message is different for the last FCOT_BLSR or TN_BLSR to be deleted. Acknowledge this message also.

13   Repeat step 12 for all the ring ADMs in the list.

14   Now that you have removed all the ring ADMs from the list, select the **Save and Send** button.

The following message is displayed:

You are about to:

> *1. Save the configuration data to the OPC database.*
> *2. Send the configuration data to the ring ADMs.*

Do you wish to continue?

15   Select the **Yes** button.

The following message is displayed:

There is no association to the following ring ADMs

 XXXX XXXX

The configuration data across the network may become inconsistent if you continue.

WARNING: Ring ADMs cannot be deleted from the ring configuration until association with the NEs is up.

Do you wish to continue?

—**continued**—

Procedure 12-3 (continued)
Deleting the topology

Step	Action
16	Select the **Yes** button.
	The following information message is displayed:
	Information: The configuration data was saved to the OPC database and sent to the ring ADMs successfully.
	Note: If you have any other message, do not continue. Call your next level of support.
17	Acknowledge the message by pressing the **Done** button.
18	From the window's Option menu, select the **Delete configuration** menu item.
	The following message is displayed:
	This configuration will be deleted.
	Do you wish to continue?
19	Select the **Yes** button to delete the configuration.
	The following information message is displayed:
	The configuration has been successfully deleted. You may now either create a new ring configuration or exit this tool.
	Do you wish to exit?
20	Select the **Yes** button to close the Configuration Manager: Ring tool.
	The list of configuration under the Span A OPC is automatically updated.
21	From the main screen of the User Session Manager, select the **Logout** button, and acknowledge any confirmation message.
	The OPC returns to the `opc>` *prompt.*
22	After you remove the ring from the Configuration Manager, you must unset the environmental variable:
	unsetenv SOC_TRANSFER↵
	To verify that it has been properly unset, type the following command to see all the environment variables (it should not appear in the list anymore):
	env↵
23	Return to the **OPC User Interface**:
	opcui↵
24	Update the checklist in Table 12-1 and go to Procedure 12-4.
	—**end**—

Procedure 12-4
Restoring the association link to the transferred NEs from Span A

Use this procedure to restore the association link to the transferred NEs from Span A.

Action

Step	Action
1	From the OPC Admin toolset, open a **Unix Shell** session, if none are already open.
	Note: Before executing step 3, ensure that the Span A OPC does not have visibility over the NEs that were transferred into Span B. Since the next steps temporarily restore these NEs in OPC A span of control, both OPCs must not be communicating to these NEs at the same time.
2	To determine if OPC A still has visibility over the transferred NEs, from the Unix Shell type:
	nnsmon -d ↵

If	then
none of the transferred NEs are listed	Go to step 3.
any of the transferred NEs are listed	Temporarily remove CNET cables to isolate the transferred NEs from OPC A span. If you require assistance, call your Nortel Networks technical representative.

Step	Action
3	Restore the association with the first NE being transferred (refer to Table 3-3 on page 3-3) by typing:
	spock -a NE_Number ↵
	where
	NE_Number is the number of the NE as listed in Table 3-3
	`Query completed.` *is displayed.*
4	Repeat step 3 for each NE recorded in Table 3-3.

—**continued**—

Procedure 12-4 (continued)
Restoring the association link to the transferred NEs from Span A

Step	Action
5	Type:
	spock↵
	The OPC MIB and the span of control table agree. line is the last line displayed by the response message.
	If you have another message, do not continue a problem may exist with the Span of Control Table. Call your next level of support.
6	Update the checklist in Table 12-1 and go to the next procedure.

—**end**—

Procedure 12-5
Removing transferred NEs from the commissioning manager

Use this procedure to remove transferred NEs from the commissioning manager.

Action

Step	Action
1	Open the **Commissioning Manager** in Span A OPC.
2	Tab to the **Commissioned Network Element** list.
3	Select the first NE to transfer (refer to Table 3-3 on page 3-3) and from the item menu select the **Delete** tool. *A confirmation dialog appears.*
4	Select the **Yes** button to acknowledge the confirmation dialog. *The NE is removed from the list after several seconds.*
5	Repeat step 2 to 4 for **each** NE recorded in Table 3-3.
6	If you made changes to the network configuration in Procedure 12-4, step 2, restore the configuration as it was before. Verify that no loss of association '?' appears in the Reboot/Load Manager for any system.
7	If no more NEs are commissioned on the Span A OPC, this OPC can be removed and relocated elsewhere (for example, as a backup OPC on Span B).

