

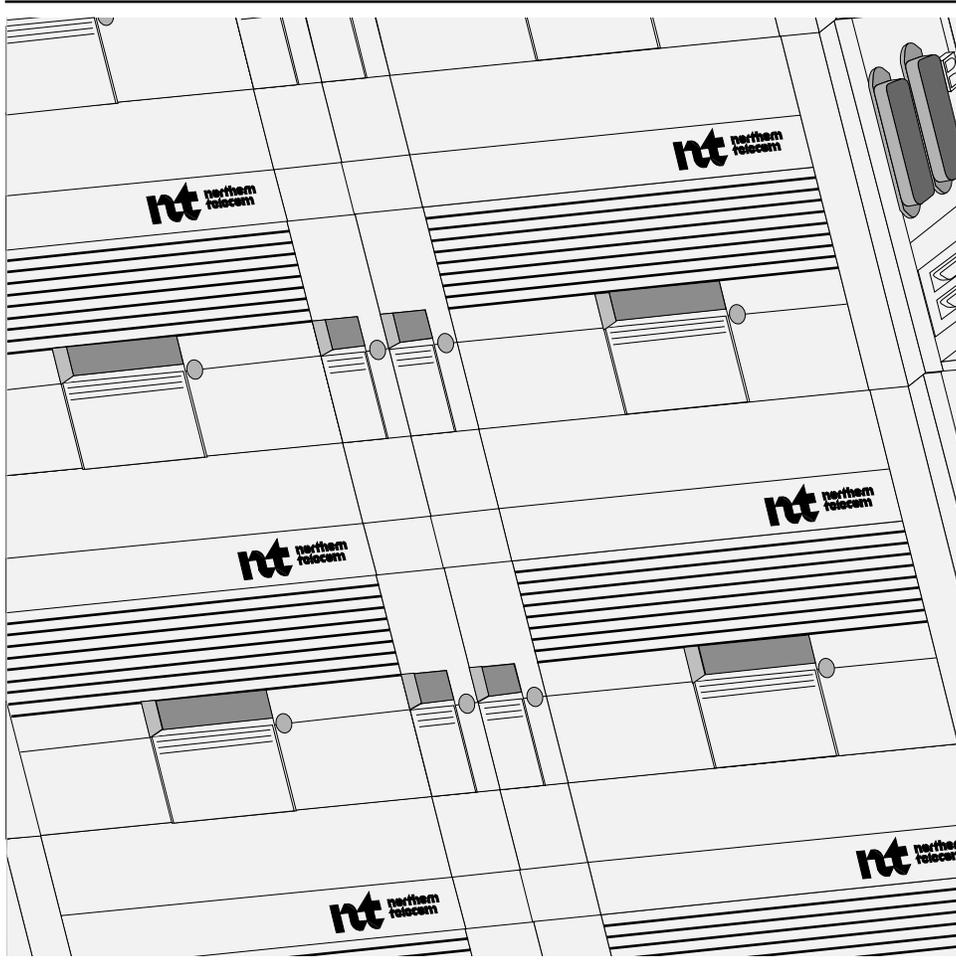
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SONET Products

AccessNode

Removal of AN Nodes in a VTBM Ring

Issue 1.0 February 1999



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Requirements and restrictions

This chapter contains the requirements and restrictions for removing AN nodes in a VTBM ring.

Requirements

Before deleting a VTBM ring node, you must adhere to the following requirements:

- Delete from the switch all integrated circuits (LSR, ISDN, EBS, ILCLSR...) terminating on the network element (NE) to be removed.
- Verify that the IDT is off-line in the DMS host switches.
- Delete from the Provisioning Manager all TR-08 circuits (POTSRT) terminating on the NE to be removed.
- Delete from the Provisioning Manager all special services circuit (DDS, ETO, FXS ...) terminating on the NE to be removed.
- Unassign from the Connection Manager all facility assignments (TR-303, TR-08 or tandem) defined for the NE.
- Equip the primary OPC with a tape drive.
- Verify that the existing VTBM based ring is running the latest version of AccessNode software, has no active high speed or low speed switches, and is alarm free.
- Locate personnel at all affected sites.
- Read “Planning your reconfiguration”, Chapter 2 and complete the appropriate tables before beginning this user guide.
- Inform all OPC users and surveillance personnel about the reconfiguration before it is initiated. Except for reconfiguration personnel, all other users should log out of the system to be reconfigured.

- Ensure that all personnel performing this process are experienced users of both the OPC and the network element user interfaces. For detailed information about OPC and network element user interfaces, refer to the AccessNode documentation.
- Complete this entire process after you begin it. If you are inadvertently logged out of the system during the reconfiguration, refer to Appendix A: Recovery procedures. Following the recovery procedures you are directed back to the main procedure at the point at which the log out occurred.

Restrictions

The following restrictions apply to this user guide:

- You cannot stop the reconfiguration process after you begin it. If for some reason you are logged out of the primary OPC while working through this process, refer to Appendix A: Recovery procedures.
- Lanpar VT100-compatible terminals are not fully VT100 compatible. Do not use them to perform this process.

IMPORTANT

The figures provided in this user guide are for illustration purposes only. The screen display might differ from what is shown in this document. Please refer to the text for the exact information.

Planning your reconfiguration

Some information is required to properly plan and prepare for the procedures in this chapter. Before you begin deleting a VTBM node, you must collect necessary data. This data also is used throughout the process. The tables contained in this section list the required data. They must be filled out before the beginning of the user guide.

Determining the network element (NE) number of the node to be deleted

Enter the NE number for the VTBM ring node to be deleted in Table 2-1.

Table 2-1
Network element number of the node to be deleted

Node #

Procedure 2-1

Collecting span of control information

Use this procedure to collect the information about the span of control.

Action

Step	Action
1	<p>Log in to the primary OPC as the 'root' user. You can log in to the primary OPC through the serial ports available at the NEs or remotely using a telnet session.</p> <p><i>For a reminder on how to log in to an OPC using the NE serial ports, refer to Appendix B: Common procedures, "Logging into the OPC" on page 7-22.</i></p> <p><i>The following prompt appears:</i></p> <pre>opc></pre>
2	<p>At the OPC prompt (opc>), enter:</p> <pre>opcui ↵</pre> <p><i>The User Session Manager appears.</i></p>
3	<p>In the User Session Manager, move to the Commissioning Manager tool then press Ctrl_A (or Keypad 0).</p> <p><i>The main OPC Commissioning Manager window appears.</i></p>
4	<p>Record the primary OPC location (the NE number of the node where this OPC is located) and the backup OPC location (the NE number of the node where this OPC is located) in Table 2-2 on page 2-4.</p> <p>Note 1: If the primary or backup OPC is located in a control (OPC) shelf, it is not listed on this screen. Therefore, record the NE number of the node to which this primary or backup OPC is connected with a CNet cable in Table 2-2 and put a checkmark inside the corresponding CNet brackets.</p> <p>Note 2: If the span of control does not have a backup OPC, enter "Not Equipped" in the "Backup OPC name" field.</p>
5	<p>Tab to the Edit system data button, then press Ctrl_A or Keypad 0).</p> <p><i>A System Commissioning Data screen appears.</i></p>

—continued—

 Procedure 2-1 (continued)

Collecting span of control information

Step	Action
6	Use the value in the OPC name field to obtain the names for the primary and the backup OPCs <ol style="list-style-type: none"> a. Add P to the value of the OPC name to obtain the primary OPC name. Record this value in Table 2-2 on page 2-4. b. Add B to the value of the OPC name to obtain the primary OPC name. Record this value in Table 2-2 on page 2-4.
7	Tab to the Cancel button then press Ctrl_A or (Keypad 0). <i>The Main Commissioning Manager window appears.</i>
8	Close the Commissioning Manager tool: <ol style="list-style-type: none"> a. Display the window menu by pressing Ctrl_L W (or Keypad 6). <i>The window menu appears.</i> b. Select the Exit command by pressing Space (or Keypad 0). <i>The User Session Manager window appears.</i>
9	In the User Session Manager, tab to the Available Tools and move to the Port Configuration tool. Press Ctrl_A (or Keypad 0). <i>The OPC Port Config Mgr appears.</i>
10	Select the Query Configuration option by entering: 1 ↵ <i>A dialog screen appears.</i>
11	Record Port 1 configuration under the "Current primary OPC port 1 configuration" field in Table 2-2 on page 2-4. Press Enter to return to the Main Menu.
12	Exit the Port Configuration tool by choosing the Exit option by entering: 9 ↵ <i>The User Session Manager window appears.</i>

—continued—

2-4 Planning your reconfiguration

Procedure 2-1 (continued)

Collecting span of control information

Table 2-2
OPC and Port information

Information required	Customer input
Primary OPC name (OPCxxxxP)	
Primary OPC location (NE number)	[] CNet
Backup OPC name (OPCxxxxB)	See Note 1
Backup OPC location (NE number)	[] CNet
Current primary OPC port 1 configuration (X.25, terminal, or printer)	
Current backup OPC port 1 configuration (X.25, terminal, or printer)	
Note: If the span of control does not have a backup OPC, enter "Not Equipped" in the "Customer input" column.	

—end—

Procedure 2-2 Determining whether an OPC is located in the node to be deleted

Use this procedure to determine if a primary, or a backup OPC is equipped in the VTBM ring node to be deleted.

Action

Step	Action						
1	<p>Determine if the primary OPC is equipped in the node to be deleted or in a control (OPC) shelf connected to the node to be deleted with a CNet cable.</p> <table border="0"> <tr> <td style="padding-right: 20px;">If the NE number entered in the "Primary OPC location" field in Table 2-2 on page 2-4</td> <td style="text-align: right;">Then</td> </tr> <tr> <td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>Enter the value "primary" in Table 2-3, then go to next section Procedure 2-3</td> </tr> <tr> <td>does not match</td> <td>Go to step 2.</td> </tr> </table>	If the NE number entered in the "Primary OPC location" field in Table 2-2 on page 2-4	Then	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	Enter the value "primary" in Table 2-3, then go to next section Procedure 2-3	does not match	Go to step 2.
If the NE number entered in the "Primary OPC location" field in Table 2-2 on page 2-4	Then						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	Enter the value "primary" in Table 2-3, then go to next section Procedure 2-3						
does not match	Go to step 2.						
2	<p>Determine if the backup OPC is equipped in (or connected to) the node to be deleted.</p> <table border="0"> <tr> <td style="padding-right: 20px;">If the NE number entered in the "Backup OPC location" field in Table 2-2 on page 2-4</td> <td style="text-align: right;">Then</td> </tr> <tr> <td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>enter backup in Table 2-3</td> </tr> <tr> <td>does not match</td> <td>enter none in Table 2-3</td> </tr> </table>	If the NE number entered in the "Backup OPC location" field in Table 2-2 on page 2-4	Then	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	enter backup in Table 2-3	does not match	enter none in Table 2-3
If the NE number entered in the "Backup OPC location" field in Table 2-2 on page 2-4	Then						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	enter backup in Table 2-3						
does not match	enter none in Table 2-3						

**Table 2-3
OPC located in the node to be deleted**

OPC

—end—

Procedure 2-3 Determining the new location for the OPC

Use this procedure to record the new location for the OPC if it is equipped in the node to be deleted or in a control (OPC) shelf connected to the node to be deleted with a CNet cable.

Action

Step	Action						
1	Determine if the node to be deleted is equipped with an OPC or if a control (OPC) shelf is connected to it with a CNet cable. <table><thead><tr><th>If the value in the OPC field in Table 2-3 is</th><th>Then</th></tr></thead><tbody><tr><td>none</td><td>Go to Procedure 2-4.</td></tr><tr><td>anything other than none</td><td>Go to step 2.</td></tr></tbody></table>	If the value in the OPC field in Table 2-3 is	Then	none	Go to Procedure 2-4.	anything other than none	Go to step 2.
If the value in the OPC field in Table 2-3 is	Then						
none	Go to Procedure 2-4.						
anything other than none	Go to step 2.						
2	Select the new location for relocating the OPC and record this information in Table 2-4. Note: The OPC can be installed in an FCOT (ABM or TBM shelf), in a DFA (ABM shelf), or in a control (OPC) shelf (ABM or TBM).						

Table 2-4
New location for the OPC equipped in the node to be deleted

NE #

—end—

Procedure 2-4

Determining the configuration that contains the node to be deleted

Use this procedure to record the configuration that contains the node to be deleted.

Action

Step	Action
1	In the User Session Manager, move to the Configuration Manager tool, then press Ctrl_A (or Keypad 0). <i>The main Configuration Manager screen appears.</i>
2	Record the name of the configuration that contains the node to be deleted in Table 2-5.

Table 2-5
The configuration that contains the node to be deleted

Configuration Name

Note: If more than one ring configuration exists, then use the Edit/Delete Configuration tool to look through the ring configurations to determine the configuration that contains the node to be deleted.

—end—

Procedure 2-5 Recording NE numbers of existing ring system nodes

Use this procedure to record the network element (NE) numbers of the nodes in the existing ring system.

Action

- | Step | Action | | | | | | |
|--|---|------------------|------|--|--|----------------|-----------------------------------|
| 1 | In the Configuration Manager screen, move to the configuration where the node to be deleted resides (also recorded in Table 2-5 on page 2-7), and press Ctrl_L (or Keypad Enter) to display the List item menu. Select the Edit Configuration command by pressing Space (or Keypad 0).
<i>A confirmation dialog appears.</i> | | | | | | |
| 2 | Tab to the Yes button, then press Ctrl_A (or Keypad 0).
<i>The Configuration Manager: Ring ADM main window appears.</i> | | | | | | |
| 3 | Move to the first NE under the “Configured Ring ADM” column. | | | | | | |
| 4 | Determine if that NE needs to be recorded. | | | | | | |
| | <table border="1"> <thead> <tr> <th>If the NE number</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>do not record the NE number in Table 2-6</td> </tr> <tr> <td>does not match</td> <td>record the NE number in Table 2-6</td> </tr> </tbody> </table> | If the NE number | Then | matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1 | do not record the NE number in Table 2-6 | does not match | record the NE number in Table 2-6 |
| If the NE number | Then | | | | | | |
| matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1 | do not record the NE number in Table 2-6 | | | | | | |
| does not match | record the NE number in Table 2-6 | | | | | | |
| | Note: Columns A and B of Table 2-6 on page 2-8 is used later in another procedure. | | | | | | |
| 5 | Repeat step 4 for each remaining NE under the “Configured Ring ADM” column (use the arrow key to move down the list, if necessary). | | | | | | |

Table 2-6
NEs of the existing ring system

NE number	A		B	
	√	Time	√	Time

—end—

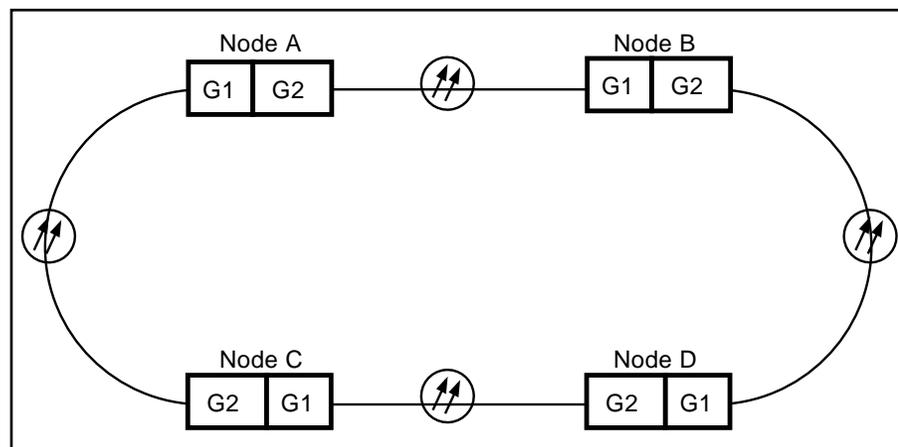
Procedure 2-6

Recording the optical connections to the VTBM ring node

Use this procedure to identify the optical connections to the VTBM ring node to be deleted.

Figure 2-1 shows an example of a ring consisting of 4 nodes that you can use to help you fill out the appropriate tables throughout this procedure. In this example, assume that Node B is the node to be deleted.

Figure 2-1
VTBM ring with 4 nodes



Action

Step	Action
1	Identify the two VTBM ring nodes adjacent to the node to be deleted. (In Figure 2-1 the 2 nodes are: Node A and Node D).
2	Identify the connections to the circuit pack G1 of the node to be deleted (in Figure 2-1 G1 of Node B is connected to G2 of Node A). Record this information in Table 2-7.

—continued—

Procedure 2-6 (continued)

Recording the optical connections to the VTBM ring node

Step	Action
3	Use the Show configuration option in the Ring Configuration Manager to determine the adjacent nodes and the circuit pack groups.

Table 2-7
Connections to G1 of the node to be deleted

Node #	Circuit Pack of the adjacent node

where

Node # is the NE number of the adjacent node that connects to G1 of the node to be deleted (in Figure 2-1, it would be the NE number of Node A).

Circuit Pack of the adjacent node is the circuit pack (G1 or G2) of the adjacent node that is connected to G1 of the node to be deleted (in Figure 2-1 G2 of Node A).

- 4 Identify the connections to the circuit pack G2 of the node to be deleted (in Figure 2-1 G2 of Node B is connected to G1 of Node D). Record this information in Table 2-8.

Table 2-8
Connections to G2 of the node to be deleted

Node #	Circuit Pack of the adjacent node

where

Node # is the NE number of the adjacent node that connects to G2 of the node to be deleted (in Figure 2-1, it would be the NE number of Node D)

Circuit Pack of the adjacent node is the circuit pack (G1 or G2) of the adjacent node that is connected to G2 of the node to be deleted (in Figure 2-1 G1 of Node D)

—continued—

Procedure 2-6 (continued)

Recording the optical connections to the VTBM ring node

- | Step | Action |
|-------------|--|
| 5 | Close the Configuration Manager: Ring ADM tool: <ol style="list-style-type: none">Display the window menu by pressing Ctrl_L W (or Keypad 6).
<i>The window menu appears.</i>Select the Exit command by pressing Space (or Keypad 0).
<i>The Configuration Manager window appears.</i>Display the window menu by pressing Ctrl_L W (or Keypad 6).
<i>The window menu appears.</i>Select the Exit command by pressing Space (or Keypad 0). |

—end—

Procedure 2-7

Recording add/drop traffic terminating at the node to be deleted

Use this procedure to record all DS1/DS3 and OC-3 traffic that terminates at the node to be deleted.

Action

Step	Action						
1	In the User Session Manager, tab to the Available Tools list, move to the Connection Manager tool, then press Ctrl_A (or Keypad 0). <i>The Connection Manager window appears.</i>						
2	Move to the first (or next) connection in the list.						
3	Determine if that connection needs to be recorded.						
	<table border="0"> <tr> <td style="border-bottom: 1px solid black;">If the End NE A or the End NE Z node number</td> <td style="border-bottom: 1px solid black;">Then go to</td> </tr> <tr> <td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>step 4</td> </tr> <tr> <td>does not match</td> <td>step 11</td> </tr> </table>	If the End NE A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 4	does not match	step 11
If the End NE A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 4						
does not match	step 11						
4	Determine if the connection is an STS-Managed or a VT-Managed STS-1 connection.						
	<table border="0"> <tr> <td style="border-bottom: 1px solid black;">If the connection</td> <td style="border-bottom: 1px solid black;">Then go to</td> </tr> <tr> <td>does not show <VT Man> under the "Tributary" field</td> <td>step 5</td> </tr> <tr> <td>shows <VT Man> under the "Tributary" field</td> <td>step 9</td> </tr> </table>	If the connection	Then go to	does not show <VT Man> under the "Tributary" field	step 5	shows <VT Man> under the "Tributary" field	step 9
If the connection	Then go to						
does not show <VT Man> under the "Tributary" field	step 5						
shows <VT Man> under the "Tributary" field	step 9						
5	Enter the NE number (END NE A or END NE Z) that matches the NE number of the node to be deleted (entered in Table 2-1 on page 2-1) under the NE# of the node to be deleted field and the tributary corresponding to that NE under Tributary at the node to be deleted field in Table 2-9 on page 2-13. Note: If the Tributary is a DS1, enter the value "all" in the "Port #" field.						
6	Enter the NE number of the other node that is part of the same connection (END NE A or END NE Z) under End NE# field in Table 2-9 on page 2-13.						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

- | Step | Action |
|------|--|
| 7 | Enter its corresponding tributary under Tributary at the End NE node field in Table 2-9.

Note 1: The OOS state and the A columns are filled out later in this process.
Note 2: If the Tributary is a DS1, enter the value all in the Port # field. |
| 8 | Go to step 11. |

Table 2-9
Add/Drop STS-Managed STS-1 Connections at the node to be deleted

Connec- tion #	NE# of the node to be deleted	Tributary at the node to be deleted			End NE# *	Tributary at the End NE node			OOS State		A	
		Tribu- tary	Circuit Pack Group	Port #		Tribu- tary	Circuit Pack Group	Port #	√	Time	√	Time
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

Note: *End NE# is the NE number of the node that terminates the tributary coming from the node to be deleted.

—continued—

2-14 Planning your reconfiguration

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action
	where
	<Tributary> DS1, DS3 or OC-3
	<Circuit Pack Group> g1,g2,g3,g4,g5,g6,g7,g8,g9,g10,g11 or g12 for DS1 tributaries g1, g2, g3 or g4 for DS3 tributaries g3, g4, g5, g6, g7, g8, g1s or g2s for OC-3 tributaries
	<Port#> all for DS1 tributaries 1,2 or 3 for DS3 and OC-3 tributaries
9	Enter the NE number (END NE A or END NE Z) that matches the NE number of the node to be deleted, entered in Table 2-1 on page 2-1 under the NE# of the node to be deleted field in Table 2-10 on page 2-15.
10	Enter the NE number of the other node that is part of the same connection (END NE A or END NE Z) under End NE# field in Table 2-10 on page 2-15. Note 1: The A and the OOS State columns are filled out later in this process. Note 2: The VT-Managed STS-1 connections are identified in the Connection Manager screen by the value <VT Man> under the Tributary column.

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step Action

Table 2-10
Add/Drop VT-Managed STS-1 Connections at the node to be deleted

Connection Number	Connection ID	NE# of the node to be deleted	End NE# *	OOS State		A	
				√	Time	√	Time
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Note: End NE is the NE number of the node that terminates the VT-Managed STS-1 path coming from the node to be deleted.

11 Repeat steps 2 through 10 for each remaining connection in the connection list.

12 Review Table 2-10 to determine if VT-Managed STS-1 connections are provisioned in the system.

If all fields in Table 2-10 are empty	Then go to step 155
does not match	step 13

13 From the Connection Manager screen, move to the first connection entered in Connection #1 in Table 2-10, then press **Ctrl_A** (or Keypad 0).

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action
14	Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i>
15	Move to the Show contained VTs option, then press Space (or Keypad 0).
16	Tab to the VT connections list.
17	Move to the first (or next) VT-Managed connection in the list.
18	Determine if that VT connection needs to be recorded.
	If the End NE A or the End NE Z node number
	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1 step 19
	does not match step 22
19	Record the tributary that corresponds to the node to be deleted under "Tributary at the node to be deleted" field in Table 2-11 on page 2-17.
20	Record the NE number of the other NE (also entered in "End NE#" for Connection #1 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-11 on page 2-17.
21	Record the tributary corresponding to the other NE (also entered in "End NE#" for Connection #1 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-11 on page 2-17.

Note: The A and the OOS State columns are filled out later in this process.

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
23	Tab to the Done button, then press Ctrl_A (or Keypad 0). <i>The Connection Manager window appears.</i>						
24	Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If all fields corresponding to Connection #2 in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">empty</td> <td>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</td> </tr> <tr> <td style="padding-left: 20px;">does not match</td> <td>Go to step 25.</td> </tr> </tbody> </table>	If all fields corresponding to Connection #2 in Table 2-10 on page 2-15 are	Then	empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.	does not match	Go to step 25.
If all fields corresponding to Connection #2 in Table 2-10 on page 2-15 are	Then						
empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.						
does not match	Go to step 25.						
25	From the Connection Manager screen, move to the connection entered in Connection #2 in Table 2-10 on page 2-15, then press Ctrl_A (or Keypad 0).						
26	Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i>						
27	Move to the Show contained VTs option, then press Space (or Keypad 0). <i>The VT Connections list window appears.</i>						
28	Tab to the VT connections list.						
29	Move to the first (or next) VT connection in the list.						
30	Determine if that VT connection needs to be recorded.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If the End NE_A or the End NE Z node number</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>step 31</td> </tr> <tr> <td style="padding-left: 20px;">does not match</td> <td>step 34</td> </tr> </tbody> </table>	If the End NE_A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 31	does not match	step 34
If the End NE_A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 31						
does not match	step 34						
31	Record the tributary that corresponds to the node to be deleted under Tributary at the node to be deleted field in Table 2-12 on page 2-19.						
32	Record the NE number of the other NE (also entered in End NE# for Connection #2 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-12 on page 2-19.						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

- | Step | Action |
|------|--|
| 33 | Record the tributary corresponding to the other NE (also entered in End NE# for Connection #2 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-12 on page 2-19.

Note: The A and the OOS State columns will be filled out later in this user guide. |
| 34 | Repeat steps 29 through 33 for each remaining VT connection in the connection list. |

Table 2-12
Add/Drop VT connections (#2)

Connec- tion #	Connec- tion ID	Tributary at the node to be deleted			Tributary at the END NE node				OOS State		A	
		Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	NE #	Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	√	Time	√	Time
2												

- 35 Tab to the **Done** button, then press **Ctrl_A** (or Keypad 0).
The Connection Manager window appears.

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
36	Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If all fields corresponding to Connection # 3 in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">empty</td> <td>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</td> </tr> <tr> <td style="padding-left: 20px;">does not match</td> <td>Go to step 37.</td> </tr> </tbody> </table>	If all fields corresponding to Connection # 3 in Table 2-10 on page 2-15 are	Then	empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.	does not match	Go to step 37.
If all fields corresponding to Connection # 3 in Table 2-10 on page 2-15 are	Then						
empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.						
does not match	Go to step 37.						
37	From the Connection Manager screen, move to the connection entered in Connection #3 in Table 2-10 on page 2-15, then press Ctrl_A (or Keypad 0).						
38	Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i>						
39	Move to the Show contained VTs option, then press Space (or Keypad 0). <i>The VT Connections list window appears.</i>						
40	Tab to the VT connections list.						
41	Move to the first (or next) VT connection in the list.						
42	Determine if that VT connection needs to be recorded.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If the End NE A or the End NE Z node number</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>step 43</td> </tr> <tr> <td style="padding-left: 20px;">does not match</td> <td>step 46</td> </tr> </tbody> </table>	If the End NE A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 43	does not match	step 46
If the End NE A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 43						
does not match	step 46						
43	Record the tributary that corresponds to the node to be deleted under "Tributary at the node to be deleted" field in Table 2-1 on page 2-1.						
44	Record the NE number of the other NE (also entered in End NE# for Connection #3 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-1 on page 2-1.						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

- | Step | Action |
|------|--|
| 45 | Record the tributary corresponding to the other NE (also entered in End NE# for Connection #3 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-1 on page 2-1.

Note: The A and the OOS State columns will be filled out later in this user guide. |
| 46 | Repeat steps 41 through 45 for each remaining VT connection in the connection list. |

Table 2-13
Add/Drop VT connections (#3)

Connec- tion #	Connec- tion ID	Tributary at the node to be deleted			Tributary at the END NE node			OOS State		A	
		Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	NE #	Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	√	Time	√
3											

- 47 Tab to the **Done** button then press **Ctrl_A** (or Keypad 0).
The Connection Manager window appears.

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
48	Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.						
	<table border="1"> <thead> <tr> <th>If all fields corresponding to Connection #4 in Table 2-10 on page 2-15 are</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>empty</td> <td>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</td> </tr> <tr> <td>does not match</td> <td>Go to step 49.</td> </tr> </tbody> </table>	If all fields corresponding to Connection #4 in Table 2-10 on page 2-15 are	Then	empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.	does not match	Go to step 49.
If all fields corresponding to Connection #4 in Table 2-10 on page 2-15 are	Then						
empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.						
does not match	Go to step 49.						
49	From the Connection Manager screen, move to the connection entered in Connection #4 in Table 2-10 on page 2-15, then press Ctrl_A (or Keypad 0).						
50	Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i>						
51	Move to the Show contained VTs option, then press Space (or Keypad 0). <i>The VT Connections list window appears.</i>						
52	Tab to the VT connections list.						
53	Move to the first (or next) VT connection in the list.						
54	Determine if that VT connection needs to be recorded.						
	<table border="1"> <thead> <tr> <th>If the End NE A or the End NE Z node number</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>step 55</td> </tr> <tr> <td>does not match</td> <td>step 58</td> </tr> </tbody> </table>	If the End NE A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 55	does not match	step 58
If the End NE A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 55						
does not match	step 58						
55	Record the tributary that corresponds to the node to be deleted under Tributary at the node to be deleted field in Table 2-2 on page 2-4.						
56	Record the NE number of the other NE (also entered in End NE# for Connection #4 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-2 on page 2-4.						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

- | Step | Action |
|------|--|
| 57 | Record the tributary corresponding to the other NE (also entered in End NE# for Connection #4 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-2 on page 2-4.

Note: The A and the OOS State columns will be filled out later in this user guide. |
| 58 | Repeat steps 53 through 57 for each remaining VT connection in the connection list. |

Table 2-14
Add/Drop VT connections (#4)

Connec- tion #	Connec- tion ID	Tributary at the node to be deleted			Tributary at the END NE node				OOS State		A	
		Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	NE #	Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	√	Time	√	Time
4												

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
	<p>where</p> <p><Tributary> DS1, TIC, or OC-3</p> <p><Circuit Pack Group> g1, g2, g3, g4, g5, g6, g7, g8, g9, g10, g11 or g12 for DS1 tributaries</p> <p> 1 for TIC tributaries</p> <p> g3, g4, g5, g6, g7, g8, g1s or g2s for OC-3 tributaries</p> <p><Port / Subport / VT Grp, - VT No> 1 to 14 for DS1 tributaries</p> <p> 1 to 28 for TIC tributaries</p> <p> 1 to 7, 1 to 4 for OC-3 tributaries</p>						
59	<p>Tab to the Done button then press Ctrl_A (or Keypad 0).</p> <p><i>The Connection Manager window appears.</i></p>						
60	<p>Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.</p>						
	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">If all fields corresponding to Connection #5 in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>empty</td> <td> <p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15.</p> <p>Go to step 155.</p> </td> </tr> <tr> <td>does not match</td> <td> <p>Go to step 61.</p> </td> </tr> </tbody> </table>	If all fields corresponding to Connection #5 in Table 2-10 on page 2-15 are	Then	empty	<p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15.</p> <p>Go to step 155.</p>	does not match	<p>Go to step 61.</p>
If all fields corresponding to Connection #5 in Table 2-10 on page 2-15 are	Then						
empty	<p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15.</p> <p>Go to step 155.</p>						
does not match	<p>Go to step 61.</p>						
61	<p>From the Connection Manager screen, move to the connection entered in Connection #5 in Table 2-10 on page 2-15, then press Ctrl_A (or Keypad 0).</p>						
62	<p>Open the connection list item menu by pressing Ctrl_L (or Keypad Enter).</p> <p><i>The list item menu appears.</i></p>						
63	<p>Move to the Show contained VTs option then press Space (or Keypad 0).</p> <p><i>The VT Connections list window appears.</i></p>						
64	<p>Tab to the VT connections list.</p>						
65	<p>Move to the first (or next) VT connection in the list.</p>						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action				
66	<p>Determine if that VT connection needs to be recorded.</p> <p>If the End NE A or the End NE Z node number</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> <p>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</p> </td> <td style="width: 50%; vertical-align: top;"> <p>step 67</p> </td> </tr> <tr> <td> <p>does not match</p> </td> <td style="vertical-align: top;"> <p>step 70</p> </td> </tr> </table>	<p>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</p>	<p>step 67</p>	<p>does not match</p>	<p>step 70</p>
<p>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</p>	<p>step 67</p>				
<p>does not match</p>	<p>step 70</p>				
67	Record the tributary that corresponds to the node to be deleted under "Tributary at the node to be deleted" field in Table 2-3 on page 2-5.				
68	Record the NE number of the other NE (also entered in "End NE#" for Connection #5 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-3 on page 2-5.				
69	Record the tributary corresponding to the other NE (also entered in "End NE#" for Connection #5 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-3 on page 2-5.				
	Note: The A and the OOS State columns will be filled out later in this user guide.				
70	Repeat steps 65 through 69 for each remaining VT connection in the connection list.				

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
72	Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If all fields corresponding to Connection #6 in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">empty</td> <td>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155</td> </tr> <tr> <td style="padding-left: 20px;">does not match</td> <td>go to step 73</td> </tr> </tbody> </table>	If all fields corresponding to Connection #6 in Table 2-10 on page 2-15 are	Then	empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155	does not match	go to step 73
If all fields corresponding to Connection #6 in Table 2-10 on page 2-15 are	Then						
empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155						
does not match	go to step 73						
73	From the Connection Manager screen, move to the connection entered in Connection #6 in Table 2-10 on page 2-15 then press Ctrl_A (or Keypad 0).						
74	Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i>						
75	Move to the Show contained VTs option then press Space (or Keypad 0). <i>The VT Connections list window appears.</i>						
76	Tab to the VT connections list.						
77	Move to the first (or next) VT connection in the list.						
78	Determine if that VT connection needs to be recorded.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If the End NE A or the End NE Z node number</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>step 79</td> </tr> <tr> <td style="padding-left: 20px;">does not match</td> <td>step 82</td> </tr> </tbody> </table>	If the End NE A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 79	does not match	step 82
If the End NE A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 79						
does not match	step 82						
79	Record the tributary that corresponds to the node to be deleted under Tributary at the node to be deleted field in Table 2-16 on page 2-28.						
80	Record the NE number of the other NE (also entered in End NE# for Connection #6 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-16 on page 2-28.						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

- | Step | Action |
|------|--|
| 81 | Record the tributary corresponding to the other NE (also entered in End NE# for Connection #6 in Table 2-10 on page 2-15) which is part of the same connection under Tributary at the End NE node field in Table 2-16 on page 2-28.

