NTN465GF **323-1059-350**

Nortel Networks

OPTera Metro 3500 Multiservice Platform

Equipment and Facility Provisioning

Standard Release 12.0 Issue 1 November 2003

What's inside...

Node information
Equipment and facility provisioning

NORTEL NETWORKS

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About this document

This document details the provisioning of time-division-multiplexed (TDM) tributary equipment, optical interface equipment and optical facilities.

Supported software

This document supports the software releases for Nortel Networks OPTera Metro 3500 Multiservice Platform Release 12.0.

Supported hardware

This document supports the OPTera Metro 3500 shelf and Universal OPTera Metro 3500 shelf.

Hardware naming conventions

The following naming conventions are used throughout this document to identify the OPTera Metro 3500 Multiservice Platform hardware:

- The extended shelf processor (SPx) is referred to as the shelf processor.
- The extended network processor (NPx) is referred to as the network processor.

Audience

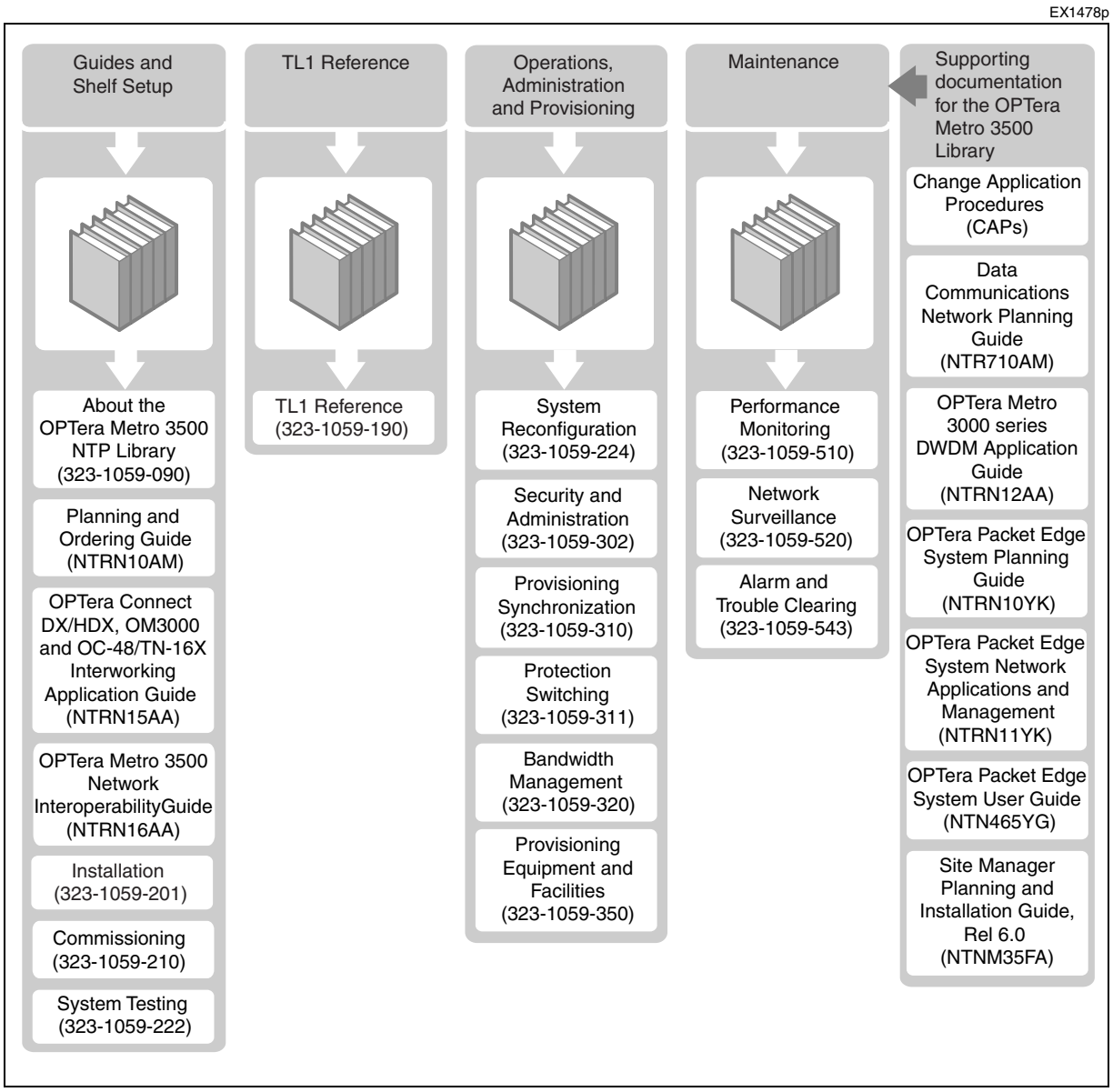
The following members of your company are the intended audience of this Nortel Networks technical publication (NTP):