If	then
no NEs are commissioned on the OPC	go to step 8.
NEs are commissioned on the OPC	go to step 13.

!WARNING!

Make sure there is no NE commissioned on the OPC before proceeding.

—continued—

Procedure 12-5 (continued)
Removing transferred NEs from the commissioning manager

Step	Action
8	Clear all commissioning information on this OPC. See *Commissioning and Testing*, Volume 3.
9	Shutdown the OPC and remove it from the shelf.
10	Verify on the Primary OPC of Span B that no alarms are turned on because the OPC is removed.

If	then
alarms are present	go to step 11.
no alarms are present	go to step 14.

Step	Action
11	To remove alarms created by the removal of the OPC:
	Login to the shelf where the OPC was located, put the OPC out-of-service: **eq opc <g1 or g2>** ↵
	Delete the OPC from the NE it was in:
	delete ↵
12	Go to step 14.
13	Close the Commissioning Manager using the **Exit** option.
14	Update the checklist in Table 12-1 and go to the next chapter.

—**end**—

Verification and clean up

This chapter describes the steps to verify the system status and re-insert a backup OPC, if it is required by the configuration. It also contains the information required to remove the software and files that were used during the OPC Span of Control Consolidation on Span A and Span B OPCs.

How to use this chapter

Perform sequentially the procedures listed in Table 13-1. Use the checklist column to indicate when a procedure is completed.

Table 13-1
Procedure sequence

Task	√
Procedure 13-1 Alarm status	
Procedure 13-2 Checking traffic status	
Procedure 13-3 Removing OPC data files	
Procedure 13-4 Rebooting Span A OPC	
Procedure 13-5 NE database backup and datasynch to backup OPC	
Procedure 13-6 Reconfiguring the OPC port	

Procedure 13-1
Alarm status

Use this procedure to check the alarm status.

Action

Step	Action
1	Verify that both systems are alarm free by opening the **Alarm Monitor**, under the Network Surv toolset.
2	Verify that the system does not exhibit any alarms or loss of association.
	Association should exist with all the NEs under the Span B OPC.
	Association should exist with all the NEs under the Span A OPC, if any NEs are still controlled by that OPC.
	Clear all alarms with operating company personnel.
3	Update the checklist in Table 13-1 and go to Procedure 13-2.

—**end**—

Procedure 13-2
Checking traffic status

Use this procedure to check traffic status.

Action

Step	Action
1	Verify that the DS1 Transport traffic, if any, operates correctly.
	a. Verify that no facility or equipment alarms exist for these DS1 circuits.
	b. Monitor at the DSX-1 panel to ensure valid signals are sent and received.
2	Verify that the DS3 Transport traffic, if any, operates correctly.
	a. Verify that there are no facility or equipment alarms exist for these DS3 circuits.
	b. Monitor at the DSX-3 panel to ensure valid signals are sent and received.
3	Verify that the DS1 Tandem traffic, if any, operates correctly.
	a. Verify that no facility or equipment alarms exist for the DS1 portion of the circuits.
	b. Monitor at the DSX panel to ensure valid signals are sent and received. Select a specific DS0 channel and monitor its content.
4	Verify that the IDLC traffic, if any, operates correctly.
	a. Verify that no alarms are related to IDLC DS1.
	b. Establish phone calls to specific line cards for each host, if in a multi-hosting environment, connected to the consolidated RFT. Monitor these lines from the **eq lc** screen on the AccessNode and post the lines on the DMS-100 switch from the **lns;ltp** level.
5	Verify that the TR-08 traffic, if any, operates correctly.
	a. Verify all DS1 facilities and equipment for each link to the TR-08 switch.
	b. Establish a phone call to a specific line. Monitor that line from the **eq lc** screen on the AccessNode.
6	Verify that the universal traffic, if any, operates correctly.
	Select a pair of line cards that are connected on the FCOT and the RFT and complete a phone call. Monitor the line card behavior from the **eq lc** screen.
7	Update the checklist in Table 13-1 and go to Procedure 13-3.

—end—

Procedure 13-3
Removing OPC data files

Use this procedure to remove OPC data files. It can be useful not to remove the data files generated during this process for a period of 1 or 2 weeks after the completion if a recovery is required.