Note: The A and the OOS State columns will be filled out later in this user guide. |
| 82 | Repeat steps 77 through 81 for each remaining VT connection in the connection list. |

**Table 2-16
Add/Drop VT connections (#6)**

Conne- tion #	Conne- tion ID	Tributary at the node to be deleted			Tributary at the END NE node			OOS State		A	
		Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	NE #	Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	√	Time	√
6											

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
	<p>where</p> <p><Tributary> DS1, TIC or OC-3</p> <p><Circuit Pack Group> g1,g2,g3,g4,g5,g6,g7,g8,g9,g10,g11 or g12 for DS1 tributaries 1 for TIC tributaries g3, g4, g5, g6, g7, g8, g1s or g2s for OC-3 tributaries</p> <p><Port / Subport/ VT Grp, - VT No> 1 to 14 for DS1 tributaries 1 to 28 for TIC tributaries 1 to 7, 1 to 4 for OC-3 tributaries</p>						
83	<p>Tab to the Done button then press Ctrl_A (or Keypad 0). <i>The Connection Manager window appears.</i></p>						
84	<p>Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.</p> <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">If all fields corresponding to Connection #7 in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>empty</td> <td> <p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p> </td> </tr> <tr> <td>does not match</td> <td> <p>Go to step 85.</p> </td> </tr> </tbody> </table>	If all fields corresponding to Connection #7 in Table 2-10 on page 2-15 are	Then	empty	<p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p>	does not match	<p>Go to step 85.</p>
If all fields corresponding to Connection #7 in Table 2-10 on page 2-15 are	Then						
empty	<p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p>						
does not match	<p>Go to step 85.</p>						
85	<p>From the Connection Manager screen, move to the connection entered in Connection #7 in Table 2-10 on page 2-15 then press Ctrl_A (or Keypad 0).</p>						
86	<p>Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i></p>						
87	<p>Move to the Show contained VTs option then press Space (or Keypad 0). <i>The VT Connections list window appears.</i></p>						
88	<p>Tab to the VT connections list.</p>						
89	<p>Move to the first (or next) VT connection in the list.</p>						

—continued—

2-30 Planning your reconfiguration

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action
90	Determine if that VT connection needs to be recorded. If the End NE A or the End NE Z node number matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1 step 91 does not match step 94
91	Record the tributary that corresponds to the node to be deleted under "Tributary at the node to be deleted" field in Table 2-17 on page 2-31.
92	Record the NE number of the other NE (also entered in End NE# for Connection #7 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-17 on page 2-31.
93	Record the tributary corresponding to the other NE (also entered in End NE# for Connection #7 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-17 on page 2-31. Note: The A and the OOS State columns will be filled out later during this process.
94	Repeat steps 89 through 93 for each remaining VT connection in the connection list.

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
96	Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If all fields corresponding to Connection #8 in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">empty</td> <td>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</td> </tr> <tr> <td style="padding-left: 20px;">does not match</td> <td>Go to step 97.</td> </tr> </tbody> </table>	If all fields corresponding to Connection #8 in Table 2-10 on page 2-15 are	Then	empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.	does not match	Go to step 97.
If all fields corresponding to Connection #8 in Table 2-10 on page 2-15 are	Then						
empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.						
does not match	Go to step 97.						
97	From the Connection Manager screen, move to the connection entered in Connection #8 in Table 2-10 on page 2-15, then press Ctrl_A (or Keypad 0).						
98	Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i>						
99	Move to the Show contained VTs option then press Space (or Keypad 0). <i>The VT Connections list window appears.</i>						
100	Tab to the VT connections list.						
101	Move to the first (or next) VT connection in the list.						
102	Determine if that VT connection needs to be recorded.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If the End NE A or the End NE Z node number</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>step 103</td> </tr> <tr> <td style="padding-left: 20px;">does not match</td> <td>step 106</td> </tr> </tbody> </table>	If the End NE A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 103	does not match	step 106
If the End NE A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 103						
does not match	step 106						
103	Record the tributary that corresponds to the node to be deleted under Tributary at the node to be deleted field in Table 2-6 on page 2-8.						
104	Record the NE number of the other NE (also entered in End NE# for Connection #8 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-6 on page 2-8.						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

- | Step | Action |
|------|--|
| 105 | Record the tributary corresponding to the other NE (also entered in End NE# for Connection #8 in Table 2-10 on page 2-15) which is part of the same connection under Tributary at the End NE node field in Table 2-6 on page 2-8.

Note: The A and the OOS State columns will be filled out later in this user guide. |
| 106 | Repeat steps 101 through 105 for each remaining VT connection in the connection list. |

**Table 2-18
Add/Drop VT connections (#8)**

Conne- tion #	Conne- tion ID	Tributary at the node to be deleted			Tributary at the END NE node			OOS State		A	
		Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	NE #	Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	√	Time	√
8											

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
	<p>where</p> <p><Tributary> DS1, TIC or OC-3</p> <p><Circuit Pack Group> g1,g2,g3,g4,g5,g6,g7,g8,g9,g10,g11 or g12 for DS1 tributaries 1 for TIC tributaries g3, g4, g5, g6, g7, g8, g1s or g2s for OC-3 tributaries</p> <p><Port / Support/ VT Grp, - VT No> 1 to 14 for DS1 tributaries 1 to 28 for TIC tributaries 1 to 7, 1 to 4 for OC-3 tributaries</p>						
107	<p>Tab to the Done button then press Ctrl_A (or Keypad 0). <i>The Connection Manager window appears.</i></p>						
108	<p>Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If all fields corresponding to Connection # 9 in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>empty</td> <td> <p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p> </td> </tr> <tr> <td>does not match</td> <td> <p>Go to step 109.</p> </td> </tr> </tbody> </table>	If all fields corresponding to Connection # 9 in Table 2-10 on page 2-15 are	Then	empty	<p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p>	does not match	<p>Go to step 109.</p>
If all fields corresponding to Connection # 9 in Table 2-10 on page 2-15 are	Then						
empty	<p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p>						
does not match	<p>Go to step 109.</p>						
109	<p>From the Connection Manager screen, move to the connection entered in Connection #9 in Table 2-10 on page 2-15, then press Ctrl_A (or Keypad 0).</p>						
110	<p>Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i></p>						
111	<p>Move to the Show contained VTs option then press Space (or Keypad 0). <i>The VT Connections list window appears.</i></p>						
112	<p>Tab to the VT connections list.</p>						
113	<p>Move to the first (or next) VT connection in the list.</p>						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
114	<p>Determine if that VT connection needs to be recorded.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">If the End NE A or the End NE Z node number</td> <td style="width: 50%;">Then go to</td> </tr> <tr> <td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>step 115</td> </tr> <tr> <td>does not match</td> <td>step 118</td> </tr> </table>	If the End NE A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 115	does not match	step 118
If the End NE A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 115						
does not match	step 118						
115	Record the tributary that corresponds to the node to be deleted under Tributary at the node to be deleted field in Table 2-19 on page 3-36.						
116	Record the NE number of the other NE (also entered in "End NE#" for Connection #9 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-19 on page 2-36.						
117	Record the tributary corresponding to the other NE (also entered in End NE# for Connection #9 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-19 on page 2-36.						
	Note: The A and the OOS State columns will be filled out later in this user guide.						
118	Repeat steps 113 through 117 for each remaining VT connection in the connection list.						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action								
120	Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.								
	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">If all fields corresponding to Connection #10 in Table 2-10 on page 2-15 are</td> <td style="width: 50%;">Then</td> </tr> <tr> <td>empty</td> <td>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</td> </tr> <tr> <td>does not match</td> <td>Go to step 121.</td> </tr> </table>	If all fields corresponding to Connection #10 in Table 2-10 on page 2-15 are	Then	empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.	does not match	Go to step 121.		
If all fields corresponding to Connection #10 in Table 2-10 on page 2-15 are	Then								
empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.								
does not match	Go to step 121.								
121	From the Connection Manager screen, move to the connection entered in Connection #10 in Table 2-10 on page 2-15 then press Ctrl_A (or Keypad 0).								
122	Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i>								
123	Move to the Show contained VTs option then press Space (or Keypad 0). <i>The VT Connections list window appears.</i>								
124	Tab to the VT connections list.								
125	Move to the first (or next) VT connection in the list.								
126	Determine if that VT connection needs to be recorded.								
	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">If the End NE A or the End NE</td> <td style="width: 50%;">Then go to</td> </tr> <tr> <td>Z node number</td> <td></td> </tr> <tr> <td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td> <td>step 127</td> </tr> <tr> <td>does not match</td> <td>step 130</td> </tr> </table>	If the End NE A or the End NE	Then go to	Z node number		matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 127	does not match	step 130
If the End NE A or the End NE	Then go to								
Z node number									
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 127								
does not match	step 130								
127	Record the tributary that corresponds to the node to be deleted under Tributary at the node to be deleted field in Table 2-8 on page 2-10.								
128	Record the NE number of the other NE (also entered in End NE# for Connection #10 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-8 on page 2-10.								

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
	<p>where</p> <p><Tributary> DS1, TIC or OC-3</p> <p><Circuit Pack Group> g1,g2,g3,g4,g5,g6,g7,g8,g9,g10,g11 or g12 for DS1 tributaries 1 for TIC tributaries g3, g4, g5, g6, g7, g8, g1s or g2s for OC-3 tributaries</p> <p><Port / Subport/ VT Grp, - VT No> 1 to 14 for DS1 tributaries 1 to 28 for TIC tributaries 1 to 7, 1 to 4 for OC-3 tributaries</p>						
131	<p>Tab to the Done button then press Ctrl_A (or Keypad 0). <i>The Connection Manager window appears.</i></p>						
132	<p>Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If all fields corresponding to Connection #11 in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>empty</td> <td> <p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p> </td> </tr> <tr> <td>does not match</td> <td> <p>Go to step 133.</p> </td> </tr> </tbody> </table>	If all fields corresponding to Connection #11 in Table 2-10 on page 2-15 are	Then	empty	<p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p>	does not match	<p>Go to step 133.</p>
If all fields corresponding to Connection #11 in Table 2-10 on page 2-15 are	Then						
empty	<p>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</p>						
does not match	<p>Go to step 133.</p>						
133	<p>From the Connection Manager screen, move to the connection entered in Connection #11 in Table 2-10 on page 2-15, then press Ctrl_A (or Keypad 0).</p>						
134	<p>Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i></p>						
135	<p>Move to the Show contained VTs option then press Space (or Keypad 0). <i>The VT Connections list window appears.</i></p>						
136	<p>Tab to the VT connections list.</p>						
137	<p>Move to the first (or next) VT connection in the list.</p>						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
138	Determine if that VT connection needs to be recorded. <table><thead><tr><th>If the End NE A or the End NE Z node number</th><th>Then go to</th></tr></thead><tbody><tr><td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td><td>step 139</td></tr><tr><td>does not match</td><td>step 142</td></tr></tbody></table>	If the End NE A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 139	does not match	step 142
If the End NE A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 139						
does not match	step 142						
139	Record the tributary that corresponds to the node to be deleted under Tributary at the node to be deleted field in Table 2-21 on page 2-41.						
140	Record the NE number of the other NE (also entered in End NE# for Connection #11 in Table 2-10 on page 2-15) which is part of the same connection under NE # in Table 2-21 on page 2-41.						
141	Record the tributary corresponding to the other NE (also entered in End NE# for Connection #11 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-21 on page 2-41. Note: The A and the OOS State columns will be filled out later in this user guide.						
142	Repeat steps 137 through 141 for each remaining VT connection in the connection list.						

—continued—

Procedure 2-7 (continued)
Recording add/drop traffic terminating at the node to be deleted

Step Action

Table 2-21
Add//Drop VT connections (#11)

Conne- tion #	Conne- tion ID	Tributary at the node to be deleted			Tributary at the END NE node				OOS State		A	
		Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	NE #	Tribu- tary	Circuit Pack Group	Port (DS1)/ Support (TIC)/ VT Grp VT No (OC-3)	√	Time	√	Time
11												

where

- <Tributary> **DS1, TIC or OC-3**
- <Circuit Pack Group> **g1,g2,g3,g4,g5,g6,g7,g8,g9,g10,g11 or g12** for DS1 tributaries
 1 for TIC tributaries
 g3, g4, g5, g6, g7, g8, g1s or g2s for OC-3 tributaries
- <Port / Support/ VT Grp, - VT No> **1 to 14** for DS1 tributaries
 1 to 28 for TIC tributaries
 1 to 7, 1 to 4 for OC-3 tributaries

143 Tab to the **Done** button then press **Ctrl_A** (or Keypad 0).
The Connection Manager window appears.

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step	Action						
144	Using Table 2-10 on page 2-15, determine if more VT connections terminate at the node to be deleted. <table><thead><tr><th>If all fields corresponding to Connection #12 in Table 2-10 on page 2-15 are</th><th>Then</th></tr></thead><tbody><tr><td>empty</td><td>you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.</td></tr><tr><td>does not match</td><td>Go to step 145.</td></tr></tbody></table>	If all fields corresponding to Connection #12 in Table 2-10 on page 2-15 are	Then	empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.	does not match	Go to step 145.
If all fields corresponding to Connection #12 in Table 2-10 on page 2-15 are	Then						
empty	you have finished recording the VT connections for the last add/drop VT-Managed STS-1 Connection in Table 2-10 on page 2-15. Go to step 155.						
does not match	Go to step 145.						
145	From the Connection Manager screen, move to the connection entered in Connection #12 in Table 2-10 on page 2-15, then press Ctrl_A (or Keypad 0).						
146	Open the connection list item menu by pressing Ctrl_L (or Keypad Enter). <i>The list item menu appears.</i>						
147	Move to the Show contained VTs option then press Space (or Keypad 0). <i>The VT Connections list window appears.</i>						
148	Tab to the VT connections list.						
149	Move to the first (or next) VT connection in the list.						
150	Determine if that VT connection needs to be recorded. <table><thead><tr><th>If the End NE A or the End NE Z node number</th><th>Then go to</th></tr></thead><tbody><tr><td>matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1</td><td>step 151</td></tr><tr><td>does not match</td><td>step 154</td></tr></tbody></table>	If the End NE A or the End NE Z node number	Then go to	matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 151	does not match	step 154
If the End NE A or the End NE Z node number	Then go to						
matches the NE number of the node to be deleted entered in Table 2-1 on page 2-1	step 151						
does not match	step 154						

—continued—

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

- | Step | Action |
|------|---|
| 151 | Record the tributary that corresponds to the node to be deleted under "Tributary at the node to be deleted" field in Table 2-22 on page 2-43. |
| 152 | Record the tributary corresponding to the other NE (also entered in "End NE#" for Connection #12 in Table 2-10 on page 2-15) which is part of the same connection under "Tributary at the End NE node" field in Table 2-22 on page 2-43.

Note: The A and the OOS State columns will be filled out later in this user guide. |
| 153 | Repeat steps 149 through 152 for each remaining VT connection in the connection list. |

Table 2-22
Add/Drop VT connections (#12)

Connec- tion #	Connec- tion ID	Tributary at the node to be deleted			Tributary at the END NE node				OOS State		A	
		Tribu- tary	Circuit Pack Group	Port (DS1)/ Subport (TIC)/ VT Grp VT No (OC-3)	NE #	Tribu- tary	Circuit Pack Group	Port (DS1)/ Subport (TIC)/ VT Grp VT No (OC-3)	√	Time	√	Time
12												

—continued—

2-44 Planning your reconfiguration

Procedure 2-7 (continued)

Recording add/drop traffic terminating at the node to be deleted

Step Action

where

<Tributary> **DS1, TIC or OC-3**

<Circuit Pack
Group> **g1,g2,g3,g4,g5,g6,g7,g8,g9,g10,g11 or g12** for DS1
tributaries

1 for TIC tributaries

g3, g4, g5, g6, g7, g8, g1s or g2s for OC-3 tributaries

<Port / Subport/
VT Grp, - VT No> **1 to 14** for DS1 tributaries

1 to 28 for TIC tributaries

1 to 7, 1 to 4 for OC-3 tributaries

154 Tab to the **Done** button then press **Ctrl_A** (or Keypad 0).

The Connection Manager window appears.

155 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 User Session Manager appears.

—end—

Procedure 2-8

Determining need for changing optical circuit packs at adjacent nodes

Use this procedure to determine if the OC-12 Virtual Tributary Bandwidth Management (VTBM) optical interface circuit packs need to be changed on either of the two adjacent nodes to the node to be deleted.

Consider the following scenarios to help you identify if you have optics that need to be changed:

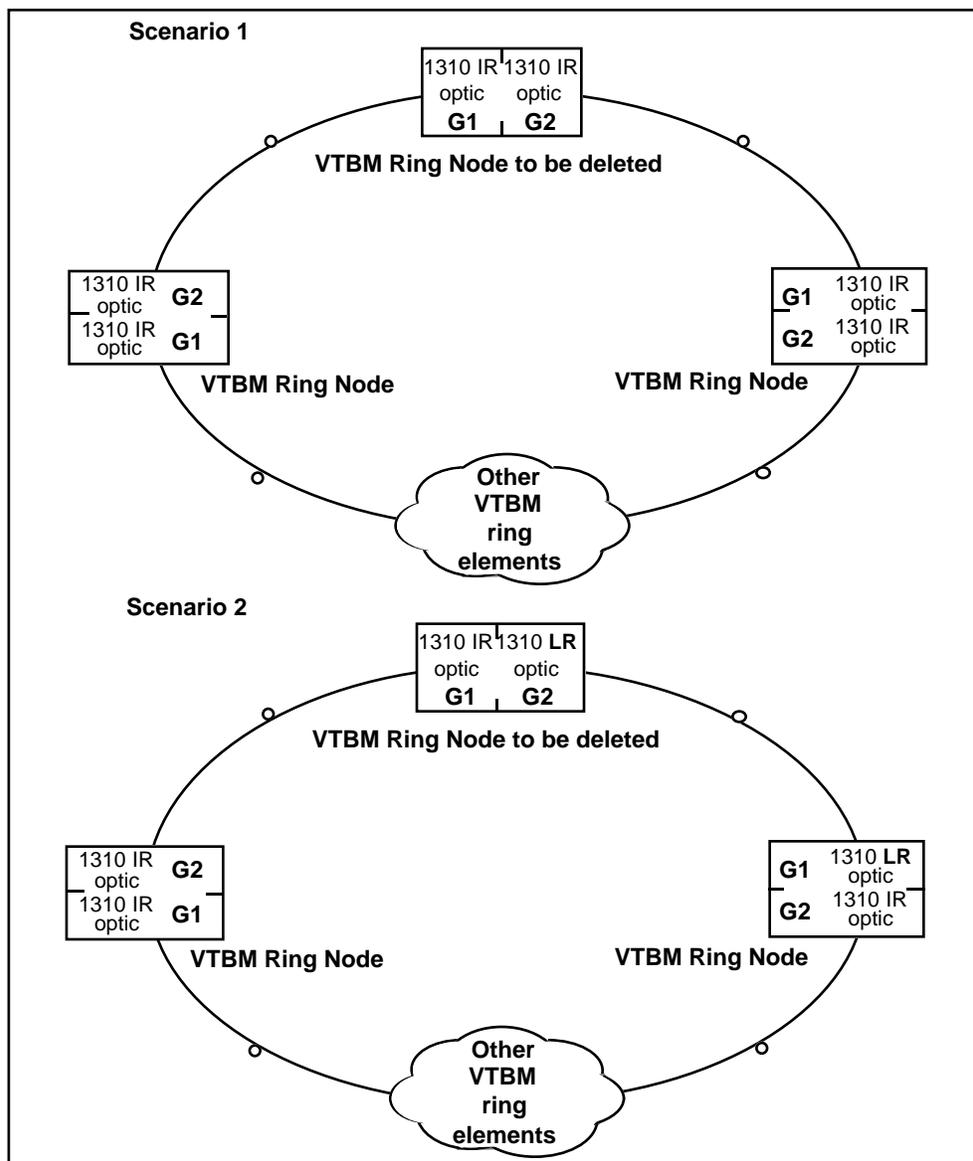
- In the first scenario, no optical circuit pack changes need to be performed since both site 1 and site 3 have already the same type of optics.
- In the second scenario, the VTBM ring node to be removed has a 1310 IR optical circuit pack in one direction, and a 1310 LR optical circuit pack in the other direction. Therefore, the optical circuit pack at one of the two sites (site 1 or site 3) needs to be changed before cabling out the node at site 2. Figure 2-2 shows the two scenarios.

—continued—

Procedure 2-8 (continued)

Determining need for change of optical circuit packs at adjacent nodes

Figure 2-2
Scenarios for deleting VTBM Ring node



—continued—

 Procedure 2-8 (continued)

Determining need for change of optical circuit packs at adjacent nodes

Action

Step	Action
1	In the User Session Manager, tab to the Available tools list, move to the NE Login Manager tool then press Ctrl_A (or Keypad 0). <i>The NE Login Manager main window appears.</i>
2	Determine the NE of one of the two nodes adjacent to the node to be deleted that you recorded in Table 2-7 on page 2-10. Enter it in the NE field.
3	Tab to the Login button and then press Ctrl_A (or Keypad 0). <i>The following prompt appears:</i> Enter User Name >
4	Enter the admin userid: <admin userid> ↵ <i>The NE prompts you to enter the password:</i> Enter Password >
5	Enter the admin password: <admin password> ↵ <i>The NE user interface appears.</i>
6	Access the OC-12 equipment screen by entering: eq oc12 <circuit pack group> ↵ where <circuit pack group> is the value (g1 or g2) entered in Table 2-7 on page 2-10 <i>The OC-12 Equipment screen appears.</i>
7	In Table 2-23, record the PEC (for example NT7E05BF) displayed in the "Circuit Packs" field of the OC-12 Equipment screen.

—continued—

Procedure 2-8 (continued)

Determining need for change of optical circuit packs at adjacent nodes

Step Action

Table 2-23
PEC of the circuit pack group connected to G1 of the node to be deleted

PEC of the circuit pack connected to G1 of the node to be deleted

8 Determine the type of that circuit pack.

If the PEC is	Then
NT7E05Bx	enter the value "1310 IR" in Table 2-24
NT7E05Ax	enter the value "1310 LR" in Table 2-24

where x is **F** for FC connectors
 G for ST connectors
 H for SC connectors

Table 2-24
Type of the circuit pack which is connected to G1 of the node to be deleted

Type of the circuit pack which is connected to G1 of the node to be deleted

9 Log out of the NE by entering:

logout ↵

The following message appears.

Press return to exit.

10 Press the **Return** key.

The NE Login Manager Main window appears.

11 Determine the NE of the other node adjacent to the node to be deleted that you recorded in Table 2-8 on page 2-10 and enter it in the NE field.

12 Tab to the **Login** button and then press **Ctrl_A** (or Keypad 0).

The following prompt appears:

Enter User Name
 >

—continued—

Procedure 2-8 (continued)

Determining need for change of optical circuit packs at adjacent nodes

- | Step | Action |
|------|--|
| 13 | Enter the admin userid:
<admin userid> ↵
<i>The NE prompts you to enter the password:</i>
Enter Password
> |
| 14 | Enter the admin password:
<admin password> ↵
<i>The NE user interface appears.</i> |
| 15 | Access the OC-12 equipment by entering:
eq oc12 <circuit pack group> ↵

where

<circuit pack group> is the value (g1 or g2) entered in Table 2-8 on page 2-10

<i>The Shelf Inventory screen appears.</i> |
| 16 | In Table 2-25, record the PEC (for example NT7E05BF) displayed in the "Circuit Packs" field of the OC-12 Equipment screen. |

Table 2-25
PEC of the circuit pack group connected to G2 of the node to be deleted

PEC of the circuit pack connected to G2 of the node to be deleted

- 17 Determine the type of that circuit pack.
- | If the PEC is | Then |
|---------------|---|
| NT7E05Bx | enter the value "1310 IR" in Table 2-26 |
| NT7E05Ax | enter the value "1310 LR" in Table 2-26 |

where **x** is

- F** for FC connectors
- G** for ST connectors
- H** for SC connectors

—continued—

Procedure 2-8 (continued)

Determining need for change of optical circuit packs at adjacent nodes

Step Action

Table 2-26
Type of the circuit pack connected to G2 of the node to be deleted

Type of the circuit pack connected to G2 of the node to be deleted

- 18** Logout of the NE by entering:
logout ↵
The following message appears.
Press return to exit.
- 19** Press the **Return** key.
The NE Login Manager Main window appears.
- 20** To close the NE Login 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 User Session Manager main window appears
- 21** In the User Session Manager, tab to the **Logout** button then press **Ctrl_A** (or Keypad 0).
A confirmation dialog appears.
- 22** In the confirmation dialog, tab to the **Logout** button then press **Ctrl_A** (or Keypad 0).
The following prompt appears:
opc>
- 23** Log out from the OPC by entering:
logout ↵
- 24** Review Table 2-24 on page 2-48 and Table 2-26 on page 2-50 to determine if the optical circuit pack of one of the adjacent node which is currently connected to G1 of the VTBM ring node to be deleted needs to be changed. If so, in Table 2-27 enter the type of the optical circuit pack that will be used as replacement.

—continued—

Procedure 2-8 (continued)

Determining need for change of optical circuit packs at adjacent nodes

Step Action

**Table 2-27
New circuit pack**

Type of the new circuit pack at the adjacent node currently connected to G1 of the node being deleted

Note: If no change is to be done on the circuit pack of the adjacent node that is connected to G1 of the node to be deleted, enter the value “none” in Table 2-27.

- 25 Review Table 2-24 on page 2-48 and Table 2-26 on page 2-50 to determine if the optical circuit pack of the other adjacent node that is currently connected to G2 of the VTBM ring node to be deleted needs to be changed. If so, in Table 2-28 enter the type of the optical circuit pack that will be used as replacement.

**Table 2-28
New circuit pack**

Type of the new circuit pack at the adjacent node currently connected to G2 of the node being deleted

Note: If no change is to be done on the circuit pack of the adjacent node which is connected to G2 of the node to be deleted, enter the value “none” in Table 2-28.

—end—

Tools and materials requirements

This chapter contains the requirements for the reconfiguration.

Information required

The following information is required before starting the reconfiguration.

√	Information description
	root passwords for the primary and backup OPCs
	administrative passwords for all the network elements

Tools required

Ensure that you have the following tools available before starting the reconfiguration. Be sure to note where the tools are to be located.

- antistatic wriststrap
- two fiber cleaning kits (see Note)
- two optical power meters and necessary optical patchcords to measure transmit output power (see Note)
- two 1/4 in. flathead screwdrivers (see Note)

Note: This equipment is required at the sites of the two nodes adjacent to the node to be deleted.

Materials required

Ensure that you have the following materials before starting the reconfiguration.

- two VT100-compatible terminals (one at the primary OPC site and one at the site of the node to be deleted if the primary and/or backup OPC needs to be relocated)
- NT7E44RA or RB cable for terminal to OPC port 1 connection (required at the primary OPC site)
- two NT7E44FA or FB cable for terminal to NE UI port 2 connection (one required at any site to reconfigure the primary or backup OPC port 1 if port 1 is not configured as terminal)
- set of AccessNode documentation
- blank DDS tape for backup

Procedure overview

This chapter contains a general overview of all the procedures required to execute the reconfiguration with the time estimate for the execution of each procedure.



CAUTION

System troubleshooting

If you encounter any situation that deviates from the behavior described in this document, do not attempt to troubleshoot the system. Call your Nortel support group (see Appendix C: Technical support information).

Typical reconfiguration times

To determine the duration of the “Deleting a VTBM ring node” procedure, refer to Table 4-1 below.

Table 4-1
Task time schedule

Procedure	Title	Approximate time
5-1	Verifying the system	5 min/network element +30 min, see Note 1
5-2	Saving pre-system reconfiguration data to tape	40 min or less, see Note 2
5-3	Relocating the OPC	20 min+
5-4	Deactivating add/drop facilities at the node being deleted	30 min
5-5	Deleting Add/Drop connections at the node being deleted	30 min
5-6	Deleting ring ADM configuration data for the node being deleted	30 min
—continued—		

Table 4-1
Task time schedule (continued)

Procedure	Title	Approximate time
5-7	Deleting commissioning data for the node being deleted	30 min
5-8	Audit connections	30 min
5-9	Cabling out the VTBM node being deleted	30 min
5-10	Post-system reconfiguration verification	5 min/network element
5-11	Saving post-system reconfiguration to tape	40 min or less
Note 1: This procedure checks system sanity. It does not impact system operation. This procedure can be carried out prior to the maintenance window.		
Note 2: This procedure backs up the system data onto tape and will not impact system operation. This procedure can be carried out prior to the maintenance window.		
—end—		

Procedures descriptions

Table 4-2 describes the procedures in the remainder of this NTP. The process is broken down into several procedures. You must go through each of these procedures. Depending on which options you use when deleting a VTBM ring node, you may be instructed not to perform all the steps in the procedure.

Table 4-2
Procedure description

Procedure no.	Title	Description
5-1	Verifying the system	Verifies that the existing ring system is running alarm free and operating in a normal state
5-2	Saving pre-system reconfiguration data to tape	Saves the existing VTBM based ring system data to tape before proceeding with the reconfiguration. This procedure is needed if it is necessary to restore the system to its previous state.
5-3	Relocating the OPC	Relocates the primary or backup OPC if it is equipped in the VTBM ring node to be deleted. If the primary or backup OPC does not need to be relocated, you can skip this procedure. See Table 2-3 on page 2-5 and Table 2-4 on page 2-6.
5-4	Deactivating add/drop facilities at the node being deleted	Deprovisions the facilities of all add/drop DS1/DS3/OC-3 traffic that terminates or originates at the node to be deleted
5-5	Deleting Add/Drop connections at the node being deleted	Deletes all STS-1 connections associated with the node being deleted
5-6	Deleting ring ADM configuration data for the node being deleted	Deletes the Configuration data of the node being deleted
5-7	Deleting commissioning data for the node being deleted	Deletes the commissioning data of the node being deleted
5-8	Audit connections	Audits the connections thus ensuring data connection consistency between the OPC and the network elements after a reconfiguration
—continued—		

4-4 Procedure overview

Table 4-2
Procedure description (continued)

Procedure no.	Title	Description
5-9	Cabling out the VTBM node being deleted	Removes the node being deleted from the existing VTBM ring
5-10	Post-system reconfiguration verification	Performs a system verification after completion of the reconfiguration, and sanity checks on each NE. This ensures that the system is, and continues to operate trouble free.
5-11	Saving post-system reconfiguration to tape	Performs an OPC data save to tape, and synchronizes the primary and backup OPCs
Appendix A	Recovery instructions	Details the action to take if connection is lost to the OPC
Appendix B	Common procedures	Contains basic instructional procedures that have been copied from AccessNode documentation to simplify user referencing
7-1	Changing the OPC date and time	Changes the date, time, or time zone code on an OPC
7-2	Basic optical tests	Measures the optical transmit and receive power levels
7-3	Configuring OPC port 1	Configures the OPC port 1 for terminal, printer, or X.25 operation
7-4	Shutting down or restarting an OPC	Outlines the steps required to shut down or restart an OPC
7-5	Logging into the OPC	Enables you to log into an OPC as a 'root' user from the OPC port 1 or the network element user interface port 2
7-6	Replacing an optical interface circuit pack	Replaces an optical circuit pack with another optical circuit pack at a VTBM ring node site
7-7	Verifying the firmware on an OC-12 VTBM circuit pack	Verifies that the OC-12 VTBM circuit pack has the correct firmware load
Appendix C	Technical support information	lists Nortel contacts and phone numbers for Canada and the United States
—end—		

Deleting a VTBM ring node

This chapter contains the procedures for deleting a VTBM ring node from an existing VTBM based ring system.

Any procedures or information used only in special circumstances in the Appendices to this user guide. The procedures indicate when you need to access this information.

Before performing the following procedures you must read and complete the previous chapters ensure a smooth reconfiguration. You must complete the appropriate tables in the “Planning your reconfiguration” chapter before the following procedures can be executed.

**CAUTION****Reconfiguration problems**

If you encounter any situation that deviates from the behavior described in this document, call your next level of support or your Nortel support group (see Appendix C: Technical support information). Do not attempt to troubleshoot the system.

Procedure 5-1 Verifying the system

Use this procedure to verify that the existing ring system is running alarm free and operating in a normal state.