- planners
- provisioners
- network administrators
- transmission standards engineers

Standards

The Telecommunications Industry Association (TIA) and the Electronics Industries Alliance (EIA) accepted RS-232 as a standard in 1997 and renumbered this standard as TIA/EIA-232. In this document, RS-232 is used to reflect current labels on the hardware and in the software for the OPTera Metro 3500 Multiservice Platform.

OPTera Metro 3500 NTP library



Technical support and information

For technical support and information from Nortel Networks, refer to the following table.

Technical Assistance Service	
For service-affecting problems: For 24-hour emergency recovery or software upgrade support, that is, for: • restoration of service for equipment that has been carrying traffic and is out of service • issues that prevent traffic protection switching • issues that prevent completion of software upgrades	**North America:** 1-800-4NORTEL (1-800-466-7835) **International:** 001-919-992-8300
For non-service-affecting problems: For 24-hour support on issues requiring immediate support or for 14-hour support (8 a.m. to 10 p.m. EST) on non-urgent issues.	**North America:** 1-800-4NORTEL (1-800-466-7835) ***Note:*** You require an express routing code (ERC). To determine the ERC, see our corporate Web site at www.nortelnetworks.com. Click on the Express Routing Codes link. **International:** Varies according to country. For a list of telephone numbers, see our corporate Web site at www.nortelnetworks.com. Click on the Contact Us link.
Global software upgrade support: For non-service affecting software upgrade issues	**North America:** 1-800-4NORTEL (1-800-466-7835) **International:** Varies according to country. For a list of telephone numbers, see our corporate Web site at www.nortelnetworks.com. Click on the Contact Us link

Node information

Procedures for node information

Displaying node information on page 1-2

Changing the AINS default period on page 1-3

Procedure 1-1
Displaying node information

Use this procedure to display information about a shelf processor or network processor.

> ***Note:*** If you are displaying an application and you select a network element that does not support the application, the Node Information window for that network element is displayed by default.

Step	Action
1	Ensure you are logged in to the network element. See 323-1059-302, Procedures for logging in to a network element on page 2-1.
2	If this is an initial login to Site Manager and you have not, as yet, displayed another application, the Node Information window appears as the initial window for the network element.
3	If you want to go to the Node Information window after the initial launch or from another window, select Node Information from the Configuration drop-down menu.

—end—

Procedure 1-2
Changing the AINS default period

Use this procedure to change the default period for the automatic in-service (AINS) feature for new facilities. You can provision the AINS period to be from 1 minute up to 5760 minutes (96 hours or 4 days) duration in increments of 1 minute.

Note 1: The default AINS period that is set in the factory is 4 hours.

Note 2: The new AINS period applies only to facilities that are created after you have performed this procedure. To edit the AINS period for an existing facility, see Provisioning AINS for a DS1 or DS3 facility on page 2-27.

Step	Action
1	Display the Node Information window. See Displaying node information on page 1-2.
2	Click Edit in the System area to open the Edit System dialog box.
3	Enter the new startup period in the Default AINS fields (Days, Hrs, Mins).
4	Click OK.