Action

Step	Action
1	From the OPC Admin toolset in Span A OPC, open a **Unix Shell** session, if none are already open.
2	At the `opc>` prompt, go back to the root directory by typing: **cd /**↵
3	Remove the UDLC/DS1-Tandem/TR-08 cross-connections file: **rm rpv.YYMMDD#.tar**↵ where `rpv.`YYMMDD#`.tar` is the cross connection filename as recorded in Table 6-2 on page 6-5.
4	If your topology is DS1-fed RFT or single-ended RFT, go to step 7.
5	If your topology is point-to-point or VTBM BLSR ring, remove the Configuration STS/VT connections file: **rm conn.XXXX**↵ where `conn.`XXXX is the Configuration STS/VT connection filename as recorded in Table 3-8 on page 3-8.
6	Remove the OPC STS/VT connections file: **rm conn.XXXX**↵ where `conn.`XXXX is the OPC STS/VT connection filename as recorded in Table 3-7 on page 3-7.
7	Repeat steps 1 through 5 with Span B OPC.
8	Update the checklist and go to Procedure 13-4.

—end—

Procedure 13-4
Rebooting Span A OPC

Use this procedure to reboot Span A OPC. After you complete the OPC Span of Control Consolidation, a database verification and Span A OPC reboot is required to ensure that the Cluster Inventory tool does not see the old network element (NE).

Action

Step	Action
1	If Span A OPC does not control any NEs, go to step 18.
	If Span A OPC still controls some NEs, go to the next step.
2	From the OPC Admin toolset, open a **Unix Shell** session, if none are already open.
3	At the `opc>` prompt, go to the following directory:
	cd /iws/brm/nedsb↵
4	Display the contents of that directory:
	ls↵
	A list of files similar to the following appears:
	N1.S1.NE8456.EQ1.RELxxxx.backup1.T0000E444*
	N1.S1.NE8456.EQ1.RELxxxx.current.T0000E4B0*
	These files represent the backup1 and current database backup for each NE.
5	Remove the files, if any, that correspond to the NEs that you deleted from the Span A OPC as part of the Span of Control Consolidation:
	rm <filename> ↵
	where
	<filename> is the name of the backup file to be removed
	Example: `rm N1.S1.NE8456.EQ1.RELxxxx.backup1.T0000E444` ↵
6	After this operation is completed, return to the main screen of the User Session Manager and ensure that the Cluster Inventory tool is closed.
7	Select the **OPC Shutdown** tool under the OPC Admin tool box.
8	Respond to all dialogs up to the point where a dialog requests that you decide if you want to perform a Halt or Restart.

—**continued**—

Procedure 13-4 (continued)
Rebooting Span A OPC

Step	Action
9	Select the **Restart** button. Then select the **OK** button.
	The OPC completes its shutdown and reboots.
10	After the login: prompt reappears, log in to the OPC and verify that the association to all NEs has come back by opening the **Reboot/Load Manager** under the Software Admin tool box.
	Verify that a question mark does not appear beside any of the NEs.
11	Open the **Cluster Inventory** tool to verify that the NEs that are displayed currently exist in the OPC Span of control (compare with the Reboot/Load Manager data). Once the verification is completed, close the tool.
12	**Exit** the Reboot/Load Manager tool.
13	From the Connection Manager window's Options menu, select the **Audit connections…** item.
14	Make sure that all the NEs are Included during the audit.
15	Select the **OK** button.
	The audit is performed and the result is displayed for each NE. If any mismatches are found, do not continue. Call your next level of support.
16	Clear any alarm that might be raised in the network element user interface.
17	Go to step 22.
18	If **Span A OPC** does not control any NEs, select the **OPC Shutdown** tool under the OPC Admin tool box.
19	Respond to all dialogs up to the point where a dialog requests that you decide if you want to perform a Halt or Restart.
20	Access the **Halt** button. Then, select the **OK** button.
	The OPC completes its shutdown and the "Active" LED on the OPC turn s off.
21	When the shutdown is completed, remove the OPC from the Network Element shelf.
22	Update the checklist in Table 13-1 and go to Procedure 13-5.

—end—

Procedure 13-5
NE database backup and datasynch to backup OPC

Use this procedure to perform NE database backups and the method to return
the Backup OPC into Span A, if one was present prior to the OPC Span of
Control Consolidation.