Requirements

To do this procedure, you must:

- have read all the information in the previous chapters of this user guide and complied with all the set up conditions
- ensure that personnel performing this procedure have root access to the primary OPC
- ensure that personnel performing this procedure have admin access to all the network elements within the system that is being reconfigured

Action

Step	Action						
1	Refer to Table 2-2 on page 2-4 to determine the configuration for the primary OPC port 1. <table><thead><tr><th>If the value in the “Current primary OPC port 1 configuration” field is</th><th>Then</th></tr></thead><tbody><tr><td>terminal</td><td>go to step 2</td></tr><tr><td>printer or X.25</td><td>go to Procedure 7-3, “Configuring OPC port 1” on page 7-10, to reconfigure port 1 as terminal</td></tr></tbody></table>	If the value in the “Current primary OPC port 1 configuration” field is	Then	terminal	go to step 2	printer or X.25	go to Procedure 7-3, “Configuring OPC port 1” on page 7-10, to reconfigure port 1 as terminal
If the value in the “Current primary OPC port 1 configuration” field is	Then						
terminal	go to step 2						
printer or X.25	go to Procedure 7-3, “Configuring OPC port 1” on page 7-10, to reconfigure port 1 as terminal						
2	Log in to the primary OPC as the root user using the primary OPC port 1 or the primary OPC ethernet port through a telnet session. Note: For a reminder on how to log in to an OPC, refer to Procedure 7-5. The following prompt is displayed: opc>						

—continued—

Procedure 5-1 (continued)
Verifying the system

Step	Action								
Verifying state of OPCs									
3	Access the User Session Manager by entering: opcui ↵ <i>The User Session Manager window is displayed.</i>								
4	Tab to the Open tools list, move to the OPC Status tool, then press Ctrl_A (or Keypad 0). <i>The primary and backup OPC status are displayed.</i>								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is other than "Not Equipped" and the OPC Status window shows the primary OPC is active and the backup OPC is inactive</td> <td>go to step 5</td> </tr> <tr> <td>the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is "Not Equipped" and the OPC Status window shows the primary OPC is active</td> <td>go to step 5</td> </tr> <tr> <td>the OPC(s) are in any other state</td> <td>contact your next level of support or your Nortel support group</td> </tr> </tbody> </table>	If	Then	the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is other than "Not Equipped" and the OPC Status window shows the primary OPC is active and the backup OPC is inactive	go to step 5	the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is "Not Equipped" and the OPC Status window shows the primary OPC is active	go to step 5	the OPC(s) are in any other state	contact your next level of support or your Nortel support group
If	Then								
the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is other than "Not Equipped" and the OPC Status window shows the primary OPC is active and the backup OPC is inactive	go to step 5								
the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is "Not Equipped" and the OPC Status window shows the primary OPC is active	go to step 5								
the OPC(s) are in any other state	contact your next level of support or your Nortel support group								
5	Return to the User Session Manager by pressing Ctrl_T 0 .								
Verifying network element association									
6	Check in the bottom left corner of the OPC user interface screen to ensure '?' (a '?' is an indication of a loss of association) does not appear. Re-establish any loss of communications. If this cannot be done, contact your next level of support or your Nortel support group.								

—continued—

5-4 Deleting a VTBM ring node

Procedure 5-1 (continued)

Verifying the system

Step	Action
------	--------

Logging in to a network element

- 7** In the User Session Manager, tab to the Available tools list, move to the NE Login Manager tool and select it by pressing **Ctrl_A** (or Keypad 0).
The NE Login Manager main window is displayed.
- 8** Look in Table 2-6 on page 2-8, tab to the Available Nodes window and select the first network element that is not checked off in column **A** in Table 2-6 on page 2-8.
Note 1: The first time you go through this step none of the NEs will be checked off in column A in Table 2-6 on page 2-8. Select the first one.
Note 2: If you are repeating this step, you must tab to the network element field.
- 9** Tab to the **Login** button, then press **Ctrl_A** (or Keypad 0).
The following prompt is displayed:
Enter User Name
>
- 10** At the prompt (>), enter the admin userid:
<admin userid> ↵
The network element prompts you to enter the password:
Enter Password
>
- 11** Enter the admin password:
<admin password> ↵
The network element user interface is displayed.

Running the network element exerciser

- 12** Run the exerciser by entering:
eq sh;exercise ↵
The following message is displayed:
The shelf exerciser has been initiated. Please refer to EQP logs for results.
The Exerciser field indicates when the exerciser is running and when it has terminated. Wait for the Exerciser field to display 'off' before proceeding with the next step.

—continued—

 Procedure 5-1 (continued)
Verifying the system

Step	Action
------	--------

Verifying the network element logs

13 Access the logs menu by entering:

fwp ↵
logutil ↵

The following message is displayed:

LOGUTIL:

14 View the results of the exerciser by entering:

open eqp ↵

The EQP608 Exerciser Results log is displayed.

If	Then
----	------

the exerciser passed in all cases	go to step 16
-----------------------------------	---------------

the exerciser did not run successfully (that is, the exerciser results show failed, aborted, or not run)	go to the next step.
--	----------------------

15 For all the results that show 'not run' determine if one of the following situations apply:

- The results show 'not run' for the OC-12. The OC-12 working units have no protection or the protection channel is active.
- The results show 'not run' for an OC-3 tributary. The OC-3 working units have no protection or the protection channel is active.
- The results show 'not run' for a DS3 or DS1 mapper. The working units have no protection, or all the facilities carried by the DS3 or DS1 working units are in the out-of-service state.

If all the results that show 'not run'	Then
--	------

can be explained from the above list	go to step 16
--------------------------------------	---------------

cannot be explained from the above list	contact your next level of support or your Nortel support group
---	---

—continued—

5-6 Deleting a VTBM ring node

Procedure 5-1 (continued)

Verifying the system

Step Action

Checking for outstanding swerrs

16 Open the software error log by entering:
open swerr ↵

If the “Log empty” message	Then
is displayed	go to step 17
otherwise	contact your next level of support or your Nortel support group

Logging out from the network element

17 Log out of the network element by entering:
logout ↵

The following message is displayed.

Press return to exit.

18 Press the **Return** key.

The NE Login Manager Main window is displayed.

19 Repeat steps 8 to 18 for each remaining NE in Table 2-6 on page 2-8.

As you complete each network element, check off and record in column **A** in Table 2-6 on page 2-8 the time this step was executed.

20 Repeat steps 8 to 18 for the node to be deleted entered in Table 2-1 on page 2-1.

21 Close the NE Login Manager tool by doing the following:

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

The window menu is displayed.

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

The User Session Manager main window is displayed.

—continued—

 Procedure 5-1 (continued)
Verifying the system

Step	Action
Checking for outstanding logs and alarms	
22	In the User Session Manager, tab to the Available tools lists, move to the Event Browser tool, then press Ctrl_A (or Keypad 0). <i>The Event Browser main window, similar to the following, is displayed.</i>
23	In the Event Browser tool, open the List item menu by pressing Ctrl_L / (or Keypad 3).
24	Move to the Filter option, then press Space (or Keypad 0). <i>The Events List Filter dialog is displayed.</i>
25	In the Number of events field, ensure that the field is set to retrieve the maximum number of events (500). Note: You can use the Number of events field to limit the number of events displayed. Events not displayed are not lost, and can be viewed by resetting this field. The maximum number of events retrieved is 500.
26	To modify the number of events displayed: <ol style="list-style-type: none"> a. Display the List item menu by pressing Ctrl_L (or Keypad Enter). b. Select the Select All command by pressing Space (or Keypad 0). <i>The data in the field is highlighted in reverse video.</i> c. Enter 500 so that the maximum number of events is displayed.
27	Tab to the network element list. Ensure that OPC and all the network elements are all marked Include. Note: Network elements whose events are currently displayed in the Events list on the Event Browser main window have the word Include appearing beside them in the network element list. To include all the network elements: <ol style="list-style-type: none"> a. Move to the network element you want to add and display the List item menu by pressing Ctrl_L (or Keypad Enter). <i>The List item menu is displayed. The first menu item Add is highlighted.</i> b. Select Add by pressing Space (or Keypad 0). <i>The network element is added and the word include is displayed beside it in the network element list.</i>
28	Tab to the Type buttons. Ensure that all the OPC logs, alarms, and alerts are selected. Note: Use the Type buttons to determine whether the OPC logs, or the OPC or network element alarms or alerts are displayed in the Events list. To display all the event types, move to the event type you want to add then press Ctrl_A (or Keypad 0). <i>The mark beside the button is displayed (indicating selection).</i>

—continued—

5-8 Deleting a VTBM ring node

Procedure 5-1 (continued)

Verifying the system

Step	Action
29	<p>Tab to the Severity buttons. Ensure that all alarm severity boxes have been selected.</p> <p>Note: Use the Severity check buttons to determine what severities of events are displayed in the Events list.</p> <p>To display all the event severities, move to the severity you want to add, then press Ctrl_A (or Keypad 0).</p> <p><i>The mark beside the button is displayed (indicating selection).</i></p>
30	<p>Tab to the OPC Logs buttons. Ensure that COM, SDA, STBY, NAD and GEN boxes are all marked.</p> <p>Note: Use the OPC Logs check buttons to determine which types of OPC logs are displayed in the Events list.</p> <p>To display all the class types, move to the class you want to add and select it by pressing Ctrl_A (or Keypad 0).</p> <p><i>The mark beside the button is displayed (indicating selection).</i></p>
31	<p>Tab to the Class buttons. Ensure that Trbl, Usage, State, Cmpl and Prog boxes are all marked.</p> <p>Note: Use the Class check buttons to determine what class of events are displayed in the Events list.</p> <p>To display all the class types, move to the class you want to add and select it by pressing Ctrl_A (or Keypad 0).</p> <p><i>The mark beside the button is displayed (indicating selection).</i></p>
32	<p>Tab to the Alarms field. Ensure that Eqp, Fac, Env and Sw boxes are all marked.</p> <p>Note: Use this field to determine if Equipment, Facility and Environmental alarms or alerts are displayed in the Events list.</p> <p>To display all alarms and events, move to the item you want to add, then press Ctrl_A (or Keypad 0).</p> <p><i>The mark beside the button is displayed (indicating selection).</i></p>

—continued—

 Procedure 5-1 (continued)
Verifying the system

- | Step | Action |
|------|--|
| 33 | <p>Tab to the Date and time, from field. Set this value to 2 days ago:</p> <p>Note: Use the Date and Time fields to specify a time range for events displayed in the Events list.</p> <ol style="list-style-type: none"> a. Select the chooser menu by pressing Ctrl_L / (or Keypad 3). b. Move to the 1 day ago option and select it by pressing Space (or Keypad 0).
<i>The date of 1 day ago is displayed.</i> c. Move the cursor and manually change the date to indicate 2 days ago. <p>Note: To manually change the date you have to position the cursor after the date that appears on the screen and erase it with the backspace key.</p> |
| 34 | <p>Tab to the Date and time, to field.</p> <p>If this field is not blank:</p> <ol style="list-style-type: none"> a. Select the chooser menu by pressing Ctrl_L / (or Keypad 3). b. Move to the Ignore time option and select it by pressing Space (or Keypad 0).
<i>This step ensures that all events up to the present time are recorded.</i> <p>Note: If any event is recorded and its date and time are ahead of the current date call your Nortel support group.</p> |
| 35 | <p>Tab to the Save button, then press Ctrl_A (or Keypad 0).</p> <p><i>The filter you have defined is the default filter for the Event Browser tool. It does not become active in the current session unless you select the OK button.</i></p> |
| 36 | <p>Tab to the OK button, then press Ctrl_A (or Keypad 0).</p> <p><i>The Events List Filter dialog closes.</i></p> <p><i>The filter you have defined is in effect for the current user, and is displayed above the Events list on the main window.</i></p> <p><i>The selected events are added to the events currently in the display until a maximum of 500 is reached.</i></p> |

—continued—

5-10 Deleting a VTBM ring node

Procedure 5-1 (continued)
Verifying the system

Step	Action
37	If you want detailed information on any event: <ol style="list-style-type: none">Move to an event, then press Ctrl_A (or Keypad 0). <i>The selected item is displayed in reverse video.</i>Display the List item menu by pressing Ctrl_L (or Keypad Enter). <i>The menu is displayed.</i>Move to the Details command, then press Space (or Keypad 0). <i>The details dialog for that event are displayed.</i>Move to the Done button, then press Space (or Keypad 0). <i>The dialog closes and the Event Browser screen reappears.</i>

	<p>CAUTION Active alarms</p> <p>If an event cannot be accounted for or if any event may pose a problem for the reconfiguration, do not proceed any further with this user guide. Contact your next level of support or your Nortel support group</p>
---	--

- 38 If the system has been completely idle for the preceding 48-hour period, (that is, no maintenance operations have been performed) ensure that the following logs have been generated for each of the preceding nights:
- ```
NAD646 Audited user profile data (success)
NAD624 Audited Connections. Result: Success
NAD619 Ring Configuration Audit. Result:Success
```
- 39 If an audit has failed and any of the following logs are present, ensure that the failure was not caused by maintenance operations on the system. Contact your next level of support or your Nortel support group.
- ```
NAD324 Audited Connections. Result: Failed
NAD346 Audited user profile data (failed)
NAD308 Ring Configuration Audit. Result: Failed
```
- 40 If the nightly data transfer has failed and the following log is present, ensure that the failure was not caused by maintenance operations on the system. Contact your next level of support or your Nortel support group.
- ```
STBY356 DATA sync error detected
```

—continued—

---

 Procedure 5-1 (continued)  
**Verifying the system**


---

| Step                                           | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                |            |                           |         |                |         |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------|---------------------------|---------|----------------|---------|
| 41                                             | <p>Determine whether the system is equipped with a backup OPC, see Table 2-2 on page 2-4.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If the value in the “Backup OPC name” field is</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>other than “Not Equipped”</td> <td>step 42</td> </tr> <tr> <td>“Not Equipped”</td> <td>step 45</td> </tr> </tbody> </table> | If the value in the “Backup OPC name” field is | Then go to | other than “Not Equipped” | step 42 | “Not Equipped” | step 45 |
| If the value in the “Backup OPC name” field is | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |            |                           |         |                |         |
| other than “Not Equipped”                      | step 42                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                |            |                           |         |                |         |
| “Not Equipped”                                 | step 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                |            |                           |         |                |         |
| 42                                             | <p>If the system has been completely idle for the preceding 48-hour period, (that is, no maintenance operations have been performed) ensure that the following logs have been generated each of the proceeding nights:</p> <pre>STBY702 OPC data sync is in progress STBY612 OPC data sync complete</pre>                                                                                                                                                                 |                                                |            |                           |         |                |         |
| 43                                             | <p>If the following failure log is found, contact your local Nortel support group immediately:</p> <pre>STBY348 During the synchronization of data from OPC to OPC, some data was corrupted in the following type file: &lt;xx&gt;</pre>                                                                                                                                                                                                                                  |                                                |            |                           |         |                |         |
| 44                                             | <p>Ensure that OPC to OPC communications have been stable. If any of the following logs is displayed, and is not the result of maintenance operations on the system, contact your next level of support or your Nortel support group:</p> <pre>STBY509 OPC to OPC link lost STBY340 Partner OPC not found STBY372 Nightly data synchronization request ignored because Backup OPC is not connected</pre>                                                                  |                                                |            |                           |         |                |         |
| 45                                             | <p>Ensure that the OPC to network element communications have been stable. If the following log are displayed, and not the result of maintenance operations on the system, contact your next level of support or your Nortel support group:</p> <pre>COM502 OPC to NE &lt;xx&gt; Sh 1 link lost</pre>                                                                                                                                                                     |                                                |            |                           |         |                |         |

—continued—

## 5-12 Deleting a VTBM ring node

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### Procedure 5-1 (continued)

#### Verifying the system

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| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 46   | <p>Ensure that none of the network elements have rebooted unexpectedly. If any of the following logs are displayed and are not the result of maintenance operations on the system, contact your next level of support or your Nortel support group:</p> <p>SDA701 Software download in progress: load &lt;xx&gt; to NE &lt;yy&gt;<br/>sh 1.</p> <p>SDA601 Software download successful: load &lt;xx&gt; to NE &lt;yy&gt;<br/>Sh 1. &lt;mm&gt; records were sent in &lt;nn&gt; seconds.</p> <p>SDA359 During the download of software load &lt;xx&gt; to NE/processor &lt;yy&gt; the following error occurred &lt;zz&gt;. The download will continue.</p> <p>SDA354 NE/processor,XX. is not accepting software load,yy, because &lt;zz&gt;. The network element will request the load and it will be sent again. If the download continues to fail, get a new network element software load and transfer it on to the OPC.</p> |
| 47   | <p>Ensure that no events indicate optical signal degradation. If signal degradation is present, high speed switching may occur during the reconfiguration.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 48   | <p>Ensure that the following log is not displayed. If it is present contact your next level of support or your Nortel support group:</p> <p>GEN302 There is not enough memory left. Too many processes may be running at the same time. Close any windows you do not need, then try again.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 49   | <p>Close the Event Browser tool by doing the following:</p> <ol style="list-style-type: none"><li>Display the <b>window</b> menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/><i>The window menu is displayed.</i></li><li>Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).<br/><i>The User Session Manager is displayed.</i></li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

—continued—

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Procedure 5-1 (continued)  
**Verifying the system**

---

| <b>Step</b> | <b>Action</b> |
|-------------|---------------|
|-------------|---------------|

---

**Final check for alarms and active protection switches**

- 50** Check the banner line at the bottom of the OPC user interface screen. There should not be any counts next to the C, M, m, w and ActProt fields which are not expected. You can use the Alarm Monitor tool to check raised alarms.

**Note:** Refer to “Troubleshooting” in the *Alarm and Troubleshooting Clearing Procedures Guide*, 323-3001-543, in *Maintenance*, Vol 5A if alarms are present.



**CAUTION**

**Active alarms**

If alarms are active, do not proceed with the next procedure. Call your next level of support or your Nortel support group (see Appendix C: Technical support information) for help.

- 51** Go to the next procedure.

—end—

## Procedure 5-2

### Saving pre-system reconfiguration data to tape

Use this procedure to save the existing VTBM based ring system data to tape before proceeding with the reconfiguration. This procedure is needed if it is necessary to restore the system to its previous state.

#### Requirements

To do this procedure, you must:

- have read all the information in the previous chapters of this user guide and complied with all the set up conditions
- ensure that personnel performing this procedure have root access to the primary OPC

#### Action

| Step                                                                                                         | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------------------------|----------------------------------------------------------------------------------------|---------------------------------------|--------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------|
| 1                                                                                                            | Determine whether you are logged in to the primary OPC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
|                                                                                                              | <table border="1"> <thead> <tr> <th>If you are</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>logged into the primary OPC</td> <td>step 2</td> </tr> <tr> <td>not logged into the primary OPC</td> <td>step 3</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                | If you are | Then go to | logged into the primary OPC | step 2                                                                                 | not logged into the primary OPC       | step 3       |                                                                                                      |                                                                                        |                                                                                                              |              |
| If you are                                                                                                   | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
| logged into the primary OPC                                                                                  | step 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
| not logged into the primary OPC                                                                              | step 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
| 2                                                                                                            | This step helps you determine what to do if you are logged into the primary OPC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
|                                                                                                              | <table border="1"> <thead> <tr> <th>If</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>an OPC tool is displayed</td> <td>return to the User Session Manager by pressing <b>Ctrl_T 0</b>, and then go to step 5</td> </tr> <tr> <td>the User Session Manager is displayed</td> <td>go to step 5</td> </tr> <tr> <td>the OPC prompt (opc&gt;) is displayed and the OPC time appears in the bottom right corner of the screen</td> <td>return to the User Session Manager by pressing <b>Ctrl_T 0</b>, and then go to step 5</td> </tr> <tr> <td>the OPC prompt (opc&gt;) is displayed and the OPC time does not appear in the bottom right corner of the screen</td> <td>go to step 4</td> </tr> </tbody> </table> | If         | Then       | an OPC tool is displayed    | return to the User Session Manager by pressing <b>Ctrl_T 0</b> , and then go to step 5 | the User Session Manager is displayed | go to step 5 | the OPC prompt (opc>) is displayed and the OPC time appears in the bottom right corner of the screen | return to the User Session Manager by pressing <b>Ctrl_T 0</b> , and then go to step 5 | the OPC prompt (opc>) is displayed and the OPC time does not appear in the bottom right corner of the screen | go to step 4 |
| If                                                                                                           | Then                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
| an OPC tool is displayed                                                                                     | return to the User Session Manager by pressing <b>Ctrl_T 0</b> , and then go to step 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
| the User Session Manager is displayed                                                                        | go to step 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
| the OPC prompt (opc>) is displayed and the OPC time appears in the bottom right corner of the screen         | return to the User Session Manager by pressing <b>Ctrl_T 0</b> , and then go to step 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |
| the OPC prompt (opc>) is displayed and the OPC time does not appear in the bottom right corner of the screen | go to step 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |            |                             |                                                                                        |                                       |              |                                                                                                      |                                                                                        |                                                                                                              |              |

—continued—

Procedure 5-2 (continued)

### Saving pre-system reconfiguration data to tape

- | Step                                   | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |         |                                        |        |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|----------|---------|----------------------------------------|--------|
| 3                                      | Log in to the primary OPC as the 'root' user using the primary OPC port 1 or the primary OPC ethernet port via a telnet session.<br><br><b>Note:</b> For a reminder on how to log in to an OPC, refer to "Appendix B: Common procedures", Procedure 7-5, "Logging into the OPC" on page 7-22.<br><i>The following prompt is displayed:</i><br>opc>                                                                                                                                                                                                      |             |            |          |         |                                        |        |
| 4                                      | At the OPC prompt (opc>), enter:<br><b>opcui</b> ↵<br><i>The User Session Manager is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |            |          |         |                                        |        |
| 5                                      | In the User Session Manager, tab to the Available tools list, move to the OPC Save and Restore tool, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The OPC Save and Restore main window is displayed.</i>                                                                                                                                                                                                                                                                                                                                               |             |            |          |         |                                        |        |
| 6                                      | Insert a DDS tape into the primary OPC's tape drive to store the system data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |            |          |         |                                        |        |
| 7                                      | Tab to the <b>Save OPC data to tape</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The Save confirmation dialog is displayed, prompting you to confirm your request.</i>                                                                                                                                                                                                                                                                                                                                                                     |             |            |          |         |                                        |        |
| 8                                      | Tab to the <b>Yes</b> button and select it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>A progress dialog is displayed, indicating that the save operation has been initiated.</i>                                                                                                                                                                                                                                                                                                                                                                    |             |            |          |         |                                        |        |
|                                        | <table border="1"> <thead> <tr> <th>If the tape</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>is blank</td> <td>step 10</td> </tr> <tr> <td>contains data that you are overwriting</td> <td>step 9</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                              | If the tape | Then go to | is blank | step 10 | contains data that you are overwriting | step 9 |
| If the tape                            | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |            |          |         |                                        |        |
| is blank                               | step 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |            |          |         |                                        |        |
| contains data that you are overwriting | step 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |         |                                        |        |
| 9                                      | If the DDS tape contains data that you are overwriting, <i>a confirmation dialog is displayed.</i><br><i>If the tape contains a data archive, the dialog prompts you to confirm your request to overwrite the existing data on the tape.</i><br><i>If the tape contains a software load, the dialog prompts you to confirm your request to overwrite the existing data on the tape.</i><br>Tab to the <b>OK</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The progress dialog reappears, indicating the progress of the save operation.</i> |             |            |          |         |                                        |        |
| 10                                     | Wait until the save operation is complete. This step may take up to 40 minutes.<br><i>A completion dialog is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                             |             |            |          |         |                                        |        |

—continued—

## 5-16 Deleting a VTBM ring node

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Procedure 5-2 (continued)

### Saving pre-system reconfiguration data to tape

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- | <b>Step</b> | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>11</b>   | Select the <b>Done</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The completion dialog closes.</i>                                                                                                                                                                                                                                                   |
| <b>12</b>   | Close the <b>Save and Restore</b> tool: <ol style="list-style-type: none"><li>Display the <b>window</b> menu by pressing <b>Ctrl_L W</b> (or <b>Keypad 6</b>).<br/><i>The window menu is displayed.</i></li><li>Select the <b>Exit</b> command by pressing <b>Space</b> (or <b>Keypad 0</b>).<br/><i>The User Session Manager window is displayed.</i></li></ol> |
| <b>13</b>   | Eject the tape from the OPC tape drive, label it (system name, current software version (OPC/network element), and store it in a secure place.                                                                                                                                                                                                                   |
| <b>14</b>   | Go to the next procedure.                                                                                                                                                                                                                                                                                                                                        |

—end—

## Procedure 5-3 Relocating the OPC

Use this procedure to relocate the primary or backup OPC if it is equipped in the VTBM ring node to be deleted.

If the primary or backup OPC does not need to be relocated, you can skip this procedure. See Table 2-2 on page 2-4 and Table 2-3 on page 2-5.

### Requirements

To do this procedure, you must:

- have read all the information in the previous chapters of this user guide and complied with all the setup conditions.
- ensure that personnel performing this procedure have root access to the primary and backup OPCs.
- ensure that the OPC port 1 is configured for terminal.

### Action

| Step                                                        | Action                                                                                                                                                                                                                                                                         |                                                             |            |      |               |                          |        |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------|------|---------------|--------------------------|--------|
| 1                                                           | Determine if the VTBM ring node to be deleted is equipped with an OPC.                                                                                                                                                                                                         |                                                             |            |      |               |                          |        |
|                                                             | <table border="1"> <thead> <tr> <th>If the value in the “OPC” field in Table 2-3 on page 2-5 is</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>none</td> <td>procedure 5-4</td> </tr> <tr> <td>anything other than none</td> <td>step 2</td> </tr> </tbody> </table> | If the value in the “OPC” field in Table 2-3 on page 2-5 is | Then go to | none | procedure 5-4 | anything other than none | step 2 |
| If the value in the “OPC” field in Table 2-3 on page 2-5 is | Then go to                                                                                                                                                                                                                                                                     |                                                             |            |      |               |                          |        |
| none                                                        | procedure 5-4                                                                                                                                                                                                                                                                  |                                                             |            |      |               |                          |        |
| anything other than none                                    | step 2                                                                                                                                                                                                                                                                         |                                                             |            |      |               |                          |        |

#### Deprovisioning the OPC

- 2 Go to the site of the node to be deleted. Using a VT-100 terminal and a NT7E44FA or NT7E44FB cable, connect to user interface port 2 of that network element.
- 3 Press the **[break]** key.  
*The Login prompt (?) is displayed.*
- 4 At the login prompt, enter:  
**login ↵**  
*The following message is displayed:*  
Enter User Name  
>

—continued—

5-18 Deleting a VTBM ring node

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Procedure 5-3 (continued)  
**Relocating the OPC**

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| <b>Step</b>                                    | <b>Action</b>                                                                                                                                                                                                                                                                                                                         |                                        |                   |                                                |         |                                               |         |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------|------------------------------------------------|---------|-----------------------------------------------|---------|
| 5                                              | Enter the admin userID:<br><b>&lt;admin userID&gt;</b> ↵<br><i>The following prompt is displayed:</i><br>Enter Password<br>>                                                                                                                                                                                                          |                                        |                   |                                                |         |                                               |         |
| 6                                              | Enter the admin password:<br><b>&lt;admin password&gt;</b> ↵<br><i>The network element user interface is displayed.</i>                                                                                                                                                                                                               |                                        |                   |                                                |         |                                               |         |
| 7                                              | Deprovision the OPC by entering:<br><b>eq opc</b> ↵<br><b>chgstate oos</b> ↵<br><b>yes</b> ↵<br><b>delete</b> ↵<br><b>yes</b> ↵                                                                                                                                                                                                       |                                        |                   |                                                |         |                                               |         |
| 8                                              | Access the equipment shelf alarm provisioning network element user interface screen by entering:<br><b>eq sh</b> ↵<br><b>almprov</b> ↵                                                                                                                                                                                                |                                        |                   |                                                |         |                                               |         |
| 9                                              | Check the CNET link fail status.<br><table><thead><tr><th><b>If the CNET link fail status is</b></th><th><b>Then go to</b></th></tr></thead><tbody><tr><td>off</td><td>step 12</td></tr><tr><td>on</td><td>step 10</td></tr></tbody></table>                                                                                          | <b>If the CNET link fail status is</b> | <b>Then go to</b> | off                                            | step 12 | on                                            | step 10 |
| <b>If the CNET link fail status is</b>         | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                     |                                        |                   |                                                |         |                                               |         |
| off                                            | step 12                                                                                                                                                                                                                                                                                                                               |                                        |                   |                                                |         |                                               |         |
| on                                             | step 10                                                                                                                                                                                                                                                                                                                               |                                        |                   |                                                |         |                                               |         |
| 10                                             | Check to see if a CNET cable is attached to the shelf.<br><table><thead><tr><th><b>If the shelf</b></th><th><b>Then go to</b></th></tr></thead><tbody><tr><td>has no CNET cable attached to its CNET port(s)</td><td>step 11</td></tr><tr><td>has a CNET cable attached to its CNET port(s)</td><td>step 12</td></tr></tbody></table> | <b>If the shelf</b>                    | <b>Then go to</b> | has no CNET cable attached to its CNET port(s) | step 11 | has a CNET cable attached to its CNET port(s) | step 12 |
| <b>If the shelf</b>                            | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                     |                                        |                   |                                                |         |                                               |         |
| has no CNET cable attached to its CNET port(s) | step 11                                                                                                                                                                                                                                                                                                                               |                                        |                   |                                                |         |                                               |         |
| has a CNET cable attached to its CNET port(s)  | step 12                                                                                                                                                                                                                                                                                                                               |                                        |                   |                                                |         |                                               |         |
| 11                                             | Change the CNET link fail status to Off by entering:<br><b>editstat 14</b> ↵<br><b>yes</b> ↵                                                                                                                                                                                                                                          |                                        |                   |                                                |         |                                               |         |
| 12                                             | Check slots 5-8 on the destination shelf to ensure that they do not have any cards provisioned in them by entering:                                                                                                                                                                                                                   |                                        |                   |                                                |         |                                               |         |

—continued—

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 Procedure 5-3 (continued)  
**Relocating the OPC**


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- | Step                                | Action                                                                                                                                                                                                                                      |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13                                  | <p><b>rlogin &lt;ne #&gt;</b> ↵</p> <p>where</p> <p><b>&lt;ne #&gt;</b> is the name of the network element of the node where the OPC will be relocated, (see Table 2-4 on page 2-6)</p>                                                     |
| 14                                  | <p>At the login prompt, enter:</p> <p><b>login</b> ↵</p> <p><i>The following message is displayed.</i></p> <pre>Enter User Name &gt;</pre>                                                                                                  |
| 15                                  | <p>Enter the admin userID:</p> <p><b>&lt;admin userID&gt;</b> ↵</p> <p><i>The following prompt is displayed:</i></p> <pre>Enter Password &gt;</pre>                                                                                         |
| 16                                  | <p>Enter the admin password:</p> <p><b>&lt;admin password&gt;</b> ↵</p> <p><i>The network element user interface is displayed.</i></p>                                                                                                      |
| 17                                  | <p>Access the Shelf Inventory network element user interface screen by entering</p> <p><b>eq sh;inventory</b></p>                                                                                                                           |
| 18                                  | <p>Check the destination slots. If any cards are provisioned in these slots, they have to be deprovisioned and removed before you insert the OPC in these slots. Contact your next level of support.</p>                                    |
| <b>Shut down and remove the OPC</b> |                                                                                                                                                                                                                                             |
| 19                                  | <p>Log in to the OPC being relocated as the 'root' user by executing in "Appendix B: Common procedures", Procedure 7-5, "Logging into the OPC", starting at step 8.</p> <p><i>The following prompt is displayed:</i></p> <pre>opc&gt;</pre> |
| 20                                  | <p>Shut down and remove the OPC (see Procedure 7-4, "Shutting down or restarting an OPC" on page 7-18 in "Appendix B: Common procedures").</p>                                                                                              |
| 21                                  | <p>Disconnect the cable between the VT-100 terminal and the craft user interface port 2.</p>                                                                                                                                                |

—continued—

5-20 Deleting a VTBM ring node

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Procedure 5-3 (continued)  
**Relocating the OPC**

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**Step    Action**

---

**Installing the OPC**

- 22**    Bring this OPC to its new location and insert it in slot 5.  
**Note:** When the login prompt (login:) appears, wait 5 minutes before proceeding with the next step. You must allow enough time for the OPC to restart.
- 23**    Log in to the primary OPC as the 'root' user using the OPC's port 1.  
For a reminder on how to log in to an OPC through the OPC port 1, see "Appendix B: Common procedures", Procedure 7-5, "Logging into the OPC" on page 7-22.  
*The following prompt is displayed:*  
opc>
- 24**    At the OPC prompt (opc>) enter:  
**opcui** ↵  
*The User Session Manager is displayed.*
- 25**    In the User Session Manager, tab to the Open tools list, move to the OPC Status tool, then press **Ctrl\_A** (or Keypad 0).  
*The OPC Status window appears.*
- | <b>If the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is</b> | <b>Then</b>                                                                                                            |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| other than "Not Equipped"                                                      | wait for the OPC Status to show Active and the Backup OPC Status to show Inactive before proceeding with the next step |
| Not Equipped                                                                   | wait for the OPC Status to show Active before proceeding with the next step                                            |
- 26**    Return to the User Session Manager by pressing **Ctrl\_T 0**.
- 27**    In the User Session Manager, tab to the Available tools list, move to the Commissioning Manager tool, then press **Ctrl\_A** (or Keypad 0).  
*The main Commissioning Manager screen appears.*

—continued—

Procedure 5-3 (continued)  
**Relocating the OPC**

| Step                                                                                          | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------|-----------|---------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------|
| 28                                                                                            | Tab to the Commissioned network elements list and move to the network element of the node to be deleted, see Table 2-1 on page 2-1.<br><b>Note:</b> Use the arrow key to move down the list, if necessary.                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
| 29                                                                                            | Press <b>Ctrl_L</b> (or Keypad Enter) to display the List item menu, then select the <b>Edit</b> command by pressing <b>Space</b> (or Keypad 0).<br><i>A network element Commissioning Data dialog appears.</i>                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
| 30                                                                                            | Tab to the <b>no OPC</b> field, then press <b>Ctrl_A</b> (or Keypad 0).<br><b>Note:</b> The 'This network element contains' field must display the 'no OPC' option selected at this time.                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
| 31                                                                                            | Tab to the <b>OK</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The dialog closes and the main Commissioning Manager screen appears.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
| 32                                                                                            | Tab to the Commissioned network elements list, then move to the new network element that currently is equipped with the relocated OPC (refer to "NE#" field in Table 2-4 on page 2-6).                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
| 33                                                                                            | Press <b>Ctrl_L</b> (or Keypad Enter) to display the List item menu, then select the <b>Edit</b> command by pressing <b>Space</b> (or Keypad 0).<br><i>The network element Commissioning Data dialog appears.</i>                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
| 34                                                                                            | Determine if it is the primary or backup OPC that has been relocated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
|                                                                                               | <table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">If the value in the "OPC located in the node to be deleted" field in Table 2-3 on page 2-5 is</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>"primary"</td> <td>Tab to the "This network element contains" field and then move to the Primary OPC field, then press Ctrl_A (or Keypad 0).</td> </tr> <tr> <td>"backup"</td> <td>Tab to the "This network element contains" field and then move to the Backup OPC field, then press Ctrl_A (or Keypad 0).</td> </tr> </tbody> </table> | If the value in the "OPC located in the node to be deleted" field in Table 2-3 on page 2-5 is | Then | "primary" | Tab to the "This network element contains" field and then move to the Primary OPC field, then press Ctrl_A (or Keypad 0). | "backup" | Tab to the "This network element contains" field and then move to the Backup OPC field, then press Ctrl_A (or Keypad 0). |
| If the value in the "OPC located in the node to be deleted" field in Table 2-3 on page 2-5 is | Then                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
| "primary"                                                                                     | Tab to the "This network element contains" field and then move to the Primary OPC field, then press Ctrl_A (or Keypad 0).                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
| "backup"                                                                                      | Tab to the "This network element contains" field and then move to the Backup OPC field, then press Ctrl_A (or Keypad 0).                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |
|                                                                                               | <b>Note:</b> The "This network element contains" field must have primary or backup OPC option selected at this time. This must correspond to the OPC installed in the shelf.                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                               |      |           |                                                                                                                           |          |                                                                                                                          |