—end—

Equipment and facility provisioning

Procedures for equipment provisioning

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Procedure 2-1
Retrieving equipment and facility details

Use this procedure to view details for selected equipment and facilities.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Ensure you are logged in to the network element. See 323-1059-302, Procedures for interface login and logout on page 2-1.
2	Select the network element in the navigation tree.
3	Select Equipment & Facility Provisioning from the Configuration drop-down menu to open the Equipment & Facility Provisioning window. The Equipment area displays the provisioning parameters for the equipment on the shelf. ***Note:*** If an unequipped slot is provisioned for a multi-port circuit pack (for example, the OC-12x4 STS), the single-port circuit pack type (for example, "OC12") appears when you retrieve the inventory or equipment details for the shelf. The multi-port circuit pack type (for example, "OC12x4") appears once the multi-port circuit pack is inserted and autoprovisioned in the slot.
4	To display the Facility area, select a specific circuit pack in the Equipment area. The Facility area displays information about all facilities related to the selected circuit pack. ***Note 1:*** The Facility area is not available if the circuit pack does not support facilities, or if the circuit pack does not have provisioned facilities. ***Note 2:*** For equipment and facility primary and secondary states, see the following: • Equipment and Facility primary states on page 2-3 • Equipment secondary states on page 2-3 • DS1 facility secondary states on page 2-4 • OC-n facility secondary states on page 2-4 • DS3 facility secondary states on page 2-5 • DS3 facility secondary states on page 2-5 • 2x100BT-P2P facility (ETH and WAN) secondary states on page 2-6 • GE/FC SFP facility (ETH, FC and WAN) secondary states on page 2-6 ***Note 3:*** Click the Details tab in the Equipment & Facility Provisioning window to view all equipment and facility attributes without scrolling. **—end—**

Equipment and Facility primary states

Primary State	Description
IS	In-service; no failure detected
IS-ANR	In-service; failure exists but entity is still capable of performing some of its provisioned functions (that is partial failure)
IS-AU	In-service; failure detected
OOS-MA	Out-of-service; no failure detected (OOS for maintenance for provisioning memory administration)
OOS-AUMA	Out-of-service; failure detected
OOS-MA-ANR	Out-of-service; partial failure detected

Equipment secondary states

Secondary State	Description
Active	Equipment has connections established to the facilities it supports and the connected facilities are in service
Fault detected	Equipment failure detected
Idle	No connections established to facilities supported on this equipment, or all connected facilities are out-of-service
Mismatched eqp. attribute	Mismatched or unknown equipment detected in a provisioned slot
Protection switch inhibited	Protection switching has been inhibited for the equipment
Hot standby	Equipment switched active to its designated 1+1 protection
STBYS	Equipment switched active to its designated 1:N protection
Unequipped	Equipment is missing
Working	Equipment is protection unit or required equipment to maintain traffic on the protection unit
Working transmitter/Working receiver	Active Equipment: the circuit pack is carrying traffic in the specified direction (only OC-n that is not provisioned for DSM).

DS1 facility secondary states

Secondary State	Description
Auto in service	Auto-In-Service is active
Disconnected	Facility has no connections established
Fault detected	Facility failure detected
Loopback active	Facility is in loopback
Support entity outage	Supporting equipment has a failure This state is also valid for a DSM DS1x84TM with an "OAM not available" secondary state.
Test signal active	Connect Test Signal has been set up on the facility
Unprovisioned site address	A DSM hosting a DSM DS1x84TM is provisioned without its SITE parameter
OAM not available	A provisioned DSM DS1x84TM does not have an OAM link

OC-n facility secondary states

Secondary State	Description
Working transmitter/Working receiver	Active facility in the specified direction
<null>	Active, working state for UPSR-protected OC-48 facility
Loopback active	Facility is in loopback
Hot standby	Inactive facility in both directions (Hot standby)
Protection switch inhibited	Protection switch inhibited. Lockout command issued on a line OC-n Not supported for OC-3 associated with a DS1 service module (DSM) or for an OC-3 facility on a DSM.
Disconnected	Facility has no connections established
Fault detected	Facility failure detected

Secondary State	Description
Support entity outage	Supporting equipment has a failure This state is also valid for a DSM DS1x84TM with an “OAM not available” secondary state.
Test signal active	Connect Test Signal has been set up on the facility (supported in slots 3 to 10, but not in slots 11 and 12)
Host-DSM fiber misconnected	Host-DSM fiber misconnected. There is a discrepancy between the provisioning data and the actual fiber connection. Not applicable for an OC-n facility on a DSM DS1x84TM