Action

Step	Action
1	If no NEs are present in Span A OPC, skip to step 10.
	If some NEs are still present in Span A OPC, force a NE database backup on all NEs. Type the following in a Unix Shell at the opc> prompt:
	opc> /iws/upr/upr_manage_ne_backups↵
	A database backup request appears for each NE. *A message that the backup has been received appears for each NE.* *A successful completion message appears followed by the opc> prompt.*
2	For any NE where the database backup has failed, log in that NE using the NE login Manager and manually perform a database backup:
	eq sh ↵ **backupdb** ↵
	A successful log is generated after a few minutes.
3	Access the Software Admin OPC tool set and select the **Backup/Restore Manager**.
4	Access the **Query All Backup** option and verify that each NE has a freshly created database backup. If not, repeat step 1.
	Note: The database backup can take up 2 minutes to be reflected on the Backup/Restore Manager - Query All Backup display.
5	Close the Query All Backup window using the **Done** button and then close the tool by selecting the **Exit** option.
6	If the Span A was not equipped with a Backup OPC, proceed to step 10.
	If the Span A was equipped with a Backup OPC, continue with the next steps.
7	Insert the Span A Backup OPC in its appropriate shelf and wait until its reboot process is completed.
	The Backup OPC reboot process should take approximately 5 minutes, when it is completed, the "Active" LED turns on.

—continued—

Procedure 13-5 (continued)
NE database backup and datasynch to backup OPC

Step	Action
8	From the Primary Span A OPC, open the **Commissioning Manager** main window, select the **Transfer data to the Backup OPC** button and acknowledge the confirmation dialog.
	The Primary OPC data is transferred to the Backup OPC. This will take approximately 10 minutes.
9	Once the data transfer is completed, select the **Exit** option of the Commissioning Manager.
10	Repeat steps 1 through 9, with **Span B OPC**.
11	Update the checklist in Table 13-1 and go to Procedure 13-6.

—**end**—

Procedure 13-6
Reconfiguring the OPC port

Use this procedure to reconfigure the OPC port.

Action

Step	Action
1	If Port b (or 1) of the OPCs was configured to settings other than VT-100 before you began the OPC Span of Control Consolidation, return that port to its original state.
2	If the port was connected to an operating system (OS) ensure that communication with the OS has been correctly re-established after the port is re-configured.
3	Ensure that the Span B OPC has all the OS access required to offer the same network access as Span A. Verify this information against Table 3-19 on page 3-20.
4	Update the checklist in Table 13-1.
5	The Span of Control Consolidation process is completed.

—end—

Appendix A: Recovery procedures

This chapter describes how to recover from a STS/VT Connections removal failure. It also contains the instructions to return Span A and Span B to their original states if a major problem occurs.

How to use this chapter

Perform the procedures listed in Table 14-1 as needed.

Table 14-1
Available procedures

Task
Procedure 14-1   Restoring STS/VT connections in Span A OPC
Procedure 14-2   Restoring the OPC and the NEs from consolidation failure

Procedure 14-1
Restoring STS/VT connections in Span A OPC

Use this procedure to restore all the STS/VT connections in Span A OPC as they were before the removal with the stsdump command.

Action

Step	Action
1	Open a **Unix Shell** session from the OPC Admin toolset in Span A OPC, if none are already open.
2	At the opc> prompt, go back to the root directory by typing: **cd /**↵
3	Verify that the OPC STS/VT connections file is still there: **ll conn.XXXX**↵ where conn.*XXXX* is the OPC STS/VT connections filename that you recorded in Table 3-7 on page 3-7. *The file is displayed along with other informations (for example date, and size).*
4	Reprovision the OPC STS/VT connections by entering the following command: **stpprov -n -o < conn.XXXX**↵ where conn.*XXXX* is the OPC STS/VT connections filename as recorded in Table 3-7. *The following message appears:* stpprov: Done (XXX connection provisioned)
5	From the Connection Manager window's Options menu, select the **Audit connections…** item.
6	Make sure that all the NEs are Included during the audit.
7	Select the **OK** button. *The audit is performed and the result is displayed for each NE.*
8	Return to Procedure 12-2.

—**end**—

Procedure 14-2
Restoring the OPC and the NEs from consolidation failure

Use this procedure to restore the OPC and the NEs from consolidation failure. Possible reasons you have decided to restore from a consolidation failure are:

- multiple failures occurred
- you could not recover quickly with the provisioning information you had captured with this process
- the provisioning information is not available to manually reprovision the system.