—continued—

5-22 Deleting a VTBM ring node

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Procedure 5-3 (continued)  
**Relocating the OPC**

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| <b>Step</b>                                                                    | <b>Action</b>                                                                                                                                                                                                                                                                                                                                              |                                                                                |                   |                         |         |              |         |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------|-------------------------|---------|--------------|---------|
| <b>35</b>                                                                      | Determine whether a backup OPC is equipped in the system.<br><br><table border="1"><thead><tr><th><b>If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is</b></th><th><b>Then go to</b></th></tr></thead><tbody><tr><td>other than Not Equipped</td><td>step 36</td></tr><tr><td>Not Equipped</td><td>step 39</td></tr></tbody></table> | <b>If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is</b> | <b>Then go to</b> | other than Not Equipped | step 36 | Not Equipped | step 39 |
| <b>If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is</b> | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                                          |                                                                                |                   |                         |         |              |         |
| other than Not Equipped                                                        | step 36                                                                                                                                                                                                                                                                                                                                                    |                                                                                |                   |                         |         |              |         |
| Not Equipped                                                                   | step 39                                                                                                                                                                                                                                                                                                                                                    |                                                                                |                   |                         |         |              |         |
| <b>36</b>                                                                      | Tab to the <b>Transfer data to Backup OPC (from Primary OPC)</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The following confirmation dialog appears.</i>                                                                                                                                                                                      |                                                                                |                   |                         |         |              |         |
| <b>37</b>                                                                      | Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The dialog disappears and a progress dialog appears, indicating that the data on the primary OPC is being copied to the backup OPC. This operation will takes between 4 and 30 minutes to complete.</i><br><i>When the transfer is done, a dialog appears.</i>                 |                                                                                |                   |                         |         |              |         |
| <b>38</b>                                                                      | To remove the dialog, select the <b>Done</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                               |                                                                                |                   |                         |         |              |         |
| <b>39</b>                                                                      | Close the Commissioning Manager tool:<br><ol style="list-style-type: none"><li>Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/>The window menu appears.</li><li>Select the <b>Exit</b> command by pressing <b>Space</b> (or <b>Keypad 0</b>).<br/><i>The User Session Manager is displayed.</i></li></ol>                           |                                                                                |                   |                         |         |              |         |
| <b>Enabling the CNET link fail alarm at the NE of the new OPC location</b>     |                                                                                                                                                                                                                                                                                                                                                            |                                                                                |                   |                         |         |              |         |
| <b>40</b>                                                                      | In the User Session Manager, tab to the Available tools list, then move to the NE Login Manager tool. Press <b>Ctrl_A</b> (or Keypad 0).<br><i>The NE Login Manager window appears.</i>                                                                                                                                                                    |                                                                                |                   |                         |         |              |         |
| <b>41</b>                                                                      | Tab to the network element field and enter the network element number of the new network element that currently is equipped with the relocated OPC (refer to “NE#” field in Table 2-4 on page 2-6).                                                                                                                                                        |                                                                                |                   |                         |         |              |         |
| <b>42</b>                                                                      | Tab to the <b>Login</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The following prompt is displayed:</i><br>Enter User Name<br>>                                                                                                                                                                                                               |                                                                                |                   |                         |         |              |         |

—continued—

Procedure 5-3 (continued)  
Relocating the OPC

| Step                            | Action                                                                                                                                                                                                                                                                                                                                                                 |                                 |            |                               |         |                              |         |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------|-------------------------------|---------|------------------------------|---------|
| 43                              | <p>At the prompt (&gt;), enter the admin userid:<br/><b>&lt;admin userid&gt;</b> ↵</p> <p><i>The network element prompts you to enter the password:</i><br/>Enter Password<br/>&gt;</p>                                                                                                                                                                                |                                 |            |                               |         |                              |         |
| 44                              | <p>Enter the admin password:<br/><b>&lt;admin password&gt;</b> ↵</p> <p><i>The network element user interface is displayed.</i></p>                                                                                                                                                                                                                                    |                                 |            |                               |         |                              |         |
| 45                              | <p>Access the equipment shelf alarm provisioning network element user interface screen by entering:<br/><b>eq sh</b> ↵<br/><b>almprov</b> ↵</p> <table border="1"> <thead> <tr> <th>If the CNET link fail status is</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>off</td> <td>step 46</td> </tr> <tr> <td>on</td> <td>step 47</td> </tr> </tbody> </table> | If the CNET link fail status is | Then go to | off                           | step 46 | on                           | step 47 |
| If the CNET link fail status is | Then go to                                                                                                                                                                                                                                                                                                                                                             |                                 |            |                               |         |                              |         |
| off                             | step 46                                                                                                                                                                                                                                                                                                                                                                |                                 |            |                               |         |                              |         |
| on                              | step 47                                                                                                                                                                                                                                                                                                                                                                |                                 |            |                               |         |                              |         |
| 46                              | <p>Change the CNET link fail status to on by entering:<br/><b>editstat 2</b> ↵</p>                                                                                                                                                                                                                                                                                     |                                 |            |                               |         |                              |         |
| 47                              | <p>Log out of this network element by entering:<br/><b>logout</b> ↵</p> <p><i>The 'Press return to exit' message appears.</i></p>                                                                                                                                                                                                                                      |                                 |            |                               |         |                              |         |
| 48                              | <p>Press the Return (↵) key.<br/><i>The NE Login Manager window appears.</i></p>                                                                                                                                                                                                                                                                                       |                                 |            |                               |         |                              |         |
| 49                              | <p>Close the NE Login Manager tool:</p> <ol style="list-style-type: none"> <li>Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/><i>The window menu appears.</i></li> <li>Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).<br/><i>The User Session Manager is displayed.</i></li> </ol>                                     |                                 |            |                               |         |                              |         |
| 50                              | <p>See Table 2-3 on page 2-5, to determine which OPC was relocated.</p> <table border="1"> <thead> <tr> <th>If</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>the primary OPC was relocated</td> <td>step 51</td> </tr> <tr> <td>the backup OPC was relocated</td> <td>step 52</td> </tr> </tbody> </table>                                                  | If                              | Then go to | the primary OPC was relocated | step 51 | the backup OPC was relocated | step 52 |
| If                              | Then go to                                                                                                                                                                                                                                                                                                                                                             |                                 |            |                               |         |                              |         |
| the primary OPC was relocated   | step 51                                                                                                                                                                                                                                                                                                                                                                |                                 |            |                               |         |                              |         |
| the backup OPC was relocated    | step 52                                                                                                                                                                                                                                                                                                                                                                |                                 |            |                               |         |                              |         |

—continued—

## 5-24 Deleting a VTBM ring node

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### Procedure 5-3 (continued)

#### Relocating the OPC

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| <b>Step</b>                         | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------------------------------------------------------------------------------------|
| <b>51</b>                           | Determine whether the primary OPC was relocated to a network element that is in a different time zone.<br><br><table><thead><tr><th><b>If the primary OPC time zone</b></th><th><b>Then go to</b></th></tr></thead><tbody><tr><td>needs to be changed</td><td>step 2 of Procedure 7-1, "Changing the OPC date and time" on page 7-2 and then go to next procedure, "Deactivating add/drop facilities at the node being deleted" on page 5-26</td></tr><tr><td><b>does not</b> need to be changed</td><td>next procedure, "Deactivating add/drop facilities at the node being deleted" on page 5-26</td></tr></tbody></table> | <b>If the primary OPC time zone</b> | <b>Then go to</b> | needs to be changed | step 2 of Procedure 7-1, "Changing the OPC date and time" on page 7-2 and then go to next procedure, "Deactivating add/drop facilities at the node being deleted" on page 5-26 | <b>does not</b> need to be changed | next procedure, "Deactivating add/drop facilities at the node being deleted" on page 5-26 |
| <b>If the primary OPC time zone</b> | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| needs to be changed                 | step 2 of Procedure 7-1, "Changing the OPC date and time" on page 7-2 and then go to next procedure, "Deactivating add/drop facilities at the node being deleted" on page 5-26                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| <b>does not</b> need to be changed  | next procedure, "Deactivating add/drop facilities at the node being deleted" on page 5-26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| <b>52</b>                           | Determine whether the backup OPC was relocated to a network element which is in a different time zone.<br><br><table><thead><tr><th><b>If the backup OPC time zone</b></th><th><b>Then go to</b></th></tr></thead><tbody><tr><td>needs to be changed</td><td>step 53</td></tr><tr><td>does not need to be changed</td><td>Procedure 5-4, "Deactivating add/drop facilities at the node being deleted" on page 5-26</td></tr></tbody></table>                                                                                                                                                                                 | <b>If the backup OPC time zone</b>  | <b>Then go to</b> | needs to be changed | step 53                                                                                                                                                                        | does not need to be changed        | Procedure 5-4, "Deactivating add/drop facilities at the node being deleted" on page 5-26  |
| <b>If the backup OPC time zone</b>  | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| needs to be changed                 | step 53                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| does not need to be changed         | Procedure 5-4, "Deactivating add/drop facilities at the node being deleted" on page 5-26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| <b>53</b>                           | Exit from the User Session Manager by tabbing to the <b>Logout</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>A confirmation dialog is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| <b>54</b>                           | Tab to the <b>Logout</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The following prompt is displayed.</i><br>opc>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| <b>55</b>                           | Access the backup OPC by entering:<br><b>opclogin backup</b> ↵<br><i>The following prompt is displayed:</i><br>login:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |
| <b>56</b>                           | Log in to the backup OPC. Enter:<br><b>root</b> ↵<br><i>The password prompt is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                   |                     |                                                                                                                                                                                |                                    |                                                                                           |

—continued—

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Procedure 5-3 (continued)  
**Relocating the OPC**

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| <b>Step</b> | <b>Action</b>                                                                                                                                                                                                         |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>57</b>   | Enter the root password and press the <b>Return</b> key.<br>The password is not displayed in the field when you enter it. Passwords are case sensitive.<br><i>The following prompt is displayed</i><br>TERM = (vt100) |
| <b>58</b>   | Press the <b>Return</b> key.<br><i>The following prompt is displayed.</i><br>opc>                                                                                                                                     |
| <b>59</b>   | Go to Procedure 7-1, "Changing the OPC date and time" on page 7-2.                                                                                                                                                    |
| <b>60</b>   | Press the <b>Return</b> key.<br><i>The following prompt is displayed:</i><br>opc>                                                                                                                                     |
| <b>61</b>   | Access the User Session Manager on the primary OPC by entering:<br><b>opcui</b> ↵<br><i>The User Session Manager is displayed.</i>                                                                                    |
| <b>62</b>   | Go to the next procedure.                                                                                                                                                                                             |

—end—

## Procedure 5-4 Deactivating add/drop facilities at the node being deleted

Use this procedure to deprovision the facilities of all add/drop DS1/DS3 traffic, that terminates or originates at the node to be deleted.

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>CAUTION</b><br/><b>Risk of Traffic loss</b></p> <p>DS1 and DS3 traffic is lost when the facility is put in the OOS state. Therefore, ensure you have accessed the correct facility screen before changing the facility state to OOS. The facility screen displays the selected facility in the right-hand corner in the Unit and Port fields</p> |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*Note:* Putting a facility in the OOS state will raise Rx Unequipped major alarms at the path terminating nodes.

### Action

| Step | Action |
|------|--------|
|------|--------|

#### Deactivating facilities that terminate STS-Managed STS-1 connections originating from the node to be deleted

- 1 In the User Session Manager, tab to the Available tools list, move to the **NE Login Manager** tool, then press **Ctrl\_A** (or Keypad 0).  
*The NE Login Manager main window is displayed.*
- 2 Return to the User Session Manager by pressing **Ctrl\_T 0**.
- 3 Determine whether STS-Managed STS-1 connections are provisioned at the node to be deleted.

| If all fields in Table 2-9 on page 2-13 are | Then go to |
|---------------------------------------------|------------|
| empty                                       | step 15    |
| not empty                                   | step 4     |

—continued—

Procedure 5-4 (continued)

**Deactivating add/drop facilities at the node being deleted**

| Step                                                                                                                                                      | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------|
| 4                                                                                                                                                         | <p>Determine the tributary type of the first connection which is not checked off in the <b>OOS State</b> column in Table 2-9 on page 2-13.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>If for this connection, the value entered in the Tributary field under the Tributary at the End NE node column in Table 2-9 on page 2-13 is</b></p> </td> <td style="width: 50%; vertical-align: top;"> <p><b>Then</b></p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>OC-3</p> </td> <td style="vertical-align: top;"> <p>check off and record the time this step was executed in the OOS State column corresponding to that connection in Table 2-9 on page 2-13 and then go to step 19</p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>not OC-3</p> </td> <td style="vertical-align: top;"> <p>go to step 5</p> </td> </tr> </table> | <p><b>If for this connection, the value entered in the Tributary field under the Tributary at the End NE node column in Table 2-9 on page 2-13 is</b></p> | <p><b>Then</b></p> | <p>OC-3</p>                           | <p>check off and record the time this step was executed in the OOS State column corresponding to that connection in Table 2-9 on page 2-13 and then go to step 19</p> | <p>not OC-3</p>                               | <p>go to step 5</p>  |
| <p><b>If for this connection, the value entered in the Tributary field under the Tributary at the End NE node column in Table 2-9 on page 2-13 is</b></p> | <p><b>Then</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| <p>OC-3</p>                                                                                                                                               | <p>check off and record the time this step was executed in the OOS State column corresponding to that connection in Table 2-9 on page 2-13 and then go to step 19</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| <p>not OC-3</p>                                                                                                                                           | <p>go to step 5</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| 5                                                                                                                                                         | <p>Determine the network element entered in the “End NE#” field that corresponds to the first connection that is not checked off in the OOS State column in Table 2-9 on page 2-13.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| 6                                                                                                                                                         | <p>Determine whether you are already logged into that network element.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>If an opened NE Login session that corresponds to that network element</b></p> </td> <td style="width: 50%; vertical-align: top;"> <p><b>Then</b></p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>appears in the Open Tools list</p> </td> <td style="vertical-align: top;"> <p>move to that opened NE Login session, then press <b>Ctrl_A</b> (or Keypad 0). Go to step 12.</p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>does not appear in the Open Tools list</p> </td> <td style="vertical-align: top;"> <p>Go to step 7.</p> </td> </tr> </table>                                                                                                                                                   | <p><b>If an opened NE Login session that corresponds to that network element</b></p>                                                                      | <p><b>Then</b></p> | <p>appears in the Open Tools list</p> | <p>move to that opened NE Login session, then press <b>Ctrl_A</b> (or Keypad 0). Go to step 12.</p>                                                                   | <p>does not appear in the Open Tools list</p> | <p>Go to step 7.</p> |
| <p><b>If an opened NE Login session that corresponds to that network element</b></p>                                                                      | <p><b>Then</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| <p>appears in the Open Tools list</p>                                                                                                                     | <p>move to that opened NE Login session, then press <b>Ctrl_A</b> (or Keypad 0). Go to step 12.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| <p>does not appear in the Open Tools list</p>                                                                                                             | <p>Go to step 7.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| 7                                                                                                                                                         | <p>In the Open Tools list, move to the NE Login Manager tool, then press <b>Ctrl_A</b> (or Keypad 0).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| 8                                                                                                                                                         | <p>Enter the network element number of that network element in the network element field.</p> <p><b>Note:</b> If you are repeating this step, tab to the network element field.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |
| 9                                                                                                                                                         | <p>Tab to the <b>Login</b> button, then press <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>The following prompt is displayed:</i></p> <pre>Enter User Name &gt;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                           |                    |                                       |                                                                                                                                                                       |                                               |                      |

—continued—

5-28 Deleting a VTBM ring node

Procedure 5-4 (continued)

**Deactivating add/drop facilities at the node being deleted**

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10   | At the prompt (>), enter the admin userid:<br><b>&lt;admin userid&gt;</b> ↵<br><i>The network element prompts you to enter the password:</i><br>Enter Password<br>>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 11   | Enter the admin password:<br><b>&lt;admin password&gt;</b> ↵<br><i>The network element user interface is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 12   | From the main network element User Interface screen, enter:<br><b>fa &lt;tributary&gt; &lt;circuit pack group&gt; &lt;port#&gt;</b> ↵<br><b>chgstate oos</b> ↵<br><b>yes</b> ↵<br><br>where<br><br><tributary> is the value entered in the Tributary field under the Tributary at the End NE node column for the first connection that is not checked off in the OOS State column in Table 2-9 on page 2-13.<br><br><circuit pack group> is the value entered in the Circuit Pack Group field under the Tributary at the End NE node column for the first connection that is not checked off in the OOS State column in Table 2-9 on page 2-13.<br><br><port#> is the value entered in the Port# field under the Tributary at the End NE node column for the first connection that is not checked off in the OOS State column in Table 2-9 on page 2-13.<br><br><b>Note:</b> If the tributary is a merged DS1 pair (for example, DS1 G11,G12) then this step must be executed for DS1 G11 and then DS1 G12.<br><br>After you complete this step, check off and record the time this step was executed in the OOS State column in Table 2-9 on page 2-13 to help you track the actions performed. |
| 13   | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 14   | Repeat steps 4 through 13 for each remaining connection in Table 2-9 on page 2-13.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

—continued—

Procedure 5-4 (continued)

**Deactivating add/drop facilities at the node being deleted**

| Step                                                                                                    | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                         |            |       |                                                                                                                                              |           |               |
|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------|
| <b>Deactivating DS1 facilities that terminate VT1.5 paths originating from the node to be deleted</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                         |            |       |                                                                                                                                              |           |               |
| 15                                                                                                      | Determine whether VT-Managed STS-1 connections are provisioned at the node to be deleted.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                         |            |       |                                                                                                                                              |           |               |
|                                                                                                         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If all fields in Table 2-10 on page 2-15 are</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>empty</td> <td>step 37</td> </tr> <tr> <td>not empty</td> <td>step 16</td> </tr> </tbody> </table>                                                                                                                                                                                                 | If all fields in Table 2-10 on page 2-15 are                                                            | Then go to | empty | step 37                                                                                                                                      | not empty | step 16       |
| If all fields in Table 2-10 on page 2-15 are                                                            | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                         |            |       |                                                                                                                                              |           |               |
| empty                                                                                                   | step 37                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                         |            |       |                                                                                                                                              |           |               |
| not empty                                                                                               | step 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                         |            |       |                                                                                                                                              |           |               |
| 16                                                                                                      | Determine the first VT-Managed STS-1 connection in Table 2-10 on page 2-15 that is not checked off in the OOS State column. Then move to the table that contains the Add/Drop VT connections associated with that connection (for example, the table that is associated with Connection #1 in Table 2-10 on page 2-15 is Table 2-11 on page 2-17 entitled: Add/Drop VT connections for Connection #1).                                                                                                                                           |                                                                                                         |            |       |                                                                                                                                              |           |               |
| 17                                                                                                      | Determine whether Add/Drop VT Connections are provisioned for that VT-Managed STS-1 connection.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                         |            |       |                                                                                                                                              |           |               |
|                                                                                                         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If all fields in the Add/Drop VT connections table associated with that VT-Managed STS-1 connection are</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>empty</td> <td>check off and record the time this step was executed in the corresponding OOS State column in Table 2-10 on page 2-15 and then go to step 31</td> </tr> <tr> <td>not empty</td> <td>go to step 18</td> </tr> </tbody> </table> | If all fields in the Add/Drop VT connections table associated with that VT-Managed STS-1 connection are | Then       | empty | check off and record the time this step was executed in the corresponding OOS State column in Table 2-10 on page 2-15 and then go to step 31 | not empty | go to step 18 |
| If all fields in the Add/Drop VT connections table associated with that VT-Managed STS-1 connection are | Then                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                         |            |       |                                                                                                                                              |           |               |
| empty                                                                                                   | check off and record the time this step was executed in the corresponding OOS State column in Table 2-10 on page 2-15 and then go to step 31                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                         |            |       |                                                                                                                                              |           |               |
| not empty                                                                                               | go to step 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                         |            |       |                                                                                                                                              |           |               |
| 18                                                                                                      | Determine the network element entered in the "End NE#" field which corresponds to that first VT-Managed STS-1 connection that is not checked off in the OOS State column in Table 2-10 on page 2-15.                                                                                                                                                                                                                                                                                                                                             |                                                                                                         |            |       |                                                                                                                                              |           |               |

—continued—

5-30 Deleting a VTBM ring node

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Procedure 5-4 (continued)

**Deactivating add/drop facilities at the node being deleted**

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| Step                                                                     | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                        |      |                                                                          |                                                                                              |                                        |                |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------|----------------|
| 19                                                                       | Determine whether you are already logged into that network element.<br><br><table border="1"><thead><tr><th>If an opened NE Login session that corresponds to that network element</th><th>Then</th></tr></thead><tbody><tr><td>already exists in the Open Tools list in the User Session Manager screen</td><td>move to that opened NE Login session, then press <b>Ctrl_A</b> (or Keypad 0). Go to step 25.</td></tr><tr><td>does not appear in the Open Tools list</td><td>Go to step 20.</td></tr></tbody></table> | If an opened NE Login session that corresponds to that network element | Then | already exists in the Open Tools list in the User Session Manager screen | move to that opened NE Login session, then press <b>Ctrl_A</b> (or Keypad 0). Go to step 25. | does not appear in the Open Tools list | Go to step 20. |
| If an opened NE Login session that corresponds to that network element   | Then                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                        |      |                                                                          |                                                                                              |                                        |                |
| already exists in the Open Tools list in the User Session Manager screen | move to that opened NE Login session, then press <b>Ctrl_A</b> (or Keypad 0). Go to step 25.                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                        |      |                                                                          |                                                                                              |                                        |                |
| does not appear in the Open Tools list                                   | Go to step 20.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        |      |                                                                          |                                                                                              |                                        |                |
| 20                                                                       | In the Open Tools list, move to the NE Login Manager tool, then press <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                        |      |                                                                          |                                                                                              |                                        |                |
| 21                                                                       | Enter the network element number of the network element entered in the END NE# field which corresponds to that first VT-Managed STS-1 connection that is not checked off in the OOS State column in Table 2-10 on page 2-15 in the network element field.<br><br><b>Note:</b> If you are repeating this step, tab to the network element field.                                                                                                                                                                        |                                                                        |      |                                                                          |                                                                                              |                                        |                |
| 22                                                                       | Tab to the <b>Login</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><br><i>The following prompt is displayed:</i><br><br>Enter User Name<br>>                                                                                                                                                                                                                                                                                                                                                                   |                                                                        |      |                                                                          |                                                                                              |                                        |                |
| 23                                                                       | At the prompt (>), enter the admin userid:<br><br><b>&lt;admin userid&gt;</b> ↵<br><br><i>The network element prompts you to enter the password:</i><br><br>Enter Password<br>>                                                                                                                                                                                                                                                                                                                                        |                                                                        |      |                                                                          |                                                                                              |                                        |                |
| 24                                                                       | Enter the admin password:<br><br><b>&lt;admin password&gt;</b> ↵<br><br><i>The network element user interface is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                        |                                                                        |      |                                                                          |                                                                                              |                                        |                |

—continued—

Procedure 5-4 (continued)

**Deactivating add/drop facilities at the node being deleted**

| Step                                                                                                              | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                   |                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                  |     |               |     |               |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|-----|---------------|
| 25                                                                                                                | <p>Determine the tributary type of the first Add/Drop VT connection that is not checked off in OOS State column in the Add/Drop VT connections table associated with that first VT-Managed STS-1 connection that is not checked off in the OOS State column in Table 2-10 on page 2-15.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If for this connection, the value entered in the Tributary field under the Tributary at the End NE node column is</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>OC-3</td> <td>check off and record the time this step was executed in the OOS State column corresponding to that VT connection in the Add/Drop VT connections table, then go to step 29</td> </tr> <tr> <td>DS1</td> <td>go to step 26</td> </tr> <tr> <td>TIC</td> <td>go to step 28</td> </tr> </tbody> </table>                                                                                                                                                                         | If for this connection, the value entered in the Tributary field under the Tributary at the End NE node column is | Then                                                                                                                                                                                                                          | OC-3    | check off and record the time this step was executed in the OOS State column corresponding to that VT connection in the Add/Drop VT connections table, then go to step 29                                        | DS1 | go to step 26 | TIC | go to step 28 |
| If for this connection, the value entered in the Tributary field under the Tributary at the End NE node column is | Then                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                   |                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                  |     |               |     |               |
| OC-3                                                                                                              | check off and record the time this step was executed in the OOS State column corresponding to that VT connection in the Add/Drop VT connections table, then go to step 29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                   |                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                  |     |               |     |               |
| DS1                                                                                                               | go to step 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                   |                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                  |     |               |     |               |
| TIC                                                                                                               | go to step 28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                   |                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                  |     |               |     |               |
| 26                                                                                                                | <p>From the main network element User Interface screen, enter:</p> <pre>fa ds1 &lt;circuit pack group&gt; &lt;port#&gt; ↵ chgstate oos ↵ yes ↵</pre> <p>where</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="padding-right: 10px;">&lt;circuit pack group&gt;</td> <td>is the value entered in the Circuit Pack Group field under the Tributary at the END NE node column for that first Add/Drop VT connection that is not checked off in the OOS State column in the Add/Drop VT connections table</td> </tr> <tr> <td style="padding-right: 10px;">&lt;port#&gt;</td> <td>is the value entered in the Port# field under the Tributary at the END NE node column for that first Add/Drop VT connection that is not checked off in the OOS State column in the Add/Drop VT connections table</td> </tr> </tbody> </table> <p>After executing this command, check off and record the time this step was executed in the corresponding <b>OOS State</b> column in the Add/Drop VT connections table to help you keep track of actions performed.</p> | <circuit pack group>                                                                                              | is the value entered in the Circuit Pack Group field under the Tributary at the END NE node column for that first Add/Drop VT connection that is not checked off in the OOS State column in the Add/Drop VT connections table | <port#> | is the value entered in the Port# field under the Tributary at the END NE node column for that first Add/Drop VT connection that is not checked off in the OOS State column in the Add/Drop VT connections table |     |               |     |               |
| <circuit pack group>                                                                                              | is the value entered in the Circuit Pack Group field under the Tributary at the END NE node column for that first Add/Drop VT connection that is not checked off in the OOS State column in the Add/Drop VT connections table                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                   |                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                  |     |               |     |               |
| <port#>                                                                                                           | is the value entered in the Port# field under the Tributary at the END NE node column for that first Add/Drop VT connection that is not checked off in the OOS State column in the Add/Drop VT connections table                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                   |                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                  |     |               |     |               |
| 27                                                                                                                | Go to step 29.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                   |                                                                                                                                                                                                                               |         |                                                                                                                                                                                                                  |     |               |     |               |

—continued—

## 5-32 Deleting a VTBM ring node

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Procedure 5-4 (continued)

### Deactivating add/drop facilities at the node being deleted

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| Step                                         | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 28                                           | <p>From the main network element User Interface screen, enter:</p> <pre>fa TIC 1 ↵ chgstate oos &lt;subport #&gt; &lt;subport #&gt; ↵ yes ↵</pre> <p>where</p> <p>&lt;circuit pack group&gt; is the value entered in the Circuit Pack Group field under the Tributary at the END NE node column for that first Add/Drop VT connection that is not checked off in the OOS State column in the Add/Drop VT connections table</p> <p>&lt;subport#&gt; is the value entered in the subport# field under the Tributary at the END NE node column for that first Add/Drop VT connection that is not checked off in the OOS State column in the Add/Drop VT connections table</p> <p>After you complete this step, check off and record the time this step was executed in the corresponding <b>OOS State</b> column in the Add/Drop VT connections table to help track the actions performed.</p> |
| 29                                           | <p>Repeat steps 25 and for each remaining VT Connection in the Add/Drop VT connections table.</p> <p>After you place all the facilities in that table in a OOS state, check off and record the time this step was executed in the <b>OOS State</b> column corresponding to that VT-Managed STS-1 connection in Table 2-10 on page 2-15.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 30                                           | <p>Return to the User Session Manager by pressing <b>Ctrl_T 0</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 31                                           | <p>Repeat steps 16 through 30 for each remaining VT-Managed STS-1 connection in Table 2-10 on page 2-15.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Logging out from the network elements</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 32                                           | <p>In the Open Tools, move to the first opened NE Login session, then press <b>Ctrl_A</b> (or <b>Keypad 0</b>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 33                                           | <p>Log out of the network element by entering:</p> <pre>logout ↵</pre> <p><i>The following message is displayed:</i></p> <pre>Press return to exit.</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 34                                           | <p>Press the <b>Return</b> key.</p> <p><i>The NE Login Manager Main window is displayed.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

—continued—

Procedure 5-4 (continued)

**Deactivating add/drop facilities at the node being deleted**

- | Step                                                     | Action                                                                                                                                                                                                     |                     |             |              |                  |             |               |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------|--------------|------------------|-------------|---------------|
| 35                                                       | Return to the User Session Manager by pressing <b>Ctrl_T0</b> .                                                                                                                                            |                     |             |              |                  |             |               |
| 36                                                       | Repeat steps 32 to 35 for each NE Login session remaining open in the Open Tools window.                                                                                                                   |                     |             |              |                  |             |               |
| <b>Deactivating facilities at the node being deleted</b> |                                                                                                                                                                                                            |                     |             |              |                  |             |               |
| 37                                                       | In the Open Tools list, move to the NE Login Manager tool, then press <b>Ctrl_A</b> (or Keypad 0).                                                                                                         |                     |             |              |                  |             |               |
| 38                                                       | Enter the network element number of the node to be deleted (see Table 2-1 on page 2-1) in the network element field.                                                                                       |                     |             |              |                  |             |               |
| 39                                                       | Tab to the <b>Login</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The following prompt is displayed:</i>                                                                                       |                     |             |              |                  |             |               |
|                                                          | Enter User Name<br>>                                                                                                                                                                                       |                     |             |              |                  |             |               |
| 40                                                       | At the prompt (>), enter the admin userid:<br><b>&lt;admin userid&gt;</b> ↵<br><i>The network element prompts you to enter the password:</i>                                                               |                     |             |              |                  |             |               |
|                                                          | Enter Password<br>>                                                                                                                                                                                        |                     |             |              |                  |             |               |
| 41                                                       | Enter the admin password:<br><b>&lt;admin password&gt;</b> ↵<br><i>The network element user interface is displayed.</i>                                                                                    |                     |             |              |                  |             |               |
| 42                                                       | Determine if the NE to be deleted is an ABM or a TBM shelf:                                                                                                                                                |                     |             |              |                  |             |               |
|                                                          | <table border="0"> <tr> <td><b>If the NE is</b></td> <td><b>Then</b></td> </tr> <tr> <td>an ABM shelf</td> <td>go the next step</td> </tr> <tr> <td>a TBM shelf</td> <td>go to step 44</td> </tr> </table> | <b>If the NE is</b> | <b>Then</b> | an ABM shelf | go the next step | a TBM shelf | go to step 44 |
| <b>If the NE is</b>                                      | <b>Then</b>                                                                                                                                                                                                |                     |             |              |                  |             |               |
| an ABM shelf                                             | go the next step                                                                                                                                                                                           |                     |             |              |                  |             |               |
| a TBM shelf                                              | go to step 44                                                                                                                                                                                              |                     |             |              |                  |             |               |
| 43                                                       | Put all TIC facilities at the node to be deleted in the OOS state by entering:<br><b>fa tic 1</b> ↵<br><b>chgstate oos 1 28</b> ↵<br><b>yes</b> ↵                                                          |                     |             |              |                  |             |               |
| 44                                                       | Put all the DS1 facilities at the node to be deleted in the OOS state by entering:<br><b>fa ds1 all</b> ↵<br><b>chgstate oos</b> ↵<br><b>yes</b> ↵<br><i>The state field indicates OOS.</i>                |                     |             |              |                  |             |               |

—continued—

## 5-34 Deleting a VTBM ring node

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Procedure 5-4 (continued)

### Deactivating add/drop facilities at the node being deleted

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- | Step | Action                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 45   | Put all the DS3 facilities at the node to be deleted in the OOS state by entering:<br><b>fa ds3 all.</b> ↵<br><b>chgstate oos</b> ↵<br><b>yes</b> ↵<br><i>The state field indicates OOS.</i>                                                                                                                            |
| 46   | Logout of the network element by entering:<br><b>logout</b> ↵<br><i>The following message is displayed.</i><br>Press return to exit.                                                                                                                                                                                    |
| 47   | Press the <b>Return</b> key.<br><i>The NE Login Manager Main window is displayed.</i>                                                                                                                                                                                                                                   |
| 48   | To close the NE Login Manager tool:<br><b>a.</b> Display the window menu by pressing <b>Ctrl_L W</b> (or <b>Keypad 6</b> ).<br><i>The window menu appears.</i><br><b>b.</b> Select the <b>Exit</b> command by pressing <b>Space</b> (or <b>Keypad 0</b> ).<br><i>The User Session Manager main window is displayed.</i> |
| 49   | Go to the next procedure                                                                                                                                                                                                                                                                                                |

—end—

## Procedure 5-5

# Deleting Add/Drop connections at the node being deleted

Use this procedure to delete all STS-1 connections associated with the node being deleted.