DS3 facility secondary states

Secondary State	Description
Auto in service	Auto-In-Service is active
Disconnected	Facility has no connections established
Fault detected	Facility failure detected
Loopback active	Facility is in loopback
Support entity outage	Supporting equipment has a failure
Test signal active	Connect Test Signal has been set up on the facility

EC-1 facility secondary states

Secondary State	Description
Disconnected	Facility has no connections established
Fault detected	Facility failure detected
Loopback active	Facility is in loopback
Support entity outage	Supporting equipment has a failure
Test signal active	Connect Test Signal has been set up on the facility

2x100BT-P2P facility (ETH and WAN) secondary states

Secondary State	Description
Disconnected	Facility has no connections established
Fault detected	Facility failure detected
Loopback active	Facility is in loopback
Support entity outage	Supporting equipment has a failure

GE/FC SFP facility (ETH, FC and WAN) secondary states

Secondary State	Description
Disconnected	Facility has no connections established
Fault detected	Facility failure detected
Loopback active	Facility is in loopback
Support entity outage	Supporting equipment has a failure

Procedure 2-2
Provisioning a circuit pack automatically

A circuit pack is automatically provisioned as in-service when it is inserted in the shelf and the shelf powers up.

Note 1: To provision a circuit pack that was manually deleted, see Provisioning a circuit pack manually on page 2-9.

Note 2: GE/FC small form factor pluggable (SFP) facilities are not automatically provisioned when you insert a 2xGigE/FC-P2P circuit pack in the shelf. To provision GE/FC SFP facilities, see Adding a facility on page 2-20.

Note 3: If an unequipped slot is provisioned for a multi-port circuit pack (for example, the OC-12x4 STS), the single-port circuit pack type (for example, "OC12") appears when you retrieve the inventory or equipment details for the shelf. The multi-port circuit pack type (for example, "OC12x4") appears once the multi-port circuit pack is inserted and autoprovisioned in the slot.

Requirements

Before you perform this procedure,

- you must ensure you have all the documentation referenced in this procedure
- if the circuit pack is an OC-48 ER, OC-48 ELR, OC-48 STS, or OC-192 circuit pack, have an optical power meter with the same optical connectors as the circuit pack

Step	Action
1	Ensure all cross-connects to the circuit pack that occupied this slot have been deleted. See: • 323-1059-320, Deleting a cross-connect on page 6-4 • 323-1059-320, Deleting an RPR cross-connect on page 6-6
2	Ensure all facilities on the circuit pack that occupied this slot have been deleted. See Deleting a facility on page 2-22.
3	Insert the circuit pack in the correct slot in the shelf. The circuit pack is automatically provisioned as in-service. ***Note:*** See 323-1059-543, Circuit pack slot assignments for OPTera Metro 3500 on page 4-38 for the slot location of each circuit pack.

—continued—

Procedure 2-2 (continued)
Provisioning a circuit pack automatically

Step	Action	
4	Wait at least 20 seconds before you insert another circuit pack. ***Note 1:*** The network element requires 20 seconds to autoprovision the circuit pack. If you do not wait, a temporary Circuit pack fail alarm will be raised. ***Note 2:*** If you are logged in to Site Manager when you automatically provision a circuit pack, click Refresh in the Equipment & Facility Provisioning window to add the circuit pack to the list of available equipment.	
5	**If** the optical interface circuit pack you installed	**Then**
	is one of the following circuit packs: • OC-48 ER or OC-48 ELR • OC-48 STS • OC-192	go to step 6
	is any other circuit pack	you have completed this procedure
6	Ensure you are logged into the network element in which you installed the optical interface circuit pack. See 323-1059-302, Procedures for interface login and logout on page 2-1. ***Note:*** Before continuing this procedure, you must ensure that the circuit pack is receiving a signal. Measure the receive power to ensure that it is within the correct range for the circuit pack.	
7	In Site Manager, select this network element in the navigation tree.	
8	Select Facility PM Thresholds in the Performance menu.	
9	In the Type box, select OC48 or OC192, as applicable.	
10	In the Facility box, select the circuit pack you installed.	
11	In the Location box, select Near end.	
12	In the Direction box, select Receive.	
13	Click Retrieve.	
14	In the Monitor Type column of the PM Thresholds list, select OPR.	
15	Click Edit.	
16	In the Edit Threshold Values dialog box, under Physical PM, select Reset baseline power level.	
17	Click OK.	