Action

Step	Action
1	Disconnect the CNET cable between Span A and Span B.
2	Put CNET termination plug in the empty CNET port to avoid association problems.
3	Using the OPC database backup on tape created in Chapter 4, use the **OPC Save and Restore** tool to restore the OPC original data in Span A.
	All the NEs in Span A have regained association with the OPC.
4	Using the OPC database backup on tape created in Chapter 4, use the **OPC Save and Restore** tool to restore the OPC original data in Span B.
	All the NEs in Span B have regained association.
5	Once the system is back to normal, attempt to analyze what was incorrect before you proceed again. It is useful to keep the audit.log files for detailed analysis of the situation on both spans.

—end—

Appendix B: Technical support information

This section lists the technical support available for AccessNode.

24-hour emergency technical assistance

This section explains how to contact 24-hour emergency technical assistance.

If you are here	Then call this number
United States	(800) ASK-ETAS (800) 275-3827
Canada	(613) 226-5456

Non-emergency support and software upgrade support

This section explains how to contact non-emergency support and software upgrade support.

If you are here...	Then call this number
United States Normal business hours 8:00 am - 5:00 pm local time Monday to Friday All other times (for urgent software upgrade support only)	(800) ASK-TRAN (800) 275-8726 (800) ASK-ETAS (800) 275-3827
Canada Normal business hours 8:00 am - 4:00 pm local time Monday to Friday All other times (for urgent software upgrade support only)	Call your regional field service engineering support group. (800) ASK-ETAS (800) 275-3827

Standard repair service: USA

This section explains how to contact US standard repair service.

US standard repair service consists of like-for-like replacement: a replacement circuit pack is shipped from Nortel Networks within five (5) working days after receiving the order.

Call customer service	and...	ship defective unit prepaid to...
(800) 251-1758 and request a Repair Order Number. 7:00 am - 6:00 pm CST Monday to Friday	Mark the defective item with the following: • fmpprn	Nortel Networks 917 Air Park Center Drive Nashville, TN 37217 Attn: Repair and Return

Standard repair service: Canada

This section explains how to contact Canadian standard repair service. Canadian standard repair service consists of the following options:

- **Like-for-like replacement**: A replacement circuit pack is shipped from Nortel Networks within five (5) working days after receiving the order.

- **Repair of the circuit pack**: The repaired circuit pack is shipped from Nortel Networks within fourteen (14) days after receipt of the defective circuit pack.

Call customer service	and...	ship defective unit prepaid to...
(800) 668-1717 (English) (800) 668-1748 (French) and request a Repair Order Number. Monday to Friday 8:00 am - 5:00 pm local time	Mark the defective item with the following: • assigned repair order number • explanation of the problem.	Northern Telecom Canada Ltd. Repair Customer Service Group 9300 Trans Canada Highway St. Laurent, Québec H4S 1K5 CANADA

Emergency repair service: USA

This section explains how to contact US emergency repair service.
A replacement circuit pack is shipped from Nortel Networks within 24 hours of receiving the order.

Call customer service	and...	ship prepaid to...
(800) 251-1758 and request an emergency replacement.	**1)** Give the following: • name • company name • telephone number • exact unit code and name for emergency replacement • ship-to address **2)** Mark the defective item with the assigned emergency repair order number	Nortel Networks 917 Air Park Center Dr. Nashville, TN 37217 Attn: Repair and Return

Emergency repair service: Canada

This section explains how to contact Canadian emergency repair service.
A replacement circuit pack is shipped from Nortel Networks within 24 hours of receiving the order.

Call customer service	and...	ship prepaid to...
Normal business hours Monday to Friday 8:00 am - 5:00 pm local time (800) 668-1717 (English) (800) 668-1748 (French) and request an emergency replacement. All other times: (800) 361-2575 and request an emergency replacement.	**1)** Give the following: • name • company name • telephone number • exact unit code and name for emergency replacement • ship-to address **2)** Mark the defective item with the assigned emergency repair order number	Northern Telecom Canada Ltd. Repair Customer Service Group 9300 Trans Canada Highway St. Laurent, Québec H4S 1K5 CANADA

Index

STS/VT   3-7
  provisioning/verifying   9-5
  removing connections   12-6
  restoring connections   14-2

T

Tandem/TR-08   6-3
TBOS   3-14
  provisioning data   11-3
Technical support   15-1
Telemetry
  E2A   2-8
  TBOS   2-8
Topology configuration   8-3
Topology, deleting   12-8
Traffic   13-3
  status   13-3

U

UDLC/DS1   6-3
Userid
  restoring and assigning   11-4

V

Virtual circuits   5-2
  reprovisioning   11-5
Virtual tributary bandwidth manager   3-7
VTBM
  See Virtual tributary bandwidth
    manager   3-2

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