### Action

| Step                                        | Action                                                                                                                                                                                                                                    |                                             |            |       |        |           |        |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------|-------|--------|-----------|--------|
| 1                                           | In the User Session Manager, move to the Connection Manager tool, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The Connection Manager window appears.</i>                                                                                |                                             |            |       |        |           |        |
| 2                                           | Determine whether STS-Managed STS-1 connections are provisioned at the node to be deleted.                                                                                                                                                |                                             |            |       |        |           |        |
|                                             | <table border="1"> <thead> <tr> <th>If all fields in Table 2-9 on page 2-13 are</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>empty</td> <td>step 8</td> </tr> <tr> <td>not empty</td> <td>step 3</td> </tr> </tbody> </table> | If all fields in Table 2-9 on page 2-13 are | Then go to | empty | step 8 | not empty | step 3 |
| If all fields in Table 2-9 on page 2-13 are | Then go to                                                                                                                                                                                                                                |                                             |            |       |        |           |        |
| empty                                       | step 8                                                                                                                                                                                                                                    |                                             |            |       |        |           |        |
| not empty                                   | step 3                                                                                                                                                                                                                                    |                                             |            |       |        |           |        |
| 3                                           | Move to the first STS-Managed STS-1 connection that is not checked off in column A in Table 2-9 on page 2-13, then press <b>Ctrl_A</b> (or Keypad 0) (use the arrow key to move down the list, if necessary).                             |                                             |            |       |        |           |        |
| 4                                           | Open the connection list item menu by pressing <b>Ctrl_L</b> (or Keypad Enter).<br><i>The list item menu appears.</i>                                                                                                                     |                                             |            |       |        |           |        |
| 5                                           | Move to the <b>Delete</b> command, then press <b>Space</b> (or Keypad 0).<br><i>A dialog box appears.</i>                                                                                                                                 |                                             |            |       |        |           |        |
| 6                                           | Verify that either END NE or END NE Z matches the network element number of the node to be deleted entered in Table 2-1 on page 2-1. Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).                                |                                             |            |       |        |           |        |
| 7                                           | Repeat steps 3 to 6 for each remaining STS-Managed STS-1 connection in Table 2-9 on page 2-13.<br>As you complete this step, check off and record the time this step was executed in column A in Table 2-9 on page 2-13.                  |                                             |            |       |        |           |        |

—continued—

5-36 Deleting a VTBM ring node

Procedure 5-5 (continued)

**Deleting add/drop connections at the node being deleted**

| <b>Step</b>                                                                                                    | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                |                   |       |         |           |         |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------|-------|---------|-----------|---------|
| <b>8</b>                                                                                                       | Determine whether VT-Managed STS-1 connections are provisioned at the node to be deleted.<br><br><table border="1"><thead><tr><th><b>If all fields in Table 2-10 on page 2-15 are</b></th><th><b>Then go to</b></th></tr></thead><tbody><tr><td>empty</td><td>step 29</td></tr><tr><td>not empty</td><td>step 9</td></tr></tbody></table>                                                                   | <b>If all fields in Table 2-10 on page 2-15 are</b>                                                            | <b>Then go to</b> | empty | step 29 | not empty | step 9  |
| <b>If all fields in Table 2-10 on page 2-15 are</b>                                                            | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                |                   |       |         |           |         |
| empty                                                                                                          | step 29                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                |                   |       |         |           |         |
| not empty                                                                                                      | step 9                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                |                   |       |         |           |         |
| <b>9</b>                                                                                                       | Move to the first VT-Managed STS-1 connection that is not checked off in column A in Table 2-10 on page 2-15, then press <b>Ctrl_A</b> (or Keypad 0) (use the arrow key to move down the list, if necessary).                                                                                                                                                                                               |                                                                                                                |                   |       |         |           |         |
| <b>10</b>                                                                                                      | Determine whether Add/Drop VT connections are provisioned for that VT-Managed STS-1 connection.<br><br><table border="1"><thead><tr><th><b>If all fields in the Add/Drop VT connections table associated with that VT-Managed STS-1 connection are</b></th><th><b>Then go to</b></th></tr></thead><tbody><tr><td>empty</td><td>step 28</td></tr><tr><td>not empty</td><td>step 11</td></tr></tbody></table> | <b>If all fields in the Add/Drop VT connections table associated with that VT-Managed STS-1 connection are</b> | <b>Then go to</b> | empty | step 28 | not empty | step 11 |
| <b>If all fields in the Add/Drop VT connections table associated with that VT-Managed STS-1 connection are</b> | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                |                   |       |         |           |         |
| empty                                                                                                          | step 28                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                |                   |       |         |           |         |
| not empty                                                                                                      | step 11                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                |                   |       |         |           |         |
| <b>11</b>                                                                                                      | Open the connection list item menu by pressing <b>Ctrl_L</b> (or Keypad Enter).<br><i>The list item menu appears.</i>                                                                                                                                                                                                                                                                                       |                                                                                                                |                   |       |         |           |         |
| <b>12</b>                                                                                                      | Move to Show contained VTs option, then press <b>Space</b> (or <b>Keypad 0</b> ).<br><i>The VT Connections list window is displayed.</i>                                                                                                                                                                                                                                                                    |                                                                                                                |                   |       |         |           |         |
| <b>13</b>                                                                                                      | Tab to the connection list and move to the first VT connection which is not checked off in column A in the Add/Drop VT connections table associated with that first VT-Managed STS-1 connection that is not checked off in column A in Table 2-10 on page 2-15 and select it by pressing <b>Ctrl_A</b> (or Keypad 0).                                                                                       |                                                                                                                |                   |       |         |           |         |
| <b>14</b>                                                                                                      | Open the connection list item menu by pressing <b>Ctrl_L</b> (or Keypad Enter).<br><i>The connection list item menu appears.</i>                                                                                                                                                                                                                                                                            |                                                                                                                |                   |       |         |           |         |
| <b>15</b>                                                                                                      | Select the <b>Manage VT Connections</b> option by pressing <b>Space</b> (or Keypad 0).<br><i>The Manage VT Connections window is displayed.</i>                                                                                                                                                                                                                                                             |                                                                                                                |                   |       |         |           |         |
| <b>16</b>                                                                                                      | Tab to the VT connection list and move to the first VT connection that is not checked off in column A in the Add/Drop VT connections table associated with the first VT-Managed STS-1 connection that is not checked off in column A in Table 2-10 on page 2-15.                                                                                                                                            |                                                                                                                |                   |       |         |           |         |

—continued—

Procedure 5-5 (continued)

**Deleting add/drop connections at the node being deleted**

| Step                                | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |      |                                |                                                                                                                                           |                                     |               |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------|
| 17                                  | Open the connection list item menu by pressing <b>Ctrl_L</b> (or Keypad Enter).<br><i>The connection list item menu appears.</i>                                                                                                                                                                                                                                                                                                                                 |    |      |                                |                                                                                                                                           |                                     |               |
| 18                                  | Move to the <b>Delete</b> command and select it by pressing <b>Space</b> (or Keypad 0).<br><i>A dialog box appears.</i>                                                                                                                                                                                                                                                                                                                                          |    |      |                                |                                                                                                                                           |                                     |               |
| 19                                  | Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                                                                                                                            |    |      |                                |                                                                                                                                           |                                     |               |
| 20                                  | Repeat steps 16 through 19 for each remaining VT connection that is not checked off in column A in the Add/Drop VT connections table (#1 to #12).<br>Choose the table (#1 to #12) associated with that first VT-Managed STS-1 connection that is not checked off in column A in Table 2-10 on page 2-15.                                                                                                                                                         |    |      |                                |                                                                                                                                           |                                     |               |
| 21                                  | After you complete this step, check off and record the time this step was executed in column A in the Add/Drop VT connections table (#1 to #12).<br><i>Choose the table (#1 to #12) associated with that first VT-Managed STS-1 connection that is not checked off in column A in Table 2-10 on page 2-15.</i>                                                                                                                                                   |    |      |                                |                                                                                                                                           |                                     |               |
| 22                                  | Tab to the <b>Done</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The Manage VT Connection window is closed and the VT Connections list window appears.</i>                                                                                                                                                                                                                                                                                           |    |      |                                |                                                                                                                                           |                                     |               |
| 23                                  | Tab to the <b>Done</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The Connection Manager window is displayed.</i>                                                                                                                                                                                                                                                                                                                                     |    |      |                                |                                                                                                                                           |                                     |               |
| 24                                  | In the Connection Manager screen, open the connection list item menu by pressing <b>Ctrl_L</b> (or Keypad 2).<br><i>The list item menu appears.</i>                                                                                                                                                                                                                                                                                                              |    |      |                                |                                                                                                                                           |                                     |               |
| 25                                  | The Connection Manager disables the command if the selected VT-Managed STS-1 connection is passing-through VT1.5s.                                                                                                                                                                                                                                                                                                                                               |    |      |                                |                                                                                                                                           |                                     |               |
|                                     | <table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">If</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td>the delete message is disabled</td> <td>close the list item menu by pressing <b>Ctrl_^</b> (or keypad PF4), check off column A in Table 2-10 on page 2-15 and then go to step 28.</td> </tr> <tr> <td>not disabled (i.e., not grayed out)</td> <td>go to step 26</td> </tr> </tbody> </table> | If | Then | the delete message is disabled | close the list item menu by pressing <b>Ctrl_^</b> (or keypad PF4), check off column A in Table 2-10 on page 2-15 and then go to step 28. | not disabled (i.e., not grayed out) | go to step 26 |
| If                                  | Then                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |      |                                |                                                                                                                                           |                                     |               |
| the delete message is disabled      | close the list item menu by pressing <b>Ctrl_^</b> (or keypad PF4), check off column A in Table 2-10 on page 2-15 and then go to step 28.                                                                                                                                                                                                                                                                                                                        |    |      |                                |                                                                                                                                           |                                     |               |
| not disabled (i.e., not grayed out) | go to step 26                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |      |                                |                                                                                                                                           |                                     |               |
| 26                                  | Move to the <b>Delete</b> command, then press <b>Space</b> (or Keypad 0).                                                                                                                                                                                                                                                                                                                                                                                        |    |      |                                |                                                                                                                                           |                                     |               |
| 27                                  | Verify that either END NE or END NE Z matches the network element number of the node to be deleted entered in Table 2-1 on page 2-1. Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                       |    |      |                                |                                                                                                                                           |                                     |               |

—continued—

5-38 Deleting a VTBM ring node

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Procedure 5-5 (continued)

**Deleting add/drop connections at the node being deleted**

---

| <b>Step</b> | <b>Action</b>                                                                                                                                                                                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>28</b>   | Repeat steps 9 to 27 for each remaining VT-Managed STS-1 connection in Table 2-10 on page 2-15.<br><br>As you complete this step, check off and record the time this step was executed in column A in Table 2-10 on page 2-15.                                                              |
| <b>29</b>   | To close the <b>Connection Manager</b> tool:<br><br><b>a.</b> Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br><i>The window menu appears.</i><br><br><b>b.</b> Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).<br><i>A dialog box appears.</i> |
| <b>30</b>   | Tab to the <b>No</b> button and select it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The Connection Manager disappears and the User Session Manager is displayed.</i>                                                                                                                   |
| <b>31</b>   | Go to the next procedure.                                                                                                                                                                                                                                                                   |

—end—

## Procedure 5-6

# Deleting ring ADM configuration data for the node being deleted

Use this procedure to delete the configuration data of the node being deleted.

### Action

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the User Session Manager, move to the Configuration Manager tool and open it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The main Configuration Manager screen appears with a display of all system configurations.</i>                                                                                                                                                                  |
| 2    | In the Configurations list, move to the ring configuration that contains the node being deleted (recorded in Table 2-5 on page 2-7), and display the List item menu by pressing <b>Ctrl_L</b> (or Keypad Enter).                                                                                                                                                                               |
| 3    | Select the <b>Edit/Delete Configuration</b> command by pressing <b>Space</b> (or Keypad 0).<br><i>The Configuration Manager: Ring main window appears.</i>                                                                                                                                                                                                                                     |
| 4    | Tab to the Configured ADMs list, then move to the node that is being deleted (recorded in Table 2-1 on page 2-1). Display the List item menu by pressing <b>Ctrl_L</b> (or Keypad Enter).                                                                                                                                                                                                      |
| 5    | Move to the <b>Delete</b> command and select it by pressing <b>Space</b> (or Keypad 0).<br><i>A confirmation dialog is displayed.</i>                                                                                                                                                                                                                                                          |
| 6    | Ensure that the network element number displayed matches the one of the ring node being deleted (recorded in Table 2-1 on page 2-1). Tab to the <b>Yes</b> button and select it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The dialog closes and the updated Configuration Manager: Ring window appears. The arrow now points to the <b>Save and send configuration</b> button.</i>        |
| 7    | Select the <b>Save and send configuration data</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The following dialog appears.</i>                                                                                                                                                                                                                                                     |
| 8    | Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>When the operation is completed, a dialog box appears.</i><br><b>Note:</b> At this point, the neighboring ring ADM nodes that are still optically connected to the deleted node raise the "Invalid Neighbor detected" alarm. The deleted node (recorded in Table 2-1 on page 2-1) raises the "Maps invalid" alarm. |

—continued—

## 5-40 Deleting a VTBM ring node

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Procedure 5-6 (continued)

### Deleting ring ADM configuration data for the node being deleted

---

| Step                                                                                      | Action                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                    |      |                                                                                           |                                                                           |                                |               |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------|---------------|
| 9                                                                                         | Select the <b>Done</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).<br><b>Note 1:</b> The Network Manager needs to be updated in order to reflect the changes made to the configuration. Make a save from GNE if the Network Manager is used.<br><b>Note 2:</b> At this point the deleted ADM node (recorded in Table 2-1 on page 2-1) is still passing through live connections on the working channels that are currently provisioned. |                                    |      |                                                                                           |                                                                           |                                |               |
| <b>Verifying data consistency between the OPC and the network elements</b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |      |                                                                                           |                                                                           |                                |               |
| 10                                                                                        | From the Configuration Manager, open the Utilities menu by pressing <b>Ctrl_L T</b> (or Keypad ,). Select the <b>Audit configuration</b> command by pressing <b>Space</b> (or Keypad 0).<br><i>A dialog box appears.</i>                                                                                                                                                                                                                    |                                    |      |                                                                                           |                                                                           |                                |               |
| 11                                                                                        | Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                                                                                                       |                                    |      |                                                                                           |                                                                           |                                |               |
|                                                                                           | <table><thead><tr><th>If the Audit Configuration command</th><th>Then</th></tr></thead><tbody><tr><td>completes successfully (an Audit successful dialog box appears; see the following screen)</td><td>select the Done button by pressing Ctrl_A (or Keypad 0) and go to step 13</td></tr><tr><td>does not complete successfully</td><td>go to step 12</td></tr></tbody></table>                                                           | If the Audit Configuration command | Then | completes successfully (an Audit successful dialog box appears; see the following screen) | select the Done button by pressing Ctrl_A (or Keypad 0) and go to step 13 | does not complete successfully | go to step 12 |
| If the Audit Configuration command                                                        | Then                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                    |      |                                                                                           |                                                                           |                                |               |
| completes successfully (an Audit successful dialog box appears; see the following screen) | select the Done button by pressing Ctrl_A (or Keypad 0) and go to step 13                                                                                                                                                                                                                                                                                                                                                                   |                                    |      |                                                                                           |                                                                           |                                |               |
| does not complete successfully                                                            | go to step 12                                                                                                                                                                                                                                                                                                                                                                                                                               |                                    |      |                                                                                           |                                                                           |                                |               |
| 12                                                                                        | Correct the problem indicated in the dialog box.<br>For example, if discrepancies are found by the audit, an option is given to correct the mismatch(es).<br>Tab to the <b>Yes</b> button and press <b>Space</b> (or keypad 0).<br>If problems persist, contact your next level of support or your Nortel support group.                                                                                                                    |                                    |      |                                                                                           |                                                                           |                                |               |

—continued—

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 Procedure 5-6 (continued)

**Deleting ring ADM configuration data for the node being deleted**


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| Step                                                          | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |      |                                                       |                                                                       |                                                               |               |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------|-------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------|---------------|
| 13                                                            | To close the Configuration Manager: Ring tool: <ol style="list-style-type: none"> <li>a. Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/><i>The window menu appears.</i></li> <li>b. Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).</li> </ol> <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">If the software</th> <th style="text-align: left;">Then</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">prompts you for a primary to backup OPC data transfer</td> <td style="vertical-align: top;">tab to the No button, then press Ctrl_A (or Keypad 0). Go to step 14.</td> </tr> <tr> <td style="vertical-align: top;">does not prompt you for a primary to backup OPC data transfer</td> <td style="vertical-align: top;">go to step 14</td> </tr> </tbody> </table> | If the software | Then | prompts you for a primary to backup OPC data transfer | tab to the No button, then press Ctrl_A (or Keypad 0). Go to step 14. | does not prompt you for a primary to backup OPC data transfer | go to step 14 |
| If the software                                               | Then                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |      |                                                       |                                                                       |                                                               |               |
| prompts you for a primary to backup OPC data transfer         | tab to the No button, then press Ctrl_A (or Keypad 0). Go to step 14.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |      |                                                       |                                                                       |                                                               |               |
| does not prompt you for a primary to backup OPC data transfer | go to step 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |      |                                                       |                                                                       |                                                               |               |
| 14                                                            | The main Configuration Manager screen appears. To close this tool: <ol style="list-style-type: none"> <li>a. Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/><i>The window menu appears.</i></li> <li>b. Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).<br/><i>The User Session Manager is displayed.</i></li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |      |                                                       |                                                                       |                                                               |               |
| 15                                                            | Go to the next procedure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |      |                                                       |                                                                       |                                                               |               |

—end—

# Procedure 5-7

## Deleting commissioning data for the node being deleted

Use this procedure to delete the Commissioning data of the node being deleted.

### Action

| Step                                                                    | Action                                                                                                                                                                                                                                                                                         |                                                                         |            |                           |        |                |        |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------|---------------------------|--------|----------------|--------|
| 1                                                                       | In the User Session Manager, move to the Commissioning Manager tool and select it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>A Commissioning Manager window appears.</i>                                                                                                                   |                                                                         |            |                           |        |                |        |
| 2                                                                       | Tab to the Commissioned network elements list and move to the Ring ADM NE that is being deleted (recorded in Table 2-1 on page 2-1). Select the Ring ADM NE to be deleted by pressing <b>Ctrl_A</b> (or Keypad 0).                                                                             |                                                                         |            |                           |        |                |        |
| 3                                                                       | Display the List item menu by pressing <b>Ctrl_L</b> (or Keypad Enter).                                                                                                                                                                                                                        |                                                                         |            |                           |        |                |        |
| 4                                                                       | Move to the <b>Delete</b> command and select it by pressing <b>Space</b> (or <b>Keypad 0</b> ).<br><i>A dialog box appears.</i>                                                                                                                                                                |                                                                         |            |                           |        |                |        |
| 5                                                                       | Tab to the <b>Yes</b> button and select it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The network element is decommissioned and the updated Commissioning Manager window appears.</i>                                                                                                      |                                                                         |            |                           |        |                |        |
|                                                                         | <table border="1"> <thead> <tr> <th>If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>other than “Not Equipped”</td> <td>step 6</td> </tr> <tr> <td>“Not Equipped”</td> <td>step 9</td> </tr> </tbody> </table> | If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is | Then go to | other than “Not Equipped” | step 6 | “Not Equipped” | step 9 |
| If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is | Then go to                                                                                                                                                                                                                                                                                     |                                                                         |            |                           |        |                |        |
| other than “Not Equipped”                                               | step 6                                                                                                                                                                                                                                                                                         |                                                                         |            |                           |        |                |        |
| “Not Equipped”                                                          | step 9                                                                                                                                                                                                                                                                                         |                                                                         |            |                           |        |                |        |
| 6                                                                       | Tab to the <b>Transfer data to Backup OPC (from Primary OPC)</b> button, then press <b>Ctrl_A</b> (or <b>Keypad 0</b> ).<br><i>A confirmation dialog appears.</i>                                                                                                                              |                                                                         |            |                           |        |                |        |
| 7                                                                       | Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The dialog disappears and a progress dialog appears, indicating that the data on the primary OPC is being transferred to the backup OPC. This data transfer takes between 4 and 30 minutes to complete.</i>        |                                                                         |            |                           |        |                |        |
| 8                                                                       | To remove the dialog, select the <b>Done</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                   |                                                                         |            |                           |        |                |        |

—continued—

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 Procedure 5-7 (continued)

**Deleting commissioning data for the node being deleted**


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| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | To close the Commissioning Manager tool: <ol style="list-style-type: none"> <li>a. Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/><i>The window menu appears.</i></li> <li>b. Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).<br/><i>The User Session Manager is displayed.</i></li> </ol> <i>Now the database backup for the network element must be deleted.</i> |
| 10   | Access the Software Admin toolset and select the Backup/Restore Manager.                                                                                                                                                                                                                                                                                                                                          |
| 11   | Access the Query All Backups option and select the network element that was decommissioned in the previous steps by pressing <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                         |
| 12   | Display the List item menu by pressing <b>Ctrl_L</b> (or Keypad Enter).                                                                                                                                                                                                                                                                                                                                           |
| 13   | Select the Manage Backups option by pressing <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                                                                         |
| 14   | Delete all backups for the network element: <ol style="list-style-type: none"> <li>a. Select the backup to be deleted and press <b>Ctrl_L</b> (or Keypad Enter).</li> <li>b. Select <b>Delete backup</b> and press <b>Space</b> (or Keypad 0).</li> </ol>                                                                                                                                                         |
| 15   | When all backups are deleted, tab to the <b>Done</b> button and press <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                                                |
| 16   | Close the Backup/Restore Manager: <ol style="list-style-type: none"> <li>a. Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/><i>The window menu appears.</i></li> <li>b. Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).<br/><i>The User Session Manager is displayed.</i></li> </ol>                                                                                |
| 17   | Go to the next procedure.                                                                                                                                                                                                                                                                                                                                                                                         |

—end—

## Procedure 5-8 Audit connections

Use this procedure to audit the connections thus ensuring data connection consistency between the OPC and the network elements after an upgrade.

### Action

| Step | Action                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the User Session Manager, move to the Connection Manager tool, then press <b>Ctrl_A</b> (or Keypad 0).                                                        |
| 2    | Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The Connection Manager window appears.</i>                                           |
| 3    | Display the Utilities menu by pressing <b>Ctrl_L G</b> (or Keypad 2). Move to options and press <b>Ctrl_A</b> (or Keypad 0).<br><i>The options menu appears.</i> |
| 4    | Move to the <b>Audit connections</b> command, then press <b>Space</b> (or Keypad 0).<br><i>A Connection Audit screen is displayed.</i>                           |
| 5    | Tab to the <b>OK</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>A dialog indicating the results of the audit appears.</i>                             |



#### CAUTION

##### Risk of traffic interruption

When you are performing the audit, 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 network elements connection data, the message "successful" is displayed | go to the next step                                                                   |
| discrepancies, the message "failed: mismatch found" is displayed                                             | select the NO option and call your next level of support or your Nortel support group |

—continued—

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Procedure 5-8 (continued)

**Audit connections**

---

| <b>Step</b> | <b>Action</b>                                                                                                                                                                                                                                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>6</b>    | In the Results dialog, select the <b>OK</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The Results dialog closes.</i>                                                                                                                                                                                              |
| <b>7</b>    | To close the Connection Manager tool: <ol style="list-style-type: none"><li>Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/><i>The window menu appears.</i></li><li>Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).<br/><i>The User Session Manager is displayed.</i></li></ol> |
| <b>8</b>    | Go to the next procedure.                                                                                                                                                                                                                                                                                                     |

—end—

## Procedure 5-9 Cabling out the VTBM node being deleted

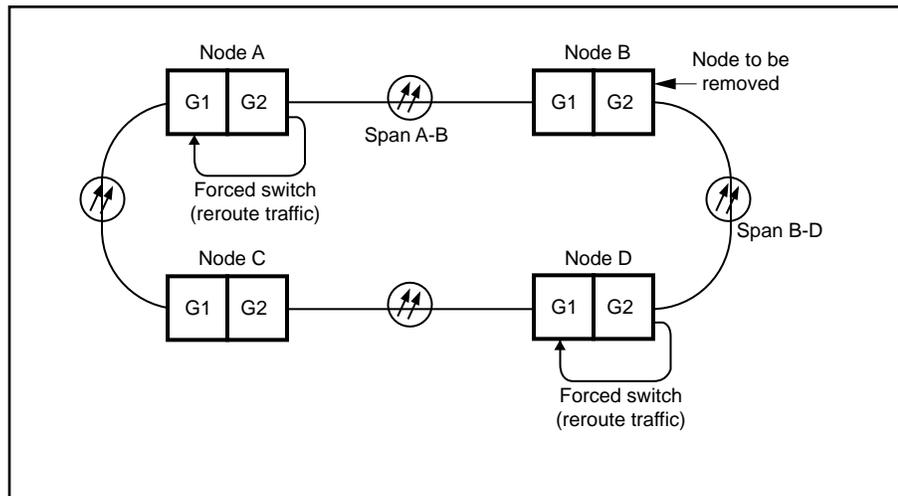
Use this procedure to physically remove the node being deleted from the existing VTBM ring.

To remove the VTBM ring node from an existing ring, you must issue a forced switch at the two nodes adjacent to the node being deleted. At this point, you can disconnect the fibers and cable out the VTBM ring node.

In the example shown in Figure 5-1, Node B is being deleted. Therefore, you must issue a forced switch command must be issued at the two adjacent nodes: Node A and Node D.

**Note:** Before you cable out the deleted ADM node, the two spans adjacent to it must be protected (in our example, spans AB and BD). The deleted node is still carrying pass-through traffic.

**Figure 5-1**  
Operating a forced switch on span AB



—continued—

Procedure 5-9 (continued)  
**Cabling out the VTBM node being deleted**

## Action

| Step | Action |
|------|--------|
|------|--------|

**Operating a forced switch on span AB on the node that connects to OC-12 circuit pack G1 of the node to be removed**

- 1** In the User Session Manager, move to the NE Login Manager tool and select it by pressing **Ctrl\_A** (or Keypad 0).

*The NE Login Manager window appears.*

- 2** Tab to the network element field and enter the network element number recorded in Table 2-7 on page 2-10 under the “Node #” field.

- 3** Tab to the **Login** button, then press **Ctrl\_A** (or Keypad 0).

*The network element prompts you to enter a user name as follows.*

Enter User Name

>

- 4** At the prompt (>), enter the admin userid:

**<admin userid>** ↵

*The network element prompts you to enter the password:*

Enter Password

>

- 5** Enter the admin password:

**<admin password>** ↵

*The network element user interface is displayed.*

- 6** Access the OC-12 protection screen. Issue a high-speed manual switch on the circuit pack group entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field. A short traffic hit (< 50 ms) occurs when you issue this command.

**pr dp oc12** ↵

**manual op <circuit pack group>** ↵

**yes** ↵

where

<circuit pack group> is the value (**g1** or **g2**) entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field.

*An asterisk (\*) appears in the Manual switch column for the selected network element.*

—continued—

5-48 Deleting a VTBM ring node

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Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

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| <b>Step</b> | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7           | Access the active alarms network element user interface screen by entering:<br><b>alarms</b> ↵<br><i>The active alarms list is displayed.</i><br>The following alarms are expected: <ul style="list-style-type: none"><li>• OC-12 Manual switch request</li><li>• OC-12 Protection switch complete</li><li>• OC-12 Gx Entry to SONET clock acquire.</li><li>• Invalid Neighbor detected</li></ul> If other alarms are active, call your next level of support or your Nortel support group. |
| 8           | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 9           | In the Open Tools, move to the NE Login Manager tool, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The NE Login Manager window appears.</i>                                                                                                                                                                                                                                                                                                                                                |
| 10          | Tab to the network element field and enter the network element number recorded in Table 2-8 on page 2-10 under the “Node #” field.                                                                                                                                                                                                                                                                                                                                                          |
| 11          | Tab to the <b>Login</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The network element prompts you to enter a user name as follows.</i><br>Enter User Name<br>>                                                                                                                                                                                                                                                                                                                  |
| 12          | At the prompt (>), enter the admin userid:<br><b>&lt;admin userid&gt;</b> ↵<br><i>The network element prompts you to enter the password:</i><br>Enter Password<br>>                                                                                                                                                                                                                                                                                                                         |
| 13          | Enter the admin password:<br><b>&lt;admin password&gt;</b> ↵<br><i>The network element user interface is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                     |
| 14          | Access the active alarms network element user interface screen by entering:<br><b>alarms</b> ↵<br><i>The active alarms list is displayed.</i>                                                                                                                                                                                                                                                                                                                                               |

—continued—

Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

| Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>The following alarm is expected:</p> <ul style="list-style-type: none"> <li>• OC-12 Protection switch complete</li> <li>• Invalid Neighbor detected</li> </ul> <p>If other alarms are active, call your next level of support or your Nortel support group.</p>                                                                                                                                                      |                                                                                   |                                                                                                                                                                                                                                                                                         |
| 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                                                                                                                                                                                                                         |
| 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>In the User Session Manager, move to the opened NE Login session for the node recorded in Table 2-7 on page 2-10. Press <b>Ctrl_A</b> (or <b>Keypad 0</b>).</p> <p><i>The network element user interface is displayed.</i></p>                                                                                                                                                                                       |                                                                                   |                                                                                                                                                                                                                                                                                         |
| <table border="1" style="width: 100%;"> <tr> <td style="width: 30%; text-align: center; vertical-align: middle;">  </td> <td style="padding-left: 10px;"> <p><b>CAUTION</b></p> <p><b>Risk of reconfiguration failure</b></p> <p>Make sure you are logged in the network element noted in Table 2-7 on page 2-10. Use the forced op command in step 17 for the optical circuit pack group where a manual protection switch is already active.</p> </td> </tr> </table> |                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <p><b>CAUTION</b></p> <p><b>Risk of reconfiguration failure</b></p> <p>Make sure you are logged in the network element noted in Table 2-7 on page 2-10. Use the forced op command in step 17 for the optical circuit pack group where a manual protection switch is already active.</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><b>CAUTION</b></p> <p><b>Risk of reconfiguration failure</b></p> <p>Make sure you are logged in the network element noted in Table 2-7 on page 2-10. Use the forced op command in step 17 for the optical circuit pack group where a manual protection switch is already active.</p>                                                                                                                                 |                                                                                   |                                                                                                                                                                                                                                                                                         |
| 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Access the OC-12 protection screen and issue a forced switch on the circuit pack group entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field.</p> <pre>pr dp oc12 ↵ forced op &lt;circuit pack group&gt; ↵ yes ↵</pre> <p>where</p> <p>&lt;circuit pack group&gt; is the value (g1 or g2) entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field.</p> |                                                                                   |                                                                                                                                                                                                                                                                                         |



—continued—

5-50 Deleting a VTBM ring node

Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

**Step    Action**

*An asterisk (\*) appears in the Forced switch column for the selected network element. The manual switch is released.*

|                                                                                   |                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>CAUTION</b><br/><b>Risk of traffic loss</b><br/>Do not operate a Lockout request on any of the optical cards instead of a forced switch, as this causes a loss of traffic upon fiber disconnecting.</p> |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Operating a forced switch on span BD on the node that connects connect to OC-12 circuit pack G2 of the node to be removed**

**18**    In the User Session Manager, move to the opened NE Login session for the node recorded in Table 2-8 on page 2-10. Press **Ctrl\_A** (or Keypad 0).

*The network element User interface screen is displayed.*

**19**    Access the OC-12 protection screen. Issue a forced switch on the circuit pack group entered in Table 2-8 on page 2-10 under the "Circuit Pack of the adjacent node" field.

**pr dp oc12** ↵  
**forced op <circuit pack group>** ↵  
**yes** ↵

where

<circuit pack group>    is the value (g1 or g2) entered in Table 2-8 on page 2-10 under the "Circuit Pack of the adjacent node" field.

*An asterisk (\*) appears in the Forced switch column for the selected network element. It replaces the Forced switch 'remote' indicator (\*R).*

**Putting OC-12 facilities Out-Of-Service in the adjacent spans**

**20**    Put the OC-12 facility of the circuit pack group recorded in Table 2-7 on page 2-10 in the OOS state by entering:

—continued—

---

 Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**


---

| Step | Action |
|------|--------|
|------|--------|

|    |                                                                      |
|----|----------------------------------------------------------------------|
| 20 | <pre>fa oc12 &lt;circuit pack group&gt; ↵ chgstate oos ↵ yes ↵</pre> |
|----|----------------------------------------------------------------------|

where

<circuit pack group> is the value (g1 or g2) entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field.

*The State field indicates OOS.*

|    |                                                                  |
|----|------------------------------------------------------------------|
| 21 | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> . |
|----|------------------------------------------------------------------|

|    |                                                                                                                                                      |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22 | In the User Session Manager, move to the opened NE Login session for the node recorded in Table 2-8 on page 2-10. Press <b>Ctrl_A</b> (or Keypad 0). |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------|

*The network element user interface is displayed.*

|    |                                                                                                                   |
|----|-------------------------------------------------------------------------------------------------------------------|
| 23 | Put the OC-12 facility of the circuit pack group recorded in Table 2-8 on page 2-10 in the OOS state by entering: |
|----|-------------------------------------------------------------------------------------------------------------------|

|    |                                                                      |
|----|----------------------------------------------------------------------|
| 23 | <pre>fa oc12 &lt;circuit pack group&gt; ↵ chgstate oos ↵ yes ↵</pre> |
|----|----------------------------------------------------------------------|

where

<circuit pack group> is the value (g1 or g2) entered in Table 2-8 on page 2-10 under the “Circuit Pack of the adjacent node” field.