—end—

Procedure 2-3
Provisioning a circuit pack manually

Use this procedure to provision an empty slot for a circuit pack that will be inserted in the slot at a later time or to provision a circuit pack that has been deprovisioned (but not removed) from the shelf.

Note 1: For DSM DS1x84 termination module (DSM DS1x84TM) provisioning, see Provisioning a DSM DS1x84TM manually on page 2-13.

Note 2: GE/FC small form factor pluggable (SFP) facilities are not automatically provisioned when you insert a 2xGigE/FC-P2P circuit pack in the shelf. To provision GE/FC SFP facilities, see Adding a facility on page 2-20.

Note 3: You must first provision the 2xGigE/FC-P2P circuit pack before you can provision its associated GE/FC SFP equipment.

Note 4: If an unequipped slot is provisioned for a multi-port circuit pack (for example, the OC-12x4 STS), the single-port circuit pack type (for example, "OC12") appears when you retrieve the inventory or equipment details for the shelf. The multi-port circuit pack type (for example, "OC12x4") appears once the multi-port circuit pack is inserted and autoprovisioned in the slot.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Ensure the last equipment that occupied the slot and its related facilities and cross-connects have been deleted. • For deleting facilities, see Retrieving equipment and facility details on page 2-2 and Deleting a facility on page 2-22. • For deleting cross-connects, see 323-1059-320, Procedures for nodal cross-connect management on page 6-1.
2	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
3	Click Add in the Equipment area to open the Add Equipment dialog box. ***Note:*** See 323-1059-543, Circuit pack slot assignments for OPTera Metro 3500 on page 4-38 for the slot location of each circuit pack.
4	Select the type of equipment from the Type drop-down list.

—continued—

Procedure 2-3 (continued)
Provisioning a circuit pack manually

Step	Action
5	Select the slot number from the Slot drop-down list. ***Note:*** Select the slot and port number when provisioning GE/FC small form factor pluggable (SFP) equipment.
6	Select the required equipment state from the State drop-down list.
7	Click OK.

—end—

Procedure 2-4
Defining or editing a site address for a DSM

Use this procedure to define or edit a site address for a DS1 service module (DSM). After a working DSM DS1x84 termination module (DSM DS1x84TM) auto-provisions, the DSM site address must be manually provisioned. Until the site address has been defined, the DSM is not in a working state and the DS1 Service module Site provisioning alarm is raised.

Note 1: Once you define a DSM site address, you can edit it, but you cannot delete it.

Note 2: If a DSM is connected to an OC-3 circuit pack that is a member of a facility fault protection (FFP) group, the DSM will not provision. Furthermore, an Autoprovisioning Mismatch alarm will not be raised.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Ensure: • the OC-3 line facility is provisioned. See Retrieving equipment and facility details on page 2-2 and Adding a facility on page 2-20. • the OC-3 SDCC is provisioned. See Enabling or disabling the lower layer SDCC parameters on page 2-39. • there are no cross-connects provisioned on the OC-3 line. See 323-1059-320, Procedures for nodal cross-connect management on page 6-1. • the OC-3 line is not provisioned as a shelf timing reference. See 323-1051-310, Procedures for provisioning system synchronization on page 1-1. • the OC-3 line is not a member of a facility protection group (FFP) pair. See 323-1059-311, Procedures for protection provisioning on page 1-1. • the OC-3 REMOTE parameter is set to OM3X00. See Retrieving equipment and facility details on page 2-2.
2	Retrieve the shelf equipment details. Ensure the OC-3 line facility is not already associated with a DSM slot. See Retrieving equipment and facility details on page 2-2.
3	In the Equipment area of the Equipment & Facility Provisioning window, select DS1TM-1 (the working DSM DS1x84TM in slot 1).