*The State field indicates OOS.*

—continued—

Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

---

| <b>Step</b>                                       | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                   |                   |      |         |                 |         |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------|------|---------|-----------------|---------|
| <b>24</b>                                         | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                   |                   |      |         |                 |         |
| <b>Disconnecting the node being deleted</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                   |                   |      |         |                 |         |
|                                                   | <p><b>Note:</b> The following alarms can be raised during the execution of the steps below, at the adjacent nodes to the node being deleted</p> <ul style="list-style-type: none"> <li>- NE id mismatch</li> <li>- SONET DCC link fail</li> <li>- Force switch request</li> <li>- Protection switch complete</li> <li>- Timing interface reference fail (see Note)</li> <li>- ESI TX AIS (see Note)</li> <li>- ESI G1 Timing generation entry to holdover (see Note)</li> <li>- ESI G2 Timing generation entry to holdover (see Note)</li> </ul> <p>These alarms are raised only if node is line timed off the optical facility that is being removed.</p> |                                                   |                   |      |         |                 |         |
| <b>25</b>                                         | At the site of the network element recorded in Table 2-7 on page 2-10, disconnect the fibers which terminate on the OC-12 circuit pack which has its green activity LED turned off (this should be the circuit pack recorded in Table 2-7 on page 2-10).                                                                                                                                                                                                                                                                                                                                                                                                   |                                                   |                   |      |         |                 |         |
|                                                   | <p><b>Note:</b> Circuit pack G1 is in slot 9 and circuit pack G2 is in slot 10.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                   |                   |      |         |                 |         |
| <b>26</b>                                         | Verify if you need to change the optical circuit pack recorded in Table 2-7 on page 2-10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                   |                   |      |         |                 |         |
|                                                   | <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;"><b>If the value in Table 2-27 on page 2-51 is</b></th> <th style="text-align: left;"><b>Then go to</b></th> </tr> </thead> <tbody> <tr> <td>none</td> <td>step 28</td> </tr> <tr> <td>other than none</td> <td>step 27</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                     | <b>If the value in Table 2-27 on page 2-51 is</b> | <b>Then go to</b> | none | step 28 | other than none | step 27 |
| <b>If the value in Table 2-27 on page 2-51 is</b> | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                   |                   |      |         |                 |         |
| none                                              | step 28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   |                   |      |         |                 |         |
| other than none                                   | step 27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   |                   |      |         |                 |         |
| <b>27</b>                                         | Go to Appendix B: Common procedures. Complete Procedure 7-6, "Replacing an optical interface circuit pack" on page 7-25 where the new circuit pack is the one recorded in Table 2-27 on page 2-51.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                   |                   |      |         |                 |         |

—continued—

Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

| Step                                       | Action                                                                                                                                                                                                                                                                                                                        |                                            |            |      |         |                 |         |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------|------|---------|-----------------|---------|
| 28                                         | At the site of the network element recorded in Table 2-8 on page 2-10, disconnect the fibers which terminate on the OC-12 circuit pack which has its green activity LED turned off (the circuit pack recorded in Table 2-8 on page 2-10).<br><br><b>Note:</b> Circuit pack G1 is in slot 9 and circuit pack G2 is in slot 10. |                                            |            |      |         |                 |         |
| 29                                         | Verify if you need to change the optical circuit pack recorded in Table 2-8 on page 2-10.                                                                                                                                                                                                                                     |                                            |            |      |         |                 |         |
|                                            | <table border="1"> <thead> <tr> <th>If the value in Table 2-28 on page 2-51 is</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>none</td> <td>step 31</td> </tr> <tr> <td>other than none</td> <td>step 30</td> </tr> </tbody> </table>                                                                               | If the value in Table 2-28 on page 2-51 is | Then go to | none | step 31 | other than none | step 30 |
| If the value in Table 2-28 on page 2-51 is | Then go to                                                                                                                                                                                                                                                                                                                    |                                            |            |      |         |                 |         |
| none                                       | step 31                                                                                                                                                                                                                                                                                                                       |                                            |            |      |         |                 |         |
| other than none                            | step 30                                                                                                                                                                                                                                                                                                                       |                                            |            |      |         |                 |         |
| 30                                         | Go to Appendix B: Common procedures, Procedure 7-6, "Replacing an optical interface circuit pack" on page 7-25 where the new circuit pack is the one recorded in Table 2-28 on page 2-51.                                                                                                                                     |                                            |            |      |         |                 |         |
| 31                                         | Make the optical connections from the network element and circuit pack group recorded in Table 2-7 on page 2-10 to the network element and circuit pack group recorded in Table 2-8 on page 2-10.                                                                                                                             |                                            |            |      |         |                 |         |

**Performing basic optical tests**

|    |                                                                                                                                                                                                                                                                                                                                                                                                  |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 32 | At the site of the network element recorded in Table 2-7 on page 2-10, go to Appendix B: Common procedures, Procedure 7-2, "Basic optical tests" on page 7-8, on the OC-12 circuit pack which has its green activity LED turned off (this should be the circuit pack recorded in Table 2-7 on page 2-10).<br><br><b>Note:</b> Circuit pack G1 is in slot 9 and circuit pack G2 is in slot 10.    |
| 33 | At the site of the network element recorded in Table 2-8 on page 2-10 and go to Appendix B: Common procedures, Procedure 7-2, "Basic optical tests" on page 7-8, on the OC-12 circuit pack which has its green activity LED turned off (this should be the circuit pack recorded in Table 2-8 on page 2-10).<br><br><b>Note:</b> Circuit pack G1 is in slot 9 and circuit pack G2 is in slot 10. |

**Verifying the firmware on the new OC-12 circuit packs**

| 34                                                                         | Determine if you need to verify the firmware on the circuit pack at the site of the network element recorded in Table 2-7 on page 2-10.                                                                                                                                                          |                                                                            |            |                  |         |                      |         |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------|------------------|---------|----------------------|---------|
|                                                                            | <table border="1"> <thead> <tr> <th>If the optical circuit pack at the node recorded in Table 2-7 on page 2-10</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>has been changed</td> <td>step 35</td> </tr> <tr> <td>has not been changed</td> <td>step 38</td> </tr> </tbody> </table> | If the optical circuit pack at the node recorded in Table 2-7 on page 2-10 | Then go to | has been changed | step 35 | has not been changed | step 38 |
| If the optical circuit pack at the node recorded in Table 2-7 on page 2-10 | Then go to                                                                                                                                                                                                                                                                                       |                                                                            |            |                  |         |                      |         |
| has been changed                                                           | step 35                                                                                                                                                                                                                                                                                          |                                                                            |            |                  |         |                      |         |
| has not been changed                                                       | step 38                                                                                                                                                                                                                                                                                          |                                                                            |            |                  |         |                      |         |

—continued—

5-54 Deleting a VTBM ring node

Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

| Step                                                                       | Action                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|
| 35                                                                         | In the User Session Manager, move to the opened NE Login session for the node recorded in Table 2-7 on page 2-10. Press <b>Ctrl_A</b> (or Keypad 0).<br><i>The network element user interface is displayed.</i>                                                                                                                                                                                                     |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| 36                                                                         | Carry out Appendix B: Common procedures, Procedure 7-7, "Verifying the firmware on an OC-12 VTBM circuit pack" on page 7-26 where the value of <circuit pack group> is the one recorded under "Circuit pack of the adjacent node" field in Table 2-7 on page 2-10.                                                                                                                                                  |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| 37                                                                         | View the OC-12 circuit pack's red unit fail LED.                                                                                                                                                                                                                                                                                                                                                                    |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
|                                                                            | <table border="1"><thead><tr><th>If the OC-12 circuit pack's red unit fail LED is</th><th>Then</th></tr></thead><tbody><tr><td>lit</td><td>the OC-12 circuit pack is faulty and needs to be replaced. To do so, repeat step 25 and step 37 with another OC-12 circuit pack of the same type as the one recorded in Table 2-24 on page 2-48</td></tr><tr><td>not lit</td><td>go to step 38</td></tr></tbody></table> | If the OC-12 circuit pack's red unit fail LED is                           | Then       | lit              | the OC-12 circuit pack is faulty and needs to be replaced. To do so, repeat step 25 and step 37 with another OC-12 circuit pack of the same type as the one recorded in Table 2-24 on page 2-48 | not lit              | go to step 38 |
| If the OC-12 circuit pack's red unit fail LED is                           | Then                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| lit                                                                        | the OC-12 circuit pack is faulty and needs to be replaced. To do so, repeat step 25 and step 37 with another OC-12 circuit pack of the same type as the one recorded in Table 2-24 on page 2-48                                                                                                                                                                                                                     |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| not lit                                                                    | go to step 38                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
|                                                                            | <b>Note:</b> If you are at this step for the second time, call your next level of support or your Nortel support group.                                                                                                                                                                                                                                                                                             |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| 38                                                                         | Determine if you need to verify the firmware on the circuit pack at the site of the network element recorded in Table 2-28 on page 2-51.                                                                                                                                                                                                                                                                            |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
|                                                                            | <table border="1"><thead><tr><th>If the optical circuit pack at the node recorded in Table 2-8 on page 2-10</th><th>Then go to</th></tr></thead><tbody><tr><td>has been changed</td><td>step 39</td></tr><tr><td>has not been changed</td><td>step 42</td></tr></tbody></table>                                                                                                                                     | If the optical circuit pack at the node recorded in Table 2-8 on page 2-10 | Then go to | has been changed | step 39                                                                                                                                                                                         | has not been changed | step 42       |
| If the optical circuit pack at the node recorded in Table 2-8 on page 2-10 | Then go to                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| has been changed                                                           | step 39                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| has not been changed                                                       | step 42                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| 39                                                                         | In the User Session Manager, move to the opened NE Login session for the node recorded in Table 2-8 on page 2-10. Select it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The network element user interface is displayed.</i>                                                                                                                                                                                     |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |
| 40                                                                         | Go to Appendix B: Common procedures. Complete Procedure 7-7, "Transfer the correct OC-12 firmware from the OPC to the OC-12 circuit pack by entering:" on page 7-26 where circuit pack group is the one recorded in the "Circuit pack of the adjacent node" field in Table 2-8 on page 2-10.                                                                                                                        |                                                                            |            |                  |                                                                                                                                                                                                 |                      |               |

—continued—

Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

| Step                                             | Action                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                  |      |     |                                                                                                                                                                                                 |         |               |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|
| 41                                               | View the OC-12 circuit pack's red unit fail LED.                                                                                                                                                                                                                                                                                                                                                                                     |                                                  |      |     |                                                                                                                                                                                                 |         |               |
|                                                  | <table border="1"> <thead> <tr> <th>If the OC-12 circuit pack's red unit fail LED is</th> <th>Then</th> </tr> </thead> <tbody> <tr> <td>lit</td> <td>the OC-12 circuit pack is faulty and needs to be replaced. To do so, repeat step 25 and step 41 with another OC-12 circuit pack of the same type as the one recorded in Table 2-26 on page 2-50</td> </tr> <tr> <td>not lit</td> <td>go to step 42</td> </tr> </tbody> </table> | If the OC-12 circuit pack's red unit fail LED is | Then | lit | the OC-12 circuit pack is faulty and needs to be replaced. To do so, repeat step 25 and step 41 with another OC-12 circuit pack of the same type as the one recorded in Table 2-26 on page 2-50 | not lit | go to step 42 |
| If the OC-12 circuit pack's red unit fail LED is | Then                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                  |      |     |                                                                                                                                                                                                 |         |               |
| lit                                              | the OC-12 circuit pack is faulty and needs to be replaced. To do so, repeat step 25 and step 41 with another OC-12 circuit pack of the same type as the one recorded in Table 2-26 on page 2-50                                                                                                                                                                                                                                      |                                                  |      |     |                                                                                                                                                                                                 |         |               |
| not lit                                          | go to step 42                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                  |      |     |                                                                                                                                                                                                 |         |               |

**Note:** If you are at this step for the second time, call your next level of support or your Nortel support group.

**Verifying network element association**

- 42 Check in the bottom left corner of the OPC user interface screen to ensure there is no '?' (a '?' is an indication of a loss of association).
- 43 If there is a '?', wait 10 minutes to allow association to restore. If associations do not restore (that the '?' is still present) after 10 minutes, contact your next level of support or your Nortel support group.

**Returning the OC-12 facilities to In-Service in the adjacent spans**

**Note:** Alarms raised after returning the OC-12 facilities In-Service. Entry to acquire, and entry to fast alarms are raised at nodes that are line timed with or without ESI units. They clear after about 2 minutes.

- 44 Move to the opened NE Login session for the node recorded in Table 2-8 on page 2-10. Press **Ctrl\_A** (or Keypad 0). At the network element User Interface screen, enter:

```
fa oc12 <circuit pack group> ↵
chgstate is ↵
```

where

<circuit pack group> is the value (**g1** or **g2**) entered in Table 2-8 on page 2-10 under the "Circuit Pack of the adjacent node" field.

*The State field indicates IS.*

—continued—

5-56 Deleting a VTBM ring node

---

Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

---

| Step | Action                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 45   | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                 |
| 46   | In the User Session Manager, move to the opened NE Login session for the node recorded in Table 2-7 on page 2-10. Press <b>Ctrl_A</b> (or Keypad 0). At the network element User interface screen, enter:<br><b>fa oc12 &lt;circuit pack group&gt; ↵</b><br><b>chgstate is ↵</b> |

where

<circuit pack group> is the value (**g1** or **g2**) entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field.

*The State field indicates IS.*

**Checking span performance before releasing the force switch**

|    |                                                                                                                                                     |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 47 | Access the OC-12 performance statistics screen by entering:<br><b>pm fp oc12 &lt;circuit pack group&gt; ↵</b>                                       |
|    | where                                                                                                                                               |
|    | <circuit pack group> is the value ( <b>g1</b> or <b>g2</b> ) entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field. |

*The OC-12 Performance Statistics screen is displayed.*

|    |                                                                                                                                                                                                                                                             |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 48 | Start a new untimed interval by entering:<br><b>startunt ↵</b>                                                                                                                                                                                              |
|    | <i>The Untimed Start field gets updated to the current date and time.</i>                                                                                                                                                                                   |
| 49 | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                            |
| 50 | In the User Session Manager, move to the opened NE Login session for the node recorded in Table 2-8 on page 2-10. Press <b>Ctrl_A</b> (or Keypad 0). At the network element User Interface screen, enter:<br><b>pm fp oc12 &lt;circuit pack group&gt; ↵</b> |

where

<circuit pack group> is the value (**g1** or **g2**) entered in Table 2-8 on page 2-10 under the “Circuit Pack of the adjacent node” field.

*The OC-12 Performance Statistics screen is displayed.*

—continued—

Procedure 5-9 (continued)

**Cabling out the VTBM node being deleted**

| Step                                      | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 51                                        | <p>Start a new untimed interval by entering:</p> <p><b>startunt</b> ↵</p> <p><i>The Untimed Start field gets updated to the current date and time.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                |
| 52                                        | <p>Return to the User Session Manager by pressing <b>Ctrl_T 0</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 53                                        | <p>Wait 15 minutes before proceeding with the next step.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 54                                        | <p>Verify that the Untimed Curr column displays 0 for all performance monitoring parameters. If 0 is not displayed for all parameters, call your next level of support or your Nortel support group.</p>                                                                                                                                                                                                                                                                                                                                                                  |
| 55                                        | <p>Move to the opened NE Login session for the node recorded in Table 2-7 on page 2-10. Press <b>Ctrl_A</b> (or Keypad 0). At the network element User Interface screen, enter:</p> <p><b>pm fp oc12 &lt;circuit pack group&gt;</b> ↵</p> <p>where</p> <p>&lt;circuit pack group&gt; is the value (<b>g1</b> or <b>g2</b>) entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field.</p> <p><i>The OC-12 Performance Statistics screen is displayed.</i></p>                                                                                 |
| 56                                        | <p>Verify that the Untimed Curr column displays 0 for all performance monitoring parameters. If 0 is not displayed for all parameters, call your next level of support or your Nortel support group.</p>                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>Releasing the forced switch</b></p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 57                                        | <p>Release the OC-12 forced switch by entering:</p> <p><b>pr dp oc12</b> ↵</p> <p><b>forced re &lt;circuit pack group&gt;</b> ↵</p> <p><b>yes</b> ↵</p> <p>where</p> <p>&lt;circuit pack group&gt; is the value (<b>g1</b> or <b>g2</b>) entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field.</p> <p><i>A short traffic hit (&lt; 50 ms) occurs when the forced switch is released. The Forced column in the OC12 protection screen changes from “*” to “.”.</i></p> <p><b>Note:</b> The invalid neighbor alarms are still present.</p> |
| 58                                        | <p>Log out from the network element by entering:</p> <p><b>logout</b> ↵</p> <p><i>The “Press return to exit” message appears.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                     |

—continued—

## 5-58 Deleting a VTBM ring node

---

Procedure 5-9 (continued)

### Cabling out the VTBM node being deleted

---

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 59   | Press the <b>Return</b> (↵) key.<br><i>The NE Login Manager window appears.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 60   | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 61   | In the User Session Manager, move to the opened NE Login session for the node recorded in Table 2-7 on page 2-10. Press <b>Ctrl_A</b> (or Keypad 0). At the network element user interface screen, enter:<br><b>pr dp oc12 ↵</b><br><b>forced re &lt;circuit pack group&gt; ↵</b><br><b>yes ↵</b><br><br>where<br><br><circuit pack group>      is the value ( <b>g1</b> or <b>g2</b> ) entered in Table 2-7 on page 2-10 under the “Circuit Pack of the adjacent node” field.<br><br><i>A short traffic hit (&lt; 50 ms) will take place when the forced switch is released. The Forced column in the OC12 protection screen will change from “*” to “.”.</i> |
| 62   | Log out of the network element by entering:<br><b>logout ↵</b><br><i>The “Press return to exit” message appears.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 63   | Press the Return (↵) key.<br><i>The NE Login Manager window appears.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 64   | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 65   | Move to the opened NE Login session of the new VTBM ring node. Select it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The network element User Interface screen is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 66   | Log out of the network element by entering:<br><b>logout ↵</b><br><i>The “Press return to exit” message appears.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 67   | Press the Return (↵) key.<br><i>The NE Login Manager window appears.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 68   | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 69   | Go to next procedure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

—end—

## Procedure 5-10

# Post-system reconfiguration verification

Use this procedure to perform system verification after you complete the reconfiguration. This verification ensures that the system is and continues to operate trouble free. This procedure also performs a sanity check on each network element.

## Action

---

| Step | Action |
|------|--------|
|------|--------|

---

### Verifying state of OPCs

- 1 In the User Session Manager, tab to the Open tools list and open the OPC Status tool by pressing **Ctrl\_A** (or Keypad 0).

*The primary and backup OPC status are displayed.*

| If                                                                                                                                                                                      | Then                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is other than "Not Equipped" and the OPC Status window shows the primary OPC is active and the backup OPC is inactive | go to step 2                                                    |
| the value in the "Backup OPC name" field in Table 2-2 on page 2-4 is "Not Equipped" and the OPC Status window shows the primary OPC is active                                           | go to step 2                                                    |
| the OPC(s) are in any other state                                                                                                                                                       | contact your next level of support or your Nortel support group |

- 2 Return to the User Session Manager by pressing **Ctrl\_T 0**.
- 3 Record the OPC time that appears in the bottom right-hand corner of the User Session Manager screen. It is used in a subsequent step in this procedure.  
OPC time: \_\_\_\_\_.

### Verifying network element association

- 4 Check in the bottom left corner of the OPC user interface screen to ensure there is no '?' (a '?' is an indication of a loss of association).  
Re-establish any loss of communications. If a problem persists, contact your next level of support or your Nortel support group.

—continued—

## 5-60 Deleting a VTBM ring node

---

Procedure 5-10 (continued)

### Post-system reconfiguration verification

---

| Step                                   | Action                                                                                                                                                                                                                                |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Logging in to a network element</b> |                                                                                                                                                                                                                                       |
| 5                                      | In the User Session Manager, tab to the Open tools list, move to the NE Login Manager tool, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The NE Login Manager main window is displayed.</i>                                          |
| 6                                      | Enter the network element number of the first network element that is not checked off in column B in Table 2-6 on page 2-8.<br><b>Note:</b> If you are repeating this step, it will be necessary to tab to the network element field. |
| 7                                      | Tab to the <b>Login</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The following prompt is displayed:</i><br>Enter User Name<br>>                                                                                          |
| 8                                      | At the prompt (>), enter the admin userid:<br><b>&lt;admin userid&gt;</b> ↵<br><i>The network element prompts you to enter the password:</i><br>Enter Password<br>>                                                                   |
| 9                                      | Enter the admin password:<br><b>&lt;admin password&gt;</b> ↵<br><i>The network element user interface is displayed.</i>                                                                                                               |

—continued—

---

 Procedure 5-10 (continued)

**Post-system reconfiguration verification**


---

| <b>Step</b> | <b>Action</b> |
|-------------|---------------|
|-------------|---------------|

---

**Creating network element database backups**

- 10** Perform a database backup by entering:

```
eq sh;backupdb ↵
yes ↵
```

*One of the following messages is displayed:*

Message 1:

The system is busy so the backupDB command cannot be processed at the moment. Please re-enter the command later.

Message 2:

The BackupDB has been initiated. Please refer to FWDB logs for results.

| <b>If</b>              | <b>Then go to</b> |
|------------------------|-------------------|
| message 1 is displayed | step 11           |
| message 2 is displayed | step 12           |

- 11** Wait 2 minutes and then repeat step 10. If the problem persists, contact your next level of support or your Nortel support group.

**Running the network element exerciser**

- 12** Run the exerciser by entering:

```
eq sh;exercise ↵
```

*The following message is displayed:*

The shelf exerciser has been initiated. Please refer to EQP logs for results.

*The Exerciser field indicates when the exerciser is running and when it has terminated. Wait for the Exerciser field to display 'off' before proceeding with the next step.*

**Verifying the network element logs**

- 13** Access the logs menu by entering:

```
fwp ↵
logutil ↵
```

*The following message is displayed:*

LOGUTIL:

—continued—

5-62 Deleting a VTBM ring node

Procedure 5-10 (continued)

**Post-system reconfiguration verification**

| Step                                                                                                                                                                                                                                                                                                                                                                                                                         | Action                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 14                                                                                                                                                                                                                                                                                                                                                                                                                           | View the results of the exerciser by entering:<br><b>open eqp</b> ↵<br><i>The EQP608 Exerciser Results log is displayed.</i> |
| <b>If</b>                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Then</b>                                                                                                                  |
| the exerciser passed in all cases                                                                                                                                                                                                                                                                                                                                                                                            | go to step 15                                                                                                                |
| the exerciser did not run successfully (that is, the exerciser results show failed, aborted, or not run)                                                                                                                                                                                                                                                                                                                     | contact your next level support or your Nortel support group                                                                 |
| <b>Note:</b> The results do show 'not run' for the OC-12 portion if the OC-12 working units have no protection or if the protection channel is active. If the DS3 or DS1 working units have no protection, then their exerciser results do not appear in the eqp logs. If all the facilities carried by the DS3 or DS1 working units are in the out-of-service state, then 'not run' is displayed for the DS3or DS1 portion. |                                                                                                                              |

**Checking for outstanding swerrs**

|                                      |                                                                 |
|--------------------------------------|-----------------------------------------------------------------|
| 15                                   | Open the software error log by entering:<br><b>open swerr</b> ↵ |
| <b>If</b>                            | <b>Then</b>                                                     |
| the "Log empty" message is displayed | go to step 16                                                   |
| is not displayed                     | contact your next level of support or your Nortel support group |

**Logging out from the network element**

- 16 Log out of the network element by entering:  
**logout** ↵  
*The following message is displayed.*  
Press return to exit.
- 17 Press the **Return** key.  
*The NE Login Manager Main window is displayed.*
- 18 Repeat steps 6 through 18 for each network element that is not checked off in column B in Table 2-6 on page 2-8.  
As you complete each network element, check off and record in column B in Table 2-6 on page 2-8 the time that you completed this step.

—continued—

Procedure 5-10 (continued)

**Post-system reconfiguration verification**

| Step                                                   | Action                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 19                                                     | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                                                                                     |
| <b>Verifying the network element database backups</b>  |                                                                                                                                                                                                                                                                                                                                                                                                      |
| 20                                                     | In the User Session Manager, tab to the Available tools list, move to the Backup/Restore Manager tool, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The Backup/Restore Manager main window is displayed.</i>                                                                                                                                                                                        |
| 21                                                     | Display the Options menu by pressing <b>Ctrl_L T</b> (or Keypad , ).<br><i>The Options menu is displayed.</i>                                                                                                                                                                                                                                                                                        |
| 22                                                     | Select <b>Query All Backups</b> command by pressing <b>Space</b> (or Keypad 0).<br><i>The Query All Backups dialog is displayed.</i>                                                                                                                                                                                                                                                                 |
| 23                                                     | For each network element in Table 2-6 on page 2-8 ensure that a REL1400.current Backup Name exists, and that its time is more recent than the one recorded in step 3 (use the arrow key to move down the list, if necessary).<br><b>Note:</b> If a REL1400.current Backup Name is missing for any one network element, contact your next level of support or your Nortel support group.              |
| 24                                                     | Close the Query all backups dialog by tabbing to the <b>Done</b> button, then press <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                     |
| 25                                                     | Close the <b>Backup/Restore Manager</b> tool: <ol style="list-style-type: none"> <li>a. Display the window menu by pressing <b>Ctrl_L W</b> (or Keypad 6).<br/><i>The window menu is displayed.</i></li> <li>b. Select the <b>Exit</b> command by pressing <b>Space</b> (or Keypad 0).<br/><i>The User Session Manager is displayed.</i></li> </ol>                                                  |
| <b>Check for alarms and active protection switches</b> |                                                                                                                                                                                                                                                                                                                                                                                                      |
| 26                                                     | Check the banner line at the bottom of the OPC user interface screen. There should not be any counts next to the C, M, m, w and ActProt fields that are not expected. Use the Alarm Monitor tool to check raised alarms.<br><b>Note:</b> Refer to "Troubleshooting" in the <i>Alarm and Trouble Clearing Procedures Guide</i> , 323-3001-543, in <i>Maintenance</i> , Vol 5A, if alarms are present. |

—continued—

Procedure 5-10 (continued)

**Post-system reconfiguration verification**

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| <b>Step</b> | <b>Action</b> |
|-------------|---------------|
|-------------|---------------|

---

**Logging out from the primary OPC**

**27** In the User Session Manager, tab to the **Logout** button, then press **Ctrl\_A** (or Keypad 0).

*A confirmation dialog is displayed.*

**28** Confirm the request by tabbing to the **Logout** button, then press **Ctrl\_A** (or Keypad 0).

*The following prompt is displayed:*

`opc>`

**29** Log out of the primary OPC by entering:

**logout** ↵

**Configuring port 1 on the primary OPC**

**30** If you altered the primary OPC port 1 configuration during this process, return its state back to its original setting (that is, X.25 or printer). Go to “Appendix B: Common procedures”, and complete Procedure 7-3, “Configuring OPC port 1” on page 7-10.

**31** Go to the next procedure.

—end—

## Procedure 5-11

# Saving post-system reconfiguration to tape

Use this procedure to save OPC data to tape and also synchronize the primary and backup OPCs.

### Action

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Log in to the primary OPC as the 'root' user using the primary OPCs port 1 or the primary OPCs ethernet port via a telnet session.</p> <p><i>For a reminder on how to log in to an OPC, refer to Appendix B: Common procedures, Procedure 7-5, "Logging into the OPC" on page 7-22.</i></p> <p><i>The following prompt is displayed:</i></p> <pre>opc&gt;</pre> <p><b>Note:</b> If the primary OPCs port 1 is not configured for terminal operation, you must log into the primary OPC using the network element user interface port 2.</p> |
| 2    | <p>Access the User Session Manager by entering:</p> <pre>opcui ↵</pre> <p><i>The User Session Manager window is displayed.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3    | <p>In the User Session Manager, tab to the Available tools list, move to the OPC Save and Restore tool, then <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>The OPC Save and Restore main window is displayed in save mode. The Save to tape button is selected and the buttons for saving OPC data to tape are displayed in the bottom half of the window.</i></p>                                                                                                                                                                                    |
| 4    | <p>Insert a blank DDS tape into the primary OPC's tape drive to store the system data.</p> <p><b>Note:</b> You can use the blank DDS tape used in Procedure 5-2, "Saving pre-system reconfiguration data to tape" on page 5-14 since the system data presently on the tape is now invalid.</p>                                                                                                                                                                                                                                                 |
| 5    | <p>Tab to the <b>Save OPC data to tape</b> button, then press <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>The Save confirmation dialog is displayed, prompting you to confirm your request.</i></p>                                                                                                                                                                                                                                                                                                                                                 |

—continued—

Procedure 5-11 (continued)

**Saving post-system reconfiguration to tape**

| Step                                                                    | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                         |            |                           |         |                                        |         |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------|---------------------------|---------|----------------------------------------|---------|
| 6                                                                       | <p>Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or <b>Keypad 0</b>).</p> <p><i>A progress dialog is displayed, indicating that the save operation has been initiated.</i></p> <table border="1"> <thead> <tr> <th>If the tape</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>is blank</td> <td>step 8</td> </tr> <tr> <td>contains data that you are overwriting</td> <td>step 7</td> </tr> </tbody> </table>                                                                                                                                      | If the tape                                                             | Then go to | is blank                  | step 8  | contains data that you are overwriting | step 7  |
| If the tape                                                             | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                         |            |                           |         |                                        |         |
| is blank                                                                | step 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                         |            |                           |         |                                        |         |
| contains data that you are overwriting                                  | step 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                         |            |                           |         |                                        |         |
| 7                                                                       | <p>If the DDS tape contains data that you are overwriting, A confirmation dialog is displayed.</p> <p><i>if the tape contains a data archive, the dialog prompts you to confirm your request to overwrite the existing data on the tape.</i></p> <p><i>If the tape contains a software load, the dialog prompts you to confirm your request to overwrite the existing data on the tape.</i></p> <p>Tab to the <b>OK</b> button, then press <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>The progress dialog reappears, indicating the progress of the save operation.</i></p> |                                                                         |            |                           |         |                                        |         |
| 8                                                                       | <p>Wait until the save operation is complete. A dialog showing the progress of the save operation is displayed. This step can take up to 40 minutes.</p> <p><i>A completion dialog is displayed.</i></p>                                                                                                                                                                                                                                                                                                                                                                |                                                                         |            |                           |         |                                        |         |
| 9                                                                       | <p>Select the <b>Done</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>The main Save and Restore Manager screen appears.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                         |            |                           |         |                                        |         |
| <b>Transfer primary OPC data to backup OPC</b>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                         |            |                           |         |                                        |         |
| 10                                                                      | <p>Determine whether the system has a backup OPC using Table 2-2 on page 2-4.</p> <table border="1"> <thead> <tr> <th>If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>other than “Not Equipped”</td> <td>step 11</td> </tr> <tr> <td>“Not Equipped”</td> <td>step 15</td> </tr> </tbody> </table>                                                                                                                                                                                      | If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is | Then go to | other than “Not Equipped” | step 11 | “Not Equipped”                         | step 15 |
| If the value in the “Backup OPC name” field in Table 2-2 on page 2-4 is | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                         |            |                           |         |                                        |         |
| other than “Not Equipped”                                               | step 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                         |            |                           |         |                                        |         |
| “Not Equipped”                                                          | step 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                         |            |                           |         |                                        |         |
| 11                                                                      | <p>Tab to Save to tape field, move to the <b>Restore from tape</b> button, then press <b>Ctrl_A</b> (or Keypad 0).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                         |            |                           |         |                                        |         |
| 12                                                                      | <p>Tab to the <b>Transfer Data to Backup OPC</b> option, then press <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>A confirmation dialog appears.</i></p> <p><b>Note:</b> The Transfer of data to the backup OPC is done from the primary OPC and not from the tape. The command is available and accessed from Save and Restore tool.</p>                                                                                                                                                                                                                                      |                                                                         |            |                           |         |                                        |         |

—continued—

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 Procedure 5-11 (continued)

**Saving post-system reconfiguration to tape**


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- | Step | Action                                                                                                                                                                                                                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13   | <p>Tab to the <b>Yes</b> button, then press <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>The dialog disappears and a progress dialog appears, indicating that the data on the OPC is being copied to the backup OPC and the percentage completion of the save operation. The save operation takes between 4 and 30 minutes.</i></p> <p>When the transfer is done, a new dialog appears.</p> |
| 14   | To remove the dialog, select the <b>Done</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                          |
| 15   | Eject the tape from the OPC tape drive, label it (system name, current software version [OPC/network element]), and store it in a secure place.                                                                                                                                                                                                                                       |

**Restarting the OPC**
**To re-initialize the databases, you must restart the OPC.**

- |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16 | Return to the User Session Manager by pressing <b>Ctrl_T 0</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 17 | <p>Open the <b>OPC Shutdown</b> tool.</p> <p><i>The OPC Shutdown tool main window appears.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 18 | <p>Select the Shutdown button by pressing <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>A confirmation dialog appears. It indicates the amount of time required for the shutdown and gives you a final chance to abort the shutdown.</i></p>                                                                                                                                                                                                                                                                                                                                                                                               |
| 19 | <p>Tab to the <b>Proceed</b> button, then press <b>Ctrl_A</b> (or Keypad 0). This commits the tool to shut down the OPC.</p> <p><i>The confirmation dialog closes and the OPC shutdown process starts. A console message appears.</i></p>                                                                                                                                                                                                                                                                                                                                                                                           |
| 20 | <p>Select the <b>OK</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>A shutdown progress dialog appears. As the shutdown progresses, the dots on the dialog are replaced with Xs. The progress dialog indicates that the OPC is shutting down normally. Since the shutdown continues while the console message appears, the shutdown might complete before you select the OK button in the console message (in the previous step). Therefore, you would not see the progress message. A dialog appears when the shutdown is complete. This dialog appears to all users who are currently logged in to the OPC.</i></p> |
| 21 | Select the <b>Done</b> button by pressing <b>Ctrl_A</b> (A dialog appears with the choice to halt or restart the OPC).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

—continued—

Procedure 5-11 (continued)

**Saving post-system reconfiguration to tape**

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| <b>Step</b> | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>22</b>   | Tab to the <b>Restart</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>This action causes the OPC to reboot without delay after the shutdown completes.</i>                                                                                                                                                                                                                                                                                  |
| <b>23</b>   | Tab back to the <b>OK</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The shutdown procedure completes. The OPC then initiates a reboot, and completes it in 5–10 minutes. When it is complete, the OPC login prompt (login:) appears. The shutdown of the OPC terminates all user login sessions. You have to log in again after the OPC returns to service.</i><br><b><i>The removal of AN nodes in a VTBM ring is now completed.</i></b> |

—end—

## Appendix A: Recovery procedures

If a step fails or you do not get an expected result, call your local Nortel support group or customer help line (refer to “Appendix C: Technical support information” on page 8-1).

### Recovering from a logout

After you start the procedures in this user guide, you cannot cancel or interrupt the reconfiguration. However, if you inadvertently log out or are logged out from the OPC, or the OPC reboots unexpectedly, resolve the problem that caused the logout. Then log back into the OPC using the recovery as shown in Table 6-1.

**Table 6-1**  
**Recovery instructions**

| If you are logged out at | Restart at                                                                         | Dependent action                                                                                           |
|--------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Procedure 5-1</b>     |                                                                                    |                                                                                                            |
| Steps 1 through 6        | Step 1                                                                             | <ul style="list-style-type: none"> <li>None</li> </ul>                                                     |
| Steps 7 through 19       | Step 7<br>- Continue with the network element you were logged into prior to logout | <ul style="list-style-type: none"> <li>Log into OPC (Procedure 7-5)</li> <li>Enter <b>opcui</b></li> </ul> |
| Steps 20 through 46      | Step 22                                                                            | <ul style="list-style-type: none"> <li>Log into OPC (Procedure 7-5)</li> <li>Enter <b>opcui</b></li> </ul> |
| Step 47                  | Step 48                                                                            | <ul style="list-style-type: none"> <li>None</li> </ul>                                                     |
| Step 48                  | Step 48                                                                            | <ul style="list-style-type: none"> <li>Log into OPC (Procedure 7-5)</li> <li>Enter <b>opcui</b></li> </ul> |
| <b>Procedure 5-2</b>     |                                                                                    |                                                                                                            |
| Steps 1 through 13       | Step 1                                                                             | <ul style="list-style-type: none"> <li>None</li> </ul>                                                     |
| —continued—              |                                                                                    |                                                                                                            |

**Table 6-1  
Recovery instructions (continued)**

| If you are logged out at | Restart at                                                                                                                             | Dependent action                                                                                                 |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Procedure 5-3</b>     |                                                                                                                                        |                                                                                                                  |
| Steps 1 through 20       | Step 1                                                                                                                                 | <ul style="list-style-type: none"> <li>• None</li> </ul>                                                         |
| Steps 20 through 38      | Step 23                                                                                                                                | <ul style="list-style-type: none"> <li>• None</li> </ul>                                                         |
| Steps 39 through 48      | Step 40                                                                                                                                | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b></li> </ul>   |
| Steps 49 through 61      | Step 50                                                                                                                                | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b></li> </ul>   |
| <b>Procedure 5-4</b>     |                                                                                                                                        |                                                                                                                  |
| Steps 1 through 14       | Step 1<br>- Continue with the network element you were logged in to and at the connection you were prior to logout.                    | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b></li> </ul>   |
| Steps 15 through 31      | Step1, then go to step 15<br>- Continue with the network element you were logged in to and at the connection you were prior to logout. | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 32 through 48      | Step1, then go to step 32                                                                                                              | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| <b>Procedure 5-5</b>     |                                                                                                                                        |                                                                                                                  |
| Steps 1 through 7        | Step 1                                                                                                                                 | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 8 through 23       | Step 8                                                                                                                                 | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 24 through 30      | Step 24                                                                                                                                | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| <b>Procedure 5-6</b>     |                                                                                                                                        |                                                                                                                  |
| Steps 1 through 9        | Step 1                                                                                                                                 | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 10 through 12      | Steps 1 through 4 and then continue at step 10.                                                                                        | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| —continued—              |                                                                                                                                        |                                                                                                                  |

**Table 6-1**  
**Recovery instructions (continued)**

| <b>If you are logged out at</b> | <b>Restart at</b>                                                                                                                                                                   | <b>Dependent action</b>                                                                                          |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Steps 13 through 14             | Steps 1 through 4 and then continue at step 13.                                                                                                                                     | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| <b>Procedure 5-7</b>            |                                                                                                                                                                                     |                                                                                                                  |
| Steps 1 through 5               | Step 1.                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 6 through 9               | Step 1 and then continue at step 6.                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| <b>Procedure 5-8</b>            |                                                                                                                                                                                     |                                                                                                                  |
| Steps 1 through 8               | Step 1.                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| <b>Procedure 5-9</b>            |                                                                                                                                                                                     |                                                                                                                  |
| Steps 1 through 19              | Steps                                                                                                                                                                               | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 20 through 23             | <ul style="list-style-type: none"> <li>• steps 1 through 5,press <b>Ctrl_T 0</b>,</li> <li>• steps 9 through 14, press <b>Ctrl_T 0</b></li> <li>• continue with step 20.</li> </ul> | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 24 through 43             | <ul style="list-style-type: none"> <li>• steps 1 through 5,press <b>Ctrl_T 0</b>,</li> <li>• steps 9 through 14, press <b>Ctrl_T 0</b></li> <li>• continue with step 24.</li> </ul> | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 44 through 51             | <ul style="list-style-type: none"> <li>• steps 1 through 5,press <b>Ctrl_T 0</b></li> <li>• steps 9 through 14, press <b>Ctrl_T 0</b></li> <li>• continue with step 44.</li> </ul>  | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Steps 52 through 58             | <ul style="list-style-type: none"> <li>• steps 1 through 5,press <b>Ctrl_T 0</b>,</li> <li>• steps 9 through 14, press <b>Ctrl_T 0</b></li> <li>• continue with step 52.</li> </ul> | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| Step 59                         | <ul style="list-style-type: none"> <li>• steps 1 through 5,press <b>Ctrl_T 0</b></li> <li>• steps 9 through 14, press <b>Ctrl_T 0</b></li> <li>• continue with step 59.</li> </ul>  | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul> |
| —continued—                     |                                                                                                                                                                                     |                                                                                                                  |

**Table 6-1**  
**Recovery instructions (continued)**

| If you are logged out at | Restart at                                                                         | Dependent action                                                                                                                                                                                                                                                                       |
|--------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Steps 60 through 68      | Go to the next procedure.                                                          | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> <li>• Open the <b>NE Login Manager</b> tool</li> </ul>                                                                                                                      |
| <b>Procedure 5-10</b>    |                                                                                    |                                                                                                                                                                                                                                                                                        |
| Steps 1 through 30       | Step 1                                                                             | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul>                                                                                                                                                                       |
| Steps 5 through 18       | Step 5<br>- Continue with the network element you were logged into prior to logout | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul>                                                                                                                                                                       |
| Steps 19 through 26      | Step 20                                                                            | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> </ul>                                                                                                                                                                       |
| Steps 27                 | Step 27                                                                            | <ul style="list-style-type: none"> <li>• None</li> </ul>                                                                                                                                                                                                                               |
| Steps 28 through 30      | Step 28                                                                            | <ul style="list-style-type: none"> <li>• None</li> </ul>                                                                                                                                                                                                                               |
| <b>Procedure 5-11</b>    |                                                                                    |                                                                                                                                                                                                                                                                                        |
| Steps 1 through 9        | Step 1                                                                             | <ul style="list-style-type: none"> <li>• None</li> </ul>                                                                                                                                                                                                                               |
| Steps 10 through 21      | Step 10                                                                            | <ul style="list-style-type: none"> <li>• Log into OPC (Procedure 7-5)</li> <li>• Enter <b>opcui</b> ↵</li> <li>• In the User Session Manager, tab to the <b>Available tools</b> list, move to the <b>OPC Save and Restore</b> tool, then press <b>Ctrl_A</b> (or Keypad 0).</li> </ul> |
| —end—                    |                                                                                    |                                                                                                                                                                                                                                                                                        |

—end—

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## Appendix B: Common procedures

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This chapter contains procedures that are not used in every system to which this user guide applies. It also contains procedures that are commonly used throughout the user guide.

# Procedure 7-1

## Changing the OPC date and time

Use this procedure to change the date, time, or time zone code on an OPC.

Table 7-1 on page 7-5 lists time zones in geographical order (starting from the international dateline), and provides their time zone (TZ) codes and Greenwich Mean Time (GMT) offsets. The TZ codes are used to set the OPC's time zone.

### Requirements

To do this procedure, you must obtain the time zone code and local time for the location of the OPC.

| Step                                                                     | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |            |                                                                          |        |                                        |                                                                              |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------|--------------------------------------------------------------------------|--------|----------------------------------------|------------------------------------------------------------------------------|
| 1                                                                        | Enter:<br><b>opcui</b> ↵<br><i>The User Session Manager is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                    |    |            |                                                                          |        |                                        |                                                                              |
| 2                                                                        | In the User Session Manager, tab to the Available tools list, move to the OPC Date tool and open it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The OPC Date tool main window is displayed.</i>                                                                                                                                                                                                                                                                           |    |            |                                                                          |        |                                        |                                                                              |
| 3                                                                        | Tab to the Reset Time button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>A confirmation dialog is displayed. That indicates the amount of time required for the shutdown and gives you a final chance to abort the shutdown.</i><br><b>Note:</b> Selecting the Proceed button commits the shutdown of the OPC, even if you decide later to abort the changes to the time and date. You can select the Cancel button at this point to abort the OPC shutdown procedure.    |    |            |                                                                          |        |                                        |                                                                              |
| 4                                                                        | Confirm the shutdown with the current Port B configuration:<br><table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>If</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>'Confirm shutdown' is selected (that is, '*' appears beside this button)</td> <td>step 5</td> </tr> <tr> <td>'*' does not appear beside this button</td> <td>tab to the 'Confirm shutdown' button, then press <b>Ctrl_A</b> (or Keypad 0)</td> </tr> </tbody> </table> | If | Then go to | 'Confirm shutdown' is selected (that is, '*' appears beside this button) | step 5 | '*' does not appear beside this button | tab to the 'Confirm shutdown' button, then press <b>Ctrl_A</b> (or Keypad 0) |
| If                                                                       | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |            |                                                                          |        |                                        |                                                                              |
| 'Confirm shutdown' is selected (that is, '*' appears beside this button) | step 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |            |                                                                          |        |                                        |                                                                              |
| '*' does not appear beside this button                                   | tab to the 'Confirm shutdown' button, then press <b>Ctrl_A</b> (or Keypad 0)                                                                                                                                                                                                                                                                                                                                                                                                 |    |            |                                                                          |        |                                        |                                                                              |
| 5                                                                        | Tab to the <b>Proceed</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The confirmation dialog closes and the OPC shutdown process starts. A console message is displayed.</i>                                                                                                                                                                                                                                                                                      |    |            |                                                                          |        |                                        |                                                                              |

—continued—

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 Procedure 7-1 (continued)  
**Changing the OPC date and time**


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- | Step                                       | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                            |                                                                                   |             |                                  |            |                                     |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------|-------------|----------------------------------|------------|-------------------------------------|
| 6                                          | <p>Select the <b>OK</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).<br/> <i>A shutdown progress message is displayed.</i></p> <p>The progress message indicates that the OPC is shutting down normally. Since the shutdown continues while the progress message is displayed, the shutdown may complete before you select the OK button in this step. In this case, you do not see the progress message.</p> <p><i>This dialog is replaced by another dialog when the shutdown is complete. The new dialog is displayed to all users who are currently logged in to the OPC.</i></p>                   |                                            |                                                                                   |             |                                  |            |                                     |
| 7                                          | <p>Select the <b>Done</b> button by pressing <b>Ctrl_A</b> (or <b>Keypad 0</b>).<br/> <i>The dialog is replaced by the Time and Date Change dialog.</i></p> <table border="1"> <thead> <tr> <th>If this procedure is being executed on the</th> <th>Then go to</th> </tr> </thead> <tbody> <tr> <td>primary OPC</td> <td>step 8</td> </tr> <tr> <td>backup OPC</td> <td>step 10</td> </tr> </tbody> </table>                                                                                                                                                                                               | If this procedure is being executed on the | Then go to                                                                        | primary OPC | step 8                           | backup OPC | step 10                             |
| If this procedure is being executed on the | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                            |                                                                                   |             |                                  |            |                                     |
| primary OPC                                | step 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                            |                                                                                   |             |                                  |            |                                     |
| backup OPC                                 | step 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                            |                                                                                   |             |                                  |            |                                     |
| 8                                          | <p>To change the date, enter a new value in the Date field in the form dd/mm/yyyy.</p> <p>where</p> <table border="0"> <tr> <td>dd</td> <td>is the day of the month (range is 01 to 28, 29, 30, or 31 depending on the month)</td> </tr> <tr> <td>mm</td> <td>is the month (range is 01 to 12)</td> </tr> <tr> <td>yyyy</td> <td>is the year (range is 1976 to 2035)</td> </tr> </table> <p>The new date appears in the Date entry <i>field</i>.</p> <p>To ensure that any old data is removed, use the right arrow key to position the cursor ahead of old text, then press the <b>Backspace</b> key.</p> | dd                                         | is the day of the month (range is 01 to 28, 29, 30, or 31 depending on the month) | mm          | is the month (range is 01 to 12) | yyyy       | is the year (range is 1976 to 2035) |
| dd                                         | is the day of the month (range is 01 to 28, 29, 30, or 31 depending on the month)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                            |                                                                                   |             |                                  |            |                                     |
| mm                                         | is the month (range is 01 to 12)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                            |                                                                                   |             |                                  |            |                                     |
| yyyy                                       | is the year (range is 1976 to 2035)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                            |                                                                                   |             |                                  |            |                                     |
| 9                                          | <p>To change the time, tab to the Time field and enter a new value in the Time field in the form hh:mm.</p> <p>where</p> <table border="0"> <tr> <td>hh</td> <td>is the hour (range 00 to 23)</td> </tr> <tr> <td>mm</td> <td>is the minute (range 00 to 59)</td> </tr> </table> <p>The new time appears in the Time entry field.</p> <p>To ensure that any old data is removed, use the right arrow key to position the cursor ahead of old text, then press the <b>Backspace</b> key.</p>                                                                                                                | hh                                         | is the hour (range 00 to 23)                                                      | mm          | is the minute (range 00 to 59)   |            |                                     |
| hh                                         | is the hour (range 00 to 23)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                            |                                                                                   |             |                                  |            |                                     |
| mm                                         | is the minute (range 00 to 59)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |                                                                                   |             |                                  |            |                                     |

—continued—

Procedure 7-1 (continued)  
**Changing the OPC date and time**

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| <b>Step</b> | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>10</b>   | <p>To change the time zone, tab to the Time Zone list, use the arrow keys to move to the time zone code desired, then press <b>Ctrl_A</b> (Keypad 0).</p> <p>The selected entry will be placed in the Time Zone field.</p> <p><b>Note:</b> Table 7-1, on page 7-5, lists the valid time zone codes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>11</b>   | <p>Tab to the <b>Update</b> button, then press <b>Ctrl_A</b> (or Keypad 0).</p> <p>If you select Cancel, the changes you have made are ignored, but the OPC continues to shutdown.</p> <p><i>A confirmation message appears that indicates that an error in selecting the new time and date requires a second OPC shutdown to correct.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>12</b>   | <p>Tab to the <b>OK</b> button, then pressing <b>Ctrl_A</b> (or Keypad 0).</p> <p>If you select the Cancel button, you are returned to the time and date change dialog.</p> <p><i>The data you entered is validated. If incorrect, an error dialog is displayed, which tells you what to do. If correct, the time and date information is saved, and the OPC begins its restart sequence. The User Session Manager screen may appear briefly.</i></p> <p><i>The restart process takes about 5-10 minutes. When it completes, the OPC login prompt (login:) is displayed if you have performed this procedure on the primary OPC. If you have performed this procedure on the backup OPC, the "Connection closed by peer entity" message appears.</i></p> |

—end—

**Table 7-1**  
**Time zone codes and GMT offsets**

| Time zone name                                              | TZ code   | Daylight savings time    |            | Standard time            |            |
|-------------------------------------------------------------|-----------|--------------------------|------------|--------------------------|------------|
|                                                             |           | Switchover date (Note 1) | GMT Offset | Switchover date (Note 1) | GMT Offset |
| Hawaiian Standard Time                                      | HST10     |                          | -600       |                          | -600       |
| Aleutian Standard Time,<br>Aleutian Daylight Time           | AST10ADT  | Apr 24-30                | -540       | Oct 25-31                | -600       |
| Yukon Standard Time                                         | YST9      |                          | -540       |                          | -540       |
| Yukon Standard Time, Yukon<br>Daylight Time                 | YST9YDT   | Apr 24-30                | -480       | Oct 25-31                | -540       |
| Pacific Standard Time                                       | PST8      |                          | -480       |                          | -480       |
| Pacific Standard Time,<br>Pacific Daylight Time             | PST8PDT   | Apr 1-7                  | -420       | Oct 25-31                | -480       |
| Mountain Standard Time                                      | MST7      |                          | -420       |                          | -420       |
| Mountain Standard Time,<br>Mountain Daylight Time           | MST7MDT   | Apr 1-7                  | -360       | Oct 25-31                | -420       |
| Central Standard Time                                       | CST6      |                          | -360       |                          | -360       |
| Central Standard<br>Time,Central Daylight Time              | CST6CDT   | Apr 1-7                  | -300       | Oct 25-31                | -360       |
| Eastern Standard Time                                       | EST5      |                          | -300       |                          | -300       |
| Eastern Standard Time,<br>Central Daylight Time             | EST5CDT   |                          | -300       |                          | -300       |
| Eastern Standard Time,<br>Eastern Daylight Time             | EST5EDT   | Apr 1-7                  | -240       | Oct 25-31                | -300       |
| Atlantic Standard Time                                      | AST4      |                          | -240       |                          | -240       |
| Atlantic Standard Time,<br>Atlantic Daylight Time           | AST4ADT   | Apr 1-7                  | -180       | Oct 25-31                | -240       |
| Newfoundland Standard<br>Time,Newfoundland Daylight<br>Time | NST330NDT | Apr 1-7                  | -150       | Oct 25-31                | -210       |
| Greenwich Mean Time                                         | GMT       |                          | 0          |                          | 0          |
| —continued—                                                 |           |                          |            |                          |            |

**Table 7-1**  
**Time zone codes and GMT offsets (continued)**

| Time zone name                                                     | TZ code    | Daylight savings time    |            | Standard time            |            |
|--------------------------------------------------------------------|------------|--------------------------|------------|--------------------------|------------|
|                                                                    |            | Switchover date (Note 1) | GMT Offset | Switchover date (Note 1) | GMT Offset |
| Greenwich Mean Time, British Summer Time                           | GMT0BST    | Mar 25-31                | 60         | Oct 23-29                | 0          |
| Western European Time, Western European Time Daylight Savings Time | WET0WETDST | Mar 23-29                | 60         | Oct 23-29                | 0          |
| Portuguese Winter Time, Portuguese Summer Time                     | PWT0PST    | Mar 25-31                | 60         | Sept 24-30               | 0          |
| Middle European Time                                               | MET1       |                          | 60         |                          | 60         |
| Middle European Time, Middle European Time Daylight Savings Time   | MET1METDST | Mar 25-31                | 120        | Sept 24-30               | 60         |
| Middle European Time                                               | MET2       |                          | 120        |                          | 120        |
| South Africa Standard Time, South Africa Daylight Time             | SAST2SADT  | Mar 1-7                  | 120        | Oct 25-31                | 180        |
| Eastern European Time                                              | EET3       |                          | 180        |                          | 180        |
| Western Asian Time                                                 | WAT4       |                          | 240        |                          | 240        |
| Western Asian Time                                                 | WAT5       |                          | 300        |                          | 300        |
| Middle Asian Time                                                  | MAT6       |                          | 360        |                          | 360        |
| Middle Asian Time                                                  | MAT7       |                          | 420        |                          | 420        |
| Australian Western Standard Time                                   | WST800     |                          | 480        |                          | 480        |
| Korean Standard Time                                               | KST9       |                          | 540        |                          | 540        |
| Japan Standard Time                                                | JST9       |                          | 540        |                          | 540        |
| Australian Central Standard Time                                   | CST930     |                          | 570        |                          | 570        |
| Australian Central Standard Time, Australian Central Daylight Time | CST930CDT  | Mar 1-7                  | 570        | Oct 25-31                | 630        |
| —continued—                                                        |            |                          |            |                          |            |

**Table 7-1**  
**Time zone codes and GMT offsets (continued)**

| Time zone name                                                                                                                                                                                                                                                                    | TZ code    | Daylight savings time    |            | Standard time            |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|------------|--------------------------|------------|
|                                                                                                                                                                                                                                                                                   |            | Switchover date (Note 1) | GMT Offset | Switchover date (Note 1) | GMT Offset |
| Australian Eastern Standard Time                                                                                                                                                                                                                                                  | EST10      |                          | 600        |                          | 600        |
| Australian Eastern Standard Time, Australian Eastern Daylight Time                                                                                                                                                                                                                | EST10EDT   | Mar 1-7                  | 600        | Oct 25-31                | 660        |
| New Zealand Standard Time, New Zealand Daylight Time                                                                                                                                                                                                                              | NZST12NZDT | Mar 15-21                | 720        | Oct 1-7                  | 780        |
| <p><b>Note 1:</b> The switchover day is the Sunday within the specified date period. Switchover occurs at 2:00 a.m. on this day.</p> <p><b>Note 2:</b> Shaded areas indicate that these cells are not applicable, as daylight savings time does not occur for this time zone.</p> |            |                          |            |                          |            |
| —end—                                                                                                                                                                                                                                                                             |            |                          |            |                          |            |

## Procedure 7-2

### Basic optical tests

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Use this procedure to measure the optical transmit and receive power levels.



#### **DANGER**

##### **Risk of laser radiation**

When you remove the connector dust cap, laser radiation within the limits of Class IIIb might be present. This level of radiation can cause injury to personnel and caution must be exercised to avoid exposure.

A label similar to the following is located on the optical interface circuit packs near the optical connector.

#### **Caution**

Avoid direct exposure to beam. Invisible light can blind. Keep all optical connectors capped.

### Requirements

The following requirements must be met when handling the equipment:

- clean optical connectors
- verify the optical meter calibration
- ensure positive mating of fibers in optical connectors
- keep transmit and receive fiber cables separate
- wear antistatic wriststrap or equivalent

—continued—

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 Procedure 7-2 (continued)  
**Basic optical tests**


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**Action**

| <b>Step</b>                                    | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                               |                                                |                                  |                                        |                     |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------|------------------------------------------------|----------------------------------|----------------------------------------|---------------------|
| <b>1</b>                                       | <p>Locate the end of the transmit patchcord (it might be connected to the FPP) and connect it to the optical power meter. Measure the optical power.</p> <table border="1"> <thead> <tr> <th><b>If the OC-12 unit is</b></th> <th><b>Then the measurement should be</b></th> </tr> </thead> <tbody> <tr> <td>1310 nm Intermediate Reach<br/>(NT7E05BF/BG/BH)</td> <td><math>\geq -15.0</math> dBm (e.g. -5.0 dBm)</td> </tr> <tr> <td>1310 nm Long Reach<br/>(NT7E05AF/AG/AH)</td> <td><math>\geq -1.5</math> dBm</td> </tr> </tbody> </table>                                                                                                                                                    | <b>If the OC-12 unit is</b> | <b>Then the measurement should be</b>         | 1310 nm Intermediate Reach<br>(NT7E05BF/BG/BH) | $\geq -15.0$ dBm (e.g. -5.0 dBm) | 1310 nm Long Reach<br>(NT7E05AF/AG/AH) | $\geq -1.5$ dBm     |
| <b>If the OC-12 unit is</b>                    | <b>Then the measurement should be</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                                               |                                                |                                  |                                        |                     |
| 1310 nm Intermediate Reach<br>(NT7E05BF/BG/BH) | $\geq -15.0$ dBm (e.g. -5.0 dBm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                             |                                               |                                                |                                  |                                        |                     |
| 1310 nm Long Reach<br>(NT7E05AF/AG/AH)         | $\geq -1.5$ dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |                                               |                                                |                                  |                                        |                     |
| <b>2</b>                                       | If the power measurement fails, replace the OC-12 unit with a new unit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |                                               |                                                |                                  |                                        |                     |
| <b>3</b>                                       | Reconnect the optical patchcord if necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                               |                                                |                                  |                                        |                     |
| <b>4</b>                                       | <p>Use the optical power meter to measure the optical receive power level to the OC-12 optical interface receiver.</p> <table border="1"> <thead> <tr> <th><b>If the OC-12 unit is</b></th> <th><b>Then the measurement should be between</b></th> </tr> </thead> <tbody> <tr> <td>1310 nm Intermediate Reach<br/>(NT7E05BF/BG/BH)</td> <td>0 dBm and -28.0 dBm</td> </tr> <tr> <td>1310 nm Long Reach<br/>(NT7E05AF/AG/AH)</td> <td>0 dBm and -29.5 dBm</td> </tr> </tbody> </table> <p>If required, set the optical receive power level to the desired level for system operation using the miniature variable optical attenuator (the recommended optical receive power level is -20 dBm).</p> | <b>If the OC-12 unit is</b> | <b>Then the measurement should be between</b> | 1310 nm Intermediate Reach<br>(NT7E05BF/BG/BH) | 0 dBm and -28.0 dBm              | 1310 nm Long Reach<br>(NT7E05AF/AG/AH) | 0 dBm and -29.5 dBm |
| <b>If the OC-12 unit is</b>                    | <b>Then the measurement should be between</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                               |                                                |                                  |                                        |                     |
| 1310 nm Intermediate Reach<br>(NT7E05BF/BG/BH) | 0 dBm and -28.0 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                               |                                                |                                  |                                        |                     |
| 1310 nm Long Reach<br>(NT7E05AF/AG/AH)         | 0 dBm and -29.5 dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                               |                                                |                                  |                                        |                     |

—end—

# Procedure 7-3

## Configuring OPC port 1

---

Use this procedure to configure the OPC port 1 for terminal, printer, or X.25 operation.

### Action

---

| Step                            | Action                                                                                                                                                                                                                                                  |                              |            |                           |         |                                 |        |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------|---------------------------|---------|---------------------------------|--------|
| 1                               | Log in to the OPC through a network element that houses the OPC, or any other network element.<br><b>Note:</b> For a reminder on how to log into the OPC using a network element's user interface port 2, refer to Procedure 7-5, Logging into the OPC. |                              |            |                           |         |                                 |        |
| 2                               | At the OPC prompt (opc>), enter:<br><b>opcui</b> ↵<br><i>The User Session Manager is displayed.</i>                                                                                                                                                     |                              |            |                           |         |                                 |        |
| 3                               | In the User Session Manager, tab to the <b>OPC Admin</b> list. Move to the <b>Port Configuration</b> tool, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The OPC Port Configuration Manager opens and a dialog is displayed:</i>                        |                              |            |                           |         |                                 |        |
| 4                               | Select the <b>Query Configuration</b> option by entering:<br><b>1</b> ↵<br><i>The port configuration is displayed.</i>                                                                                                                                  |                              |            |                           |         |                                 |        |
| 5                               | Record the port configuration for port 1. It is required in a subsequent step.                                                                                                                                                                          |                              |            |                           |         |                                 |        |
| 6                               | Return to the Main Menu by entering a zero:<br><b>0</b><br><i>The Port Configuration Main Menu is displayed.</i>                                                                                                                                        |                              |            |                           |         |                                 |        |
| 7                               | Use the port configuration recorded in step 4.                                                                                                                                                                                                          |                              |            |                           |         |                                 |        |
|                                 | <table><thead><tr><th>If the port configuration is</th><th>Then go to</th></tr></thead><tbody><tr><td>X.25, terminal or printer</td><td>step 12</td></tr><tr><td>X.25 TCPIP over X.25 is enabled</td><td>step 8</td></tr></tbody></table>               | If the port configuration is | Then go to | X.25, terminal or printer | step 12 | X.25 TCPIP over X.25 is enabled | step 8 |
| If the port configuration is    | Then go to                                                                                                                                                                                                                                              |                              |            |                           |         |                                 |        |
| X.25, terminal or printer       | step 12                                                                                                                                                                                                                                                 |                              |            |                           |         |                                 |        |
| X.25 TCPIP over X.25 is enabled | step 8                                                                                                                                                                                                                                                  |                              |            |                           |         |                                 |        |

—continued—

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 Procedure 7-3 (continued)  
**Configuring OPC port 1**


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| Step | Action                                                                                                                                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | Select the <b>Unconfigure a Service</b> option by entering:<br>3 ↵<br><i>A dialog is displayed.</i>                                                                                            |
| 9    | Unconfigure the TCP/IP over X.25 service by entering:<br>4 ↵<br><i>The following message is displayed:</i><br>Warning: TCP/IP over X.25 is being disabled<br>Do you wish to continue (yes/no): |
| 10   | To confirm the request, enter:<br>y ↵<br><i>A dialog is displayed.</i>                                                                                                                         |
| 11   | Return to the Main Menu by entering:<br>8 ↵<br><i>The Port Configuration Main Menu is displayed.</i>                                                                                           |
| 12   | Select the <b>Configure a Service</b> option by entering:<br>2 ↵<br><i>A dialog is displayed.</i>                                                                                              |
| 13   | Determine how the OPC port 1 needs to be configured.                                                                                                                                           |
|      | <b>If you want to configure OPC port 1 as</b>                                                                                                                                                  |
|      | <b>Then go to</b>                                                                                                                                                                              |
|      | X.25 step 25                                                                                                                                                                                   |
|      | or                                                                                                                                                                                             |
|      | X.25 TCP/IP over X.25 is enabled                                                                                                                                                               |
|      | printer step 44                                                                                                                                                                                |
|      | terminal step 14                                                                                                                                                                               |

—continued—

Procedure 7-3 (continued)

**Configuring OPC port 1**

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| Step                                  | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                       |            |           |         |                                     |                                                                                                                               |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------|-----------|---------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 14                                    | <p>Select port 1 to be a terminal by entering:<br/> <b>1 ↵</b></p> <p><i>Depending on the OPC hardware module equipped in your system, a message such as the following is displayed prompting you to select a port:</i></p> <pre>Port Number (B, 1, 3):</pre> <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">If this message is displayed</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>displayed</td> <td>step 15</td> </tr> <tr> <td>not displayed</td> <td>Configuration on port 1 is changing from Printer (or X.25) to Terminal<br/>Do you wish to continue (yes/no):<br/>Go to step 16.</td> </tr> </tbody> </table> | If this message is displayed          | Then go to | displayed | step 15 | not displayed                       | Configuration on port 1 is changing from Printer (or X.25) to Terminal<br>Do you wish to continue (yes/no):<br>Go to step 16. |
| If this message is displayed          | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |            |           |         |                                     |                                                                                                                               |
| displayed                             | step 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                       |            |           |         |                                     |                                                                                                                               |
| not displayed                         | Configuration on port 1 is changing from Printer (or X.25) to Terminal<br>Do you wish to continue (yes/no):<br>Go to step 16.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |            |           |         |                                     |                                                                                                                               |
| 15                                    | <p>For port 1, enter:<br/> <b>1 ↵</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |            |           |         |                                     |                                                                                                                               |
| 16                                    | <p>Using the port configuration determined in step 4.</p> <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">If the initial port configuration was</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>printer</td> <td>step 17</td> </tr> <tr> <td>X.25<br/>or<br/>X.25 TCP/IP over X.25</td> <td>step 21</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                              | If the initial port configuration was | Then go to | printer   | step 17 | X.25<br>or<br>X.25 TCP/IP over X.25 | step 21                                                                                                                       |
| If the initial port configuration was | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |            |           |         |                                     |                                                                                                                               |
| printer                               | step 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                       |            |           |         |                                     |                                                                                                                               |
| X.25<br>or<br>X.25 TCP/IP over X.25   | step 21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                       |            |           |         |                                     |                                                                                                                               |
| 17                                    | <p>To confirm the request, enter:<br/> <b>y ↵</b></p> <p><i>The following message is displayed:</i></p> <pre>Warning Printer operation is being removed from port 1<br/>Do you wish to continue (yes/no):</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                       |            |           |         |                                     |                                                                                                                               |
| 18                                    | <p>To confirm the request, enter:<br/> <b>y ↵</b></p> <p><i>The following message is displayed:</i></p> <pre>Printer operation has been successfully removed from<br/>port 1<br/>Terminal operation is being configured on port 1<br/>Do you wish to continue (yes/no):</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |            |           |         |                                     |                                                                                                                               |

—continued—

Procedure 7-3 (continued)  
**Configuring OPC port 1**

| Step               | Action                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |            |           |         |               |                                                                                                            |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|-----------|---------|---------------|------------------------------------------------------------------------------------------------------------|
| 19                 | To confirm the request, enter:<br><b>y</b> ↵<br><i>A new screen is displayed.</i>                                                                                                                                                                                                                                                                                                                                                       |                    |            |           |         |               |                                                                                                            |
| 20                 | Go to step 52.                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |            |           |         |               |                                                                                                            |
| 21                 | To confirm the request, enter:<br><b>y</b> ↵<br><i>After about 1 minute, the following messages is displayed:</i><br>X.25 operation has been removed from port 1<br>Remove the X.25 cable and insert the appropriate terminal<br>cable.<br>Press RETURN when you are done.                                                                                                                                                              |                    |            |           |         |               |                                                                                                            |
| 22                 | After inserting the appropriate terminal cable, enter a zero:<br><b>0</b><br><i>The following message is displayed:</i><br>Terminal operation is being configured on port 1<br>Do you wish to continue (yes/no):                                                                                                                                                                                                                        |                    |            |           |         |               |                                                                                                            |
| 23                 | To confirm the request, enter:<br><b>y</b> ↵<br><i>A new screen is displayed.</i>                                                                                                                                                                                                                                                                                                                                                       |                    |            |           |         |               |                                                                                                            |
| 24                 | Go to step 52.                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |            |           |         |               |                                                                                                            |
| 25                 | Select the X.25 option by entering.<br><b>3</b> ↵<br><i>A dialog is displayed:.</i>                                                                                                                                                                                                                                                                                                                                                     |                    |            |           |         |               |                                                                                                            |
| 26                 | To enable the X.25 port, enter:<br><b>3</b> ↵<br><i>Depending on the OPC hardware module equipped in your system, a<br/>           message such as the following is displayed prompting you to select a port:</i><br>Port Number (B, 1, 2, 3):                                                                                                                                                                                          |                    |            |           |         |               |                                                                                                            |
|                    | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If this message is</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>displayed</td> <td>step 27</td> </tr> <tr> <td>not displayed</td> <td>Warning Terminal operation is being<br/> removed from port 1<br/> Do you wish to continue (yes/no):<br/> step 28</td> </tr> </tbody> </table> | If this message is | Then go to | displayed | step 27 | not displayed | Warning Terminal operation is being<br>removed from port 1<br>Do you wish to continue (yes/no):<br>step 28 |
| If this message is | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |            |           |         |               |                                                                                                            |
| displayed          | step 27                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |            |           |         |               |                                                                                                            |
| not displayed      | Warning Terminal operation is being<br>removed from port 1<br>Do you wish to continue (yes/no):<br>step 28                                                                                                                                                                                                                                                                                                                              |                    |            |           |         |               |                                                                                                            |

—continued—

Procedure 7-3 (continued)

**Configuring OPC port 1**

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| Step                                  | Action                                                                                                                                                                                                                                                                                                                                                                                                                           |           |            |                               |         |                                       |         |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-------------------------------|---------|---------------------------------------|---------|
| 27                                    | For port 1, enter:<br><b>1</b> ↵                                                                                                                                                                                                                                                                                                                                                                                                 |           |            |                               |         |                                       |         |
| 28                                    | Confirm the configuration port change by entering:<br><b>y</b> ↵<br><i>After about 1 minute, the following message is displayed:</i><br>Terminal operation has been removed from port 1<br>Remove the terminal cable and insert the appropriate X.25<br>cable.<br>Press RETURN when you are done.                                                                                                                                |           |            |                               |         |                                       |         |
| 29                                    | After the X.25 cable has been inserted, enter a zero:<br><b>0</b><br><i>The following message is displayed:</i><br>X.25 operation is being configured on port 1<br>Do you wish to continue (yes/no):                                                                                                                                                                                                                             |           |            |                               |         |                                       |         |
| 30                                    | Enter:<br><b>y</b> ↵<br><i>A new screen is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                        |           |            |                               |         |                                       |         |
| 31                                    | Determine if TCP/IP needs to be enabled over the X.25 link.<br><table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If TCP/IP</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>needs to be enabled over X.25</td> <td>step 32</td> </tr> <tr> <td>does not need to be enabled over X.25</td> <td>step 36</td> </tr> </tbody> </table> | If TCP/IP | Then go to | needs to be enabled over X.25 | step 32 | does not need to be enabled over X.25 | step 36 |
| If TCP/IP                             | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                       |           |            |                               |         |                                       |         |
| needs to be enabled over X.25         | step 32                                                                                                                                                                                                                                                                                                                                                                                                                          |           |            |                               |         |                                       |         |
| does not need to be enabled over X.25 | step 36                                                                                                                                                                                                                                                                                                                                                                                                                          |           |            |                               |         |                                       |         |
| 32                                    | Return to the Configure menu by entering:<br><b>8</b> ↵<br><i>The Configure menu is displayed.</i>                                                                                                                                                                                                                                                                                                                               |           |            |                               |         |                                       |         |
| 33                                    | Select the TCP/IP over X.25 option by entering:<br><b>6</b> ↵<br><i>A new screen is displayed.</i>                                                                                                                                                                                                                                                                                                                               |           |            |                               |         |                                       |         |
| 34                                    | Enable TCP/IP over X.25 by entering:<br><b>6</b> ↵<br><i>A new screen is displayed.</i>                                                                                                                                                                                                                                                                                                                                          |           |            |                               |         |                                       |         |
| 35                                    | Go to step 52.                                                                                                                                                                                                                                                                                                                                                                                                                   |           |            |                               |         |                                       |         |

—continued—

Procedure 7-3 (continued)  
**Configuring OPC port 1**

| Step                         | Action                                                                                                                                                                                                                                                                                                                                   |                              |            |           |         |               |         |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------|-----------|---------|---------------|---------|
| 36                           | Exit the Port Configuration tool by entering:<br><b>9</b> ↵<br><i>The User Session Manager is displayed.</i>                                                                                                                                                                                                                             |                              |            |           |         |               |         |
| 37                           | In the User Session Manager, move to a Unix Shell tool, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The “opc&gt;” prompt appears.</i>                                                                                                                                                                                                  |                              |            |           |         |               |         |
| 38                           | At the opc prompt (opc>), enter:<br><b>config_TL1</b> ↵<br><i>The TL1 Configuration Main Menu appears.</i>                                                                                                                                                                                                                               |                              |            |           |         |               |         |
| 39                           | To restart the TL1 Session Manager, enter:<br><b>3</b> ↵<br><i>A confirmation dialog appears.</i>                                                                                                                                                                                                                                        |                              |            |           |         |               |         |
| 40                           | Confirm the request by entering:<br><b>yes</b> ↵<br><i>The ‘Restarting TL1 Session Manager’ message appears followed by the TL1 Configuration Main Menu.</i>                                                                                                                                                                             |                              |            |           |         |               |         |
| 41                           | Exit the TL1 Configuration tool by entering:<br><b>9</b> ↵<br><i>The “opc&gt;” prompt appears.</i>                                                                                                                                                                                                                                       |                              |            |           |         |               |         |
| 42                           | Return to the User Session Manager by pressing <b>Ctrl_T 0</b> .                                                                                                                                                                                                                                                                         |                              |            |           |         |               |         |
| 43                           | Go to step 53.                                                                                                                                                                                                                                                                                                                           |                              |            |           |         |               |         |
| 44                           | To configure the port as printer, enter:<br><b>2</b> ↵<br><i>A dialog is displayed.</i>                                                                                                                                                                                                                                                  |                              |            |           |         |               |         |
| 45                           | To configure the port, enter:<br><b>1</b> ↵<br><i>Depending on the OPC hardware module equipped in your system, a message similar to the following is displayed prompting you to select a port:</i><br>Port Number (B, 1, 3):                                                                                                            |                              |            |           |         |               |         |
|                              | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If this message is displayed</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>displayed</td> <td>step 46</td> </tr> <tr> <td>not displayed</td> <td>step 47</td> </tr> </tbody> </table> | If this message is displayed | Then go to | displayed | step 46 | not displayed | step 47 |
| If this message is displayed | Then go to                                                                                                                                                                                                                                                                                                                               |                              |            |           |         |               |         |
| displayed                    | step 46                                                                                                                                                                                                                                                                                                                                  |                              |            |           |         |               |         |
| not displayed                | step 47                                                                                                                                                                                                                                                                                                                                  |                              |            |           |         |               |         |

—continued—

Procedure 7-3 (continued)  
**Configuring OPC port 1**

---

| <b>Step</b> | <b>Action</b>                                                                                                                                                                                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>46</b>   | For port 1, enter:<br><b>1</b> ↵<br><i>The Baud Rate menu is displayed.FW6(12R10).</i>                                                                                                                                                                                                                                     |
| <b>47</b>   | Select a baud rate from the menu and enter its corresponding number, then press the <b>Return</b> key.<br><i>The printer mode menu is displayed.</i>                                                                                                                                                                       |
| <b>48</b>   | Select a printer mode from the menu and enter its corresponding number, then press the <b>Return</b> key.<br><i>The following message is displayed.</i><br>Configuration on port 1 is changing from<br>Terminal to Printer<br>Warning Terminal operation is being removed from port 1<br>Do you wish to continue (yes/no): |
| <b>49</b>   | Confirm the change by entering:<br><b>y</b> ↵<br><i>After about 1 minute, the following message is displayed.:</i><br>Terminal operation has been removed from port 1<br>Remove the terminal cable and insert the appropriate<br>printer cable<br>Press RETURN when you are done                                           |
| <b>50</b>   | Insert the appropriate printer cable on port 1 and then enter a zero<br><b>0</b><br><i>The following message is displayed:</i><br>PRINTER operation (<baud rate> baud, <printer mode> mode)<br>is being configured on port 1<br>Do you wish to continue (yes/no):                                                          |
| <b>51</b>   | To confirm, the request, enter:<br><b>y</b> ↵<br><i>A new screen is displayed:</i>                                                                                                                                                                                                                                         |

—continued—

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Procedure 7-3 (continued)  
**Configuring OPC port 1**

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| <b>Step</b> | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>52</b>   | Close the <b>Port Configuration</b> tool by entering:<br><b>9</b> ↵<br><i>The User Session Manager is displayed.</i>                                                                                                                                                                                                                                                                                                                                                               |
| <b>53</b>   | To log out from the OPC:<br><b>a.</b> In the User Session Manager, tab to the <b>Logout</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>A confirmation dialog appears.</i><br><b>b.</b> In the confirmation dialog, tab to the <b>Logout</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><b>c.</b> To terminate the remote login session, at the opc prompt (opc>), enter:<br><b>logout</b> ↵<br><i>The session is terminated. You are logged out of the OPC.</i> |
| <b>54</b>   | Log out from the network element user interface by entering:<br><b>logout</b> ↵                                                                                                                                                                                                                                                                                                                                                                                                    |

—end—

## Procedure 7-4

# Shutting down or restarting an OPC

---

Use this procedure to shut down or restart an OPC.

### Requirements

To do this procedure, you must do the following:

- obtain the password for the root user ID on the OPC.
- obtain the password for the admin user ID on the network elements.

### Action

---

| Step | Action                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Connect a VT-100 terminal to the craft User Interface port B (port 1) on the network element which houses the OPC (use an NT7E44FA or NT7E44FB cable). |
| 2    | Press the <b>break</b> key.<br><i>The Login prompt (?) appears.</i>                                                                                    |
| 3    | At the login prompt, enter:<br><b>login</b> ↵<br><i>The following message appears:</i><br>Enter user name<br>>                                         |
| 4    | Enter the admin userID:<br><b>&lt;admin userID&gt;</b> ↵<br><i>The following prompt is displayed.</i><br>Enter Password<br>>                           |
| 5    | Enter the admin password:<br><b>&lt;admin password&gt;</b> ↵<br><i>The network element user interface is displayed.</i>                                |

—continued—

Procedure 7-4 (continued)  
**Shutting down or restarting an OPC**

| Step                                       | Action                                                                                                                                                                                                                                                                                                                                                                                    |                                 |            |                                            |         |                                           |         |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------|--------------------------------------------|---------|-------------------------------------------|---------|
| 6                                          | Deprovision the OPC by entering:<br><b>eq opc</b> ↵<br><b>chgstate oos</b> ↵<br><b>yes</b> ↵<br><b>delete</b> ↵<br><b>yes</b> ↵<br><i>The State field indicates Null.</i>                                                                                                                                                                                                                 |                                 |            |                                            |         |                                           |         |
| 7                                          | Access the equipment shelf alarm provisioning screen by entering:<br><b>eq sh</b> ↵<br><b>almprov</b> ↵<br><i>The Shelf Alarm Provisioning screen is displayed.</i>                                                                                                                                                                                                                       |                                 |            |                                            |         |                                           |         |
| 8                                          | Using the equipment shelf alarm provisioning screen, determine the CNET link fail status.                                                                                                                                                                                                                                                                                                 |                                 |            |                                            |         |                                           |         |
|                                            | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If the CNET link fail status is</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>off</td> <td>step 11</td> </tr> <tr> <td>on</td> <td>step 9</td> </tr> </tbody> </table>                                                                 | If the CNET link fail status is | Then go to | off                                        | step 11 | on                                        | step 9  |
| If the CNET link fail status is            | Then go to                                                                                                                                                                                                                                                                                                                                                                                |                                 |            |                                            |         |                                           |         |
| off                                        | step 11                                                                                                                                                                                                                                                                                                                                                                                   |                                 |            |                                            |         |                                           |         |
| on                                         | step 9                                                                                                                                                                                                                                                                                                                                                                                    |                                 |            |                                            |         |                                           |         |
| 9                                          | Determine if the shelf has a CNET cable attached to its CNET ports.                                                                                                                                                                                                                                                                                                                       |                                 |            |                                            |         |                                           |         |
|                                            | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If the shelf has</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>no CNET cable attached to its CNET port(s)</td> <td>step 10</td> </tr> <tr> <td>a CNET cable attached to its CNET port(s)</td> <td>step 11</td> </tr> </tbody> </table> | If the shelf has                | Then go to | no CNET cable attached to its CNET port(s) | step 10 | a CNET cable attached to its CNET port(s) | step 11 |
| If the shelf has                           | Then go to                                                                                                                                                                                                                                                                                                                                                                                |                                 |            |                                            |         |                                           |         |
| no CNET cable attached to its CNET port(s) | step 10                                                                                                                                                                                                                                                                                                                                                                                   |                                 |            |                                            |         |                                           |         |
| a CNET cable attached to its CNET port(s)  | step 11                                                                                                                                                                                                                                                                                                                                                                                   |                                 |            |                                            |         |                                           |         |
| 10                                         | Change the CNET link fail status to off by entering:<br><b>editstat 2</b> ↵<br><b>yes</b> ↵<br><i>The CNET link fail status field indicates Off.</i>                                                                                                                                                                                                                                      |                                 |            |                                            |         |                                           |         |
| 11                                         | Disconnect the cable between the VT-100 terminal and the craft User Interface port B (port 1).                                                                                                                                                                                                                                                                                            |                                 |            |                                            |         |                                           |         |
| 12                                         | Log into the OPC using the root class user ID and password.<br><b>Note:</b> For a reminder on how to log into an OPC, refer to Procedure 7-5, "Logging into the OPC" on page 7-22.                                                                                                                                                                                                        |                                 |            |                                            |         |                                           |         |

—continued—

Procedure 7-4 (continued)

**Shutting down or restarting an OPC**

| <b>Step</b>                                                            | <b>Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                   |                                                                        |         |                                                          |                                                                                            |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|------------------------------------------------------------------------|---------|----------------------------------------------------------|--------------------------------------------------------------------------------------------|
| 13                                                                     | To access the User Session Manager from the opc prompt (opc>), enter:<br><b>opcui</b> ↵<br><i>The User Session Manager window appears:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                   |                                                                        |         |                                                          |                                                                                            |
| 14                                                                     | In the User Session Manager, tab to the <b>Available tools</b> list and move to the <b>OPC Shutdown</b> tool. Open the tool by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The OPC Shutdown tool main window is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                   |                                                                        |         |                                                          |                                                                                            |
| 15                                                                     | Select the <b>Shutdown</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>A confirmation dialog is displayed that indicates the amount of time required for the shutdown and gives you a final chance to abort the shutdown.</i><br><b>Note:</b> Selecting the Proceed button commits the shutdown of the OPC. You can select the Cancel button at this point to abort the OPC shutdown procedure.                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                   |                                                                        |         |                                                          |                                                                                            |
| 16                                                                     | Confirm the shutdown with the current Port B configuration:<br><br><table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><b>If</b></th> <th style="text-align: left; border-bottom: 1px solid black;"><b>Then go to</b></th> </tr> </thead> <tbody> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">‘Confirm shutdown’ is selected that is ‘*’ appears beside this button)</td> <td>step 17</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">‘*’ does not appear beside this button</td> <td>tab to the ‘Confirm shutdown’ button and select it by pressing <b>Ctrl_A</b> (or Keypad 0)</td> </tr> </tbody> </table>                                                                             | <b>If</b>         | <b>Then go to</b> | ‘Confirm shutdown’ is selected that is ‘*’ appears beside this button) | step 17 | ‘*’ does not appear beside this button                   | tab to the ‘Confirm shutdown’ button and select it by pressing <b>Ctrl_A</b> (or Keypad 0) |
| <b>If</b>                                                              | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                   |                                                                        |         |                                                          |                                                                                            |
| ‘Confirm shutdown’ is selected that is ‘*’ appears beside this button) | step 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                   |                                                                        |         |                                                          |                                                                                            |
| ‘*’ does not appear beside this button                                 | tab to the ‘Confirm shutdown’ button and select it by pressing <b>Ctrl_A</b> (or Keypad 0)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                   |                                                                        |         |                                                          |                                                                                            |
| 17                                                                     | Tab to the <b>Proceed</b> button and select it by pressing <b>Ctrl_A</b> (or Keypad 0).<br><i>The confirmation dialog closes and a new dialog is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                   |                                                                        |         |                                                          |                                                                                            |
| 18                                                                     | Depending on the task you are performing, you may be required to remove the OPC module from the shelf. In this case, you must take the required action before the OPC attempts to restart. Determine now if you are removing the OPC from the shelf.<br><br><table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><b>If you are</b></th> <th style="text-align: left; border-bottom: 1px solid black;"><b>Then go to</b></th> </tr> </thead> <tbody> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">restarting the OPC</td> <td>step 19</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">removing the OPC from the shelf (that is, shutting down)</td> <td>step 20</td> </tr> </tbody> </table> | <b>If you are</b> | <b>Then go to</b> | restarting the OPC                                                     | step 19 | removing the OPC from the shelf (that is, shutting down) | step 20                                                                                    |
| <b>If you are</b>                                                      | <b>Then go to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                   |                                                                        |         |                                                          |                                                                                            |
| restarting the OPC                                                     | step 19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                   |                                                                        |         |                                                          |                                                                                            |
| removing the OPC from the shelf (that is, shutting down)               | step 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                   |                                                                        |         |                                                          |                                                                                            |
| 19                                                                     | Tab to the <b>Halt</b> button, then move to the <b>Restart</b> button. Press <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                   |                                                                        |         |                                                          |                                                                                            |
| 20                                                                     | Tab to the <b>OK</b> button, then press <b>Ctrl_A</b> (or Keypad 0).<br><i>The OPC shutdown process starts and a dialog is displayed.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                   |                                                                        |         |                                                          |                                                                                            |

—continued—

Procedure 7-4 (continued)  
**Shutting down or restarting an OPC**

| Step                                                     | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |            |                    |         |                                                          |         |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|--------------------|---------|----------------------------------------------------------|---------|
| 21                                                       | <p>Select the <b>OK</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).</p> <p><i>A shutdown progress message is displayed.</i></p> <p>The progress message indicates that the OPC is shutting down normally. Since the shutdown continues while the progress message is displayed, the shutdown may complete before you select the OK button in this step. In this case, you do not see the progress message.</p> <p><i>This dialog is replaced by another dialog when the shutdown is complete. The new dialog is displayed to all users who are currently logged in to the OPC.</i></p> |            |            |                    |         |                                                          |         |
| 22                                                       | Select the <b>Done</b> button by pressing <b>Ctrl_A</b> (or Keypad 0).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |            |                    |         |                                                          |         |
| 23                                                       | Depending on the task you are performing, you may be required to remove the OPC module from the shelf.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |            |                    |         |                                                          |         |
|                                                          | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If you are</th> <th style="text-align: left;">Then go to</th> </tr> </thead> <tbody> <tr> <td>restarting the OPC</td> <td>step 25</td> </tr> <tr> <td>removing the OPC from the shelf (that is, shutting down)</td> <td>step 24</td> </tr> </tbody> </table>                                                                                                                                                                                                                 | If you are | Then go to | restarting the OPC | step 25 | removing the OPC from the shelf (that is, shutting down) | step 24 |
| If you are                                               | Then go to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |            |                    |         |                                                          |         |
| restarting the OPC                                       | step 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |            |                    |         |                                                          |         |
| removing the OPC from the shelf (that is, shutting down) | step 24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |            |                    |         |                                                          |         |
|                                                          | <p><b>Note:</b> You must not remove the OPC from the shelf during the restart process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |            |                    |         |                                                          |         |
| 24                                                       | <p>Immediately after the green Activity Indicator LED turns off, remove the OPC from the shelf.</p> <p><i>The OPC initiates a restart after a 3 minute delay, if the OPC is left in place. If you have not removed or powered down the OPC by this time, the red Unit Fail LED turns on and an alarm is raised.</i></p> <p>Do not remove or power down the OPC after the red LED has turned on. If you do, the data on its hard drive gets corrupted. The restart process takes 5-10 minutes.</p>                                                                                          |            |            |                    |         |                                                          |         |
| 25                                                       | The OPC shutdown/restart procedure is complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |                    |         |                                                          |         |

—end—

## Procedure 7-5

# Logging into the OPC

---

Use this procedure to log into an OPC as a 'root' user from the OPC port 1 or the network element user interface port B (port 1).

### Requirements

To do this procedure, you must do the following:

- obtain the password for the root userid on the OPC.
- obtain the password for the admin userid on the network elements.

### Action

---

| Step                  | Action                                                                                                                                                                                                                                                                                                   |                       |            |            |        |                       |        |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|------------|--------|-----------------------|--------|
| 1                     | Unless otherwise noted, assume that you are logging into a terminal connected to OPC port 1.<br><table><thead><tr><th>If logging in through</th><th>Then go to</th></tr></thead><tbody><tr><td>OPC port 1</td><td>step 2</td></tr><tr><td>user interface port 2</td><td>step 3</td></tr></tbody></table> | If logging in through | Then go to | OPC port 1 | step 2 | user interface port 2 | step 3 |
| If logging in through | Then go to                                                                                                                                                                                                                                                                                               |                       |            |            |        |                       |        |
| OPC port 1            | step 2                                                                                                                                                                                                                                                                                                   |                       |            |            |        |                       |        |
| user interface port 2 | step 3                                                                                                                                                                                                                                                                                                   |                       |            |            |        |                       |        |
| 2                     | Connect the VT100-compatible terminal—set to 9600 baud, no parity, 8 bits, no new line, and VT100 mode—to the OPC port 1 located on the left side of the network element shelf. (Use an NT7E44RA or NT7E44RB cable.)<br><i>The following prompt is displayed:</i><br>login:<br>Go to step 10.            |                       |            |            |        |                       |        |
| 3                     | Connect the VT100-compatible terminal—set to the baud rate of the craft user interface port 2, no parity, 8 bits, no new line and VT100 mode—to the craft user interface port 2 on the network element (use an NT7E44FA or NT7E44FB cable).                                                              |                       |            |            |        |                       |        |
| 4                     | Press the <b>break</b> key.<br><i>The Login prompt (?) is displayed.</i>                                                                                                                                                                                                                                 |                       |            |            |        |                       |        |
| 5                     | At the login prompt, enter:<br><b>login</b> ↵<br><i>The following message is displayed.</i><br>Enter User Name<br>>                                                                                                                                                                                      |                       |            |            |        |                       |        |

—continued—

Procedure 7-5 (continued)  
**Logging into the OPC**

| Step                 | Action                                                                                                                                                                                                                                                                                                                                                            |                      |            |             |                          |            |                          |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------|-------------|--------------------------|------------|--------------------------|
| 6                    | Enter the admin userID:<br><b>&lt;admin userID&gt;</b> ↵<br><i>The following prompt is displayed:</i><br>Enter Password<br>>                                                                                                                                                                                                                                      |                      |            |             |                          |            |                          |
| 7                    | Enter the admin password:<br><b>&lt;admin password&gt;</b> ↵<br><i>The network element user interface is displayed.</i>                                                                                                                                                                                                                                           |                      |            |             |                          |            |                          |
| 8                    | From the network element screen, enter:<br><b>quit all</b> ↵<br><i>The screen clears. The following prompt is displayed:</i><br>>                                                                                                                                                                                                                                 |                      |            |             |                          |            |                          |
| 9                    | Using rlogin to access the primary or backup OPC.                                                                                                                                                                                                                                                                                                                 |                      |            |             |                          |            |                          |
|                      | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">If logging in to the</th> <th style="text-align: left;">Then enter</th> </tr> </thead> <tbody> <tr> <td>primary OPC</td> <td><b>rlogin OPCxxxxP</b> ↵</td> </tr> <tr> <td>backup OPC</td> <td><b>rlogin OPCxxxxB</b> ↵</td> </tr> </tbody> </table> | If logging in to the | Then enter | primary OPC | <b>rlogin OPCxxxxP</b> ↵ | backup OPC | <b>rlogin OPCxxxxB</b> ↵ |
| If logging in to the | Then enter                                                                                                                                                                                                                                                                                                                                                        |                      |            |             |                          |            |                          |
| primary OPC          | <b>rlogin OPCxxxxP</b> ↵                                                                                                                                                                                                                                                                                                                                          |                      |            |             |                          |            |                          |
| backup OPC           | <b>rlogin OPCxxxxB</b> ↵                                                                                                                                                                                                                                                                                                                                          |                      |            |             |                          |            |                          |
|                      | where<br>OPCxxxxP is the Primary OPC name. Refer to the Table 2-2 on page 2-4<br>OPCxxxxB is the Backup OPC name. Refer to the Table 2-2 on page 2-4<br><br><i>The following prompt is displayed.</i><br>login:                                                                                                                                                   |                      |            |             |                          |            |                          |
| 10                   | Enter:<br><b>root</b> ↵<br><i>The password prompt is displayed.</i>                                                                                                                                                                                                                                                                                               |                      |            |             |                          |            |                          |

—continued—

Procedure 7-5 (continued)

**Logging into the OPC**

---

| <b>Step</b> | <b>Action</b> |
|-------------|---------------|
|-------------|---------------|

---

|           |                                                                                                                                                                |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>11</b> | Enter the root password and press the <b>Return</b> key.<br><i>The password is not displayed in the field when you enter it. Passwords are case sensitive.</i> |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|

*The following prompt is displayed:*

```
TERM = (vt100)
```

|           |                                                                           |
|-----------|---------------------------------------------------------------------------|
| <b>12</b> | Press the <b>Return</b> key.<br><i>The following prompt is displayed.</i> |
|-----------|---------------------------------------------------------------------------|

```
opc>
```

—end—

## Procedure 7-6

# Replacing an optical interface circuit pack

Use this procedure to replace an optical circuit pack with another optical circuit pack at a VTBM ring node site.

### Action

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Attach one end of the antistatic wrist strap to the electrostatic discharge (ESD) jack on the shelf and the other end to your wrist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2    | Remove the optical patchcord, or pigtail, from the shelf fiber guides to provide sufficient slack for the circuit pack.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3    | Gently pull out the circuit pack to the extent necessary to disconnect it from the backplane connector.<br><b>Note 1:</b> An "Rx loss of signal" minor alarm is raised at the neighboring network element. This alarm clears once the new OC-12 VTBM circuit pack is inserted.<br><b>Note 2:</b> Take care when pulling out the circuit pack to prevent causing stress to the optical patchcord or pigtail.<br><b>Note 3:</b> A "Circuit pack missing" minor alarm is raised at the network element. This alarm clears once the new OC-12 VTBM circuit pack is inserted.<br><b>Note 4:</b> Do not extract the circuit pack from the shelf while a lamp test is running. If a circuit pack is removed during a lamp test and then reinserted after the test, you must run another lamp test. |
| 4    | Disconnect the optical patchcord, or pigtail, from the output biconic, ST, or FC connector on the circuit pack that has its green activity LED turned off. Install the connector dust cap.<br><b>Note:</b> Circuit pack G1 is in slot 9 and circuit pack G2 is in slot 10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5    | Remove the circuit pack from the shelf.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 6    | Install the new circuit pack in the shelf without inserting it into the backplane connector (that is, the circuit pack must not be powered). Wait at least 20 seconds before reinserting a removed circuit pack.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 7    | Reconnect the optical patchcords to the new optic circuit pack.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 8    | Firmly push the new circuit pack all the way into its position and into the backplane connector.<br><b>Note:</b> After insertion, the red fail LED and the yellow LOS LED turn on for several seconds until the circuit pack achieves full operation. If the red fail LED stays lit, do not replace the OC-12 unit; the LED may be lit because the OC-12 unit does not have the correct firmware.                                                                                                                                                                                                                                                                                                                                                                                           |

—end—

---

## Procedure 7-7

# Verifying the firmware on an OC-12 VTBM circuit pack

---

Use this procedure to verify that the OC-12 VTBM circuit pack has the correct firmware load.

### Action

---

| Step                     | Action                                                                                                                                                                                                                                                                                                                                                                                                  |                          |            |         |        |             |        |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------|---------|--------|-------------|--------|
| 1                        | <p>At the network element user interface enter:</p> <pre>quit all ↵<br/>tcsfwdl ↵<br/>query oc12VTBM &lt;circuit pack group&gt; ↵</pre> <p><i>The system returns the current load name for the firmware on the OC-12 circuit pack where the firmware is verified (Circuit pack G1 is in slot 9 and circuit pack G2 is in slot 10). Record the Running load name.</i></p> <p>Running load name _____</p> |                          |            |         |        |             |        |
| 2                        | <p>Verify that the OC-12 firmware Running load name for that circuit pack matches the OC-12 firmware.</p> <table><thead><tr><th>If the OC-12 firmware is</th><th>Then go to</th></tr></thead><tbody><tr><td>correct</td><td>step 4</td></tr><tr><td>not correct</td><td>step 3</td></tr></tbody></table>                                                                                                | If the OC-12 firmware is | Then go to | correct | step 4 | not correct | step 3 |
| If the OC-12 firmware is | Then go to                                                                                                                                                                                                                                                                                                                                                                                              |                          |            |         |        |             |        |
| correct                  | step 4                                                                                                                                                                                                                                                                                                                                                                                                  |                          |            |         |        |             |        |
| not correct              | step 3                                                                                                                                                                                                                                                                                                                                                                                                  |                          |            |         |        |             |        |
| 3                        | <p>Transfer the correct OC-12 firmware from the OPC to the OC-12 circuit pack by entering:</p> <pre>download oc12VTBM &lt;circuit pack group&gt; ↵<br/>yes ↵</pre> <p><i>The OC-12 firmware gets transferred from the OPC to the OC-12 circuit pack. This operation takes about 15 minutes. Wait for the message: "Download to OC12xx Completed" to appear before proceeding.</i></p>                   |                          |            |         |        |             |        |
| 4                        | <p>Exit the TCSFWDL CI tool and return to the network element main user interface screen by entering:</p> <pre>quit ↵<br/>fwp ↵</pre> <p><i>The network element status screen is displayed.</i></p>                                                                                                                                                                                                     |                          |            |         |        |             |        |
| 5                        | <p>Return to the User Session Manager by pressing <b>Ctrl_T 0</b>.</p> <p style="text-align: center;">—end—</p>                                                                                                                                                                                                                                                                                         |                          |            |         |        |             |        |

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## Appendix C: Technical support information

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This chapter 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<br>(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<br>Normal business hours<br>8:00 am - 5:00 pm local time<br>Monday to Friday | (800) ASK-TRAN<br>(800) 275-8726                            |
| All other times (for urgent software upgrade support only)                                 | (800) ASK-ETAS<br>(800) 275-3827                            |
| Canada<br>Normal business hours<br>8:00 am - 4:00 pm local time<br>Monday to Friday        | Call your regional field service engineering support group. |
| All other times (for urgent software upgrade support only)                                 | (800) ASK-ETAS<br>(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.<br>7:00 am - 6:00 pm CST<br>Monday to Friday | Mark the defective item with the following: <ul style="list-style-type: none"> <li>•assigned repair order number</li> <li>•explanation of the problem.</li> </ul> | Nortel Networks<br>917 Air Park Center Drive<br>Nashville, TN 37217<br>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 within five (5) working days after receiving the order.
- **Repair of the circuit pack:** The repaired circuit pack is shipped from Nortel within fourteen (14) days after receipt of the defective circuit pack.

| Call customer service                                                                                                                         | and...                                                                                                                                                            | ship defective unit prepaid to...                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| (800) 668-1717 (English)<br>(800) 668-1748 (French)<br>and request a Repair Order Number.<br>Monday to Friday<br>8:00 am - 5:00 pm local time | Mark the defective item with the following: <ul style="list-style-type: none"> <li>•assigned repair order number</li> <li>•explanation of the problem.</li> </ul> | Northern Telecom Canada Ltd.<br>Repair Customer Service Group<br>9300 Trans Canada Highway<br>St. Laurent, Québec<br>H4S 1K5<br>CANADA |

## Emergency repair service: USA

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

| Call customer service                                   | and...                                                                                                                                                                                                                                                                                                           | ship prepaid to...                                                                               |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| (800) 251-1758<br>and request an emergency replacement. | <b>1)</b> Give the following: <ul style="list-style-type: none"> <li>•name</li> <li>•company name</li> <li>•telephone number</li> <li>•exact unit code and name for emergency replacement</li> <li>•ship-to address</li> </ul> <b>2)</b> Mark the defective item with the assigned emergency repair order number | Nortel Networks<br>917 Air Park Center Dr.<br>Nashville, TN 37217<br><br>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 within 24 hours of receiving the order.

| Call customer service                                                                                                                                                                                                                                        | and...                                                                                                                                                                                                                                                                                                           | ship prepaid to...                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal business hours<br>Monday to Friday<br>8:00 am - 5:00 pm local time<br>(800) 668-1717 (English)<br>(800) 668-1748 (French)<br>and request an emergency replacement.<br><br>All other times:<br>(800) 361-2575<br>and request an emergency replacement. | <b>1)</b> Give the following: <ul style="list-style-type: none"> <li>•name</li> <li>•company name</li> <li>•telephone number</li> <li>•exact unit code and name for emergency replacement</li> <li>•ship-to address</li> </ul> <b>2)</b> Mark the defective item with the assigned emergency repair order number | Northern Telecom<br>Canada Ltd.<br>Repair Customer<br>Service Group<br>9300 Trans Canada<br>Highway<br>St. Laurent, Québec<br>H4S 1K5<br>CANADA |



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SONET Products

## **AccessNode**

### Removal of AN Nodes in a VTBM Ring

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