—continued—

Procedure 2-4 (continued)
Defining or editing a site address for a DSM

Step	Action
4	Click Edit in the Equipment area to open the Edit Equipment dialog box.
5	Enter a site address, 1 to 40 characters in length. ***Note:*** Double-quotes (“) and backslash (\) can be used as a character within the string, but they must be preceded by a backslash (\) as an escape character.
6	Click OK.

—end—

Procedure 2-5
Provisioning a DSM DS1x84TM manually

Use this procedure to provision a DSM DS1x84 termination module (DSM DS1x84 TM).

> ***Note:*** If the OC-3 facilities meet the specified requirements, provisioning of the protection DSM DS1x84 TM (in slot 2), automatically provisions the working DSM DS1x84 TM (in slot 1) even if the working DSM is not present.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Ensure: • the OC-3 line facility is provisioned. See Retrieving equipment and facility details on page 2-2 and Adding a facility on page 2-20. • the OC-3 SDCC is provisioned. See Enabling or disabling the lower layer SDCC parameters on page 2-39. • there are no cross-connects provisioned on the OC-3 line. See 323-1059-320, Procedures for nodal cross-connect management on page 6-1. • the OC-3 line is not provisioned as a shelf timing reference. See 323-1051-310, Procedures for provisioning system synchronization on page 1-1. • the OC-3 line is not a member of a facility protection group (FFP) pair. See 323-1059-311, Procedures for protection provisioning on page 1-1. • the OC-3 REMOTE parameter is set to OM3X00. See Retrieving equipment and facility details on page 2-2.
2	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
3	Verify the host OC-3 or OC-3x4 equipment and its related facilities are in service (IS). See Retrieving equipment and facility details on page 2-2.
4	Click Add in the Equipment area to open the Add Equipment dialog box.
5	Select the type of equipment from the Type drop-down list.

—continued—

Procedure 2-5 (continued)
Provisioning a DSM DS1x84TM manually

Step	Action
6	Do one of the following: • Select slot 1 from the DS1TM Slot drop-down list for the working DSM DS1x84TM • Select slot 2 from the DS1TM Slot drop-down list for the protection DSM DS1x84TM
7	Select the slot for the host OC-3 or OC-3x4 circuit pack from the Host slot drop-down list. ***Note:*** If you are provisioning the working DSM DSM DS1x84TM, you can select any odd or even slot that meets the procedure requirements. However, if you select an even slot, you will not be able to protect the working DSM DSM DS1x84TM. You can provision a protection DSM DSM DS1x84TM, only if the working one is provisioned or can be provisioned against an odd OC-3 slot.
8	Select the required equipment state from the State drop-down list.
9	Enter a site address for the DSM, 1 through 40 characters. ***Note 1:*** Double-quotes (“) and backslash (\) can be used as a character within the string, but they must be preceded by a backslash (\) as an escape character. ***Note 2:*** When you are provisioning the protection DSM DSM DS1x84TM in slot 2, the site address field is not available. You can define the DSM site address only by editing the properties of the working DSM DSM DS1x84TM in slot 1.
10	Click OK.

—end—

Procedure 2-6
Putting circuit pack equipment out of service (OOS)

Note: Only one STX or VTX module can be put out of service (OOS) at any one time. If the shelf is equipped with only one STX or VTX module, you cannot change the STX or VTX equipment state to OOS.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Retrieve the equipment and facilities details for the circuit pack. See Retrieving equipment and facility details on page 2-2.
2	Ensure the circuit pack is in service (IS).
3	Ensure the circuit pack facilities, if there are any related facilities, are out of service. This includes GE/FC SFP facilities for 2xGigE/FC-P2P circuit packs. See Changing a facility state to Out of Service (OOS) on page 2-25. ***Note:*** You must delete all facilities on a multiple-port circuit pack before you can delete this type of circuit pack. **CAUTION** **Risk of service interruption** If you place a facility out of service, you can cause a loss of traffic.
4	Ensure that the circuit pack is selected in the Equipment area.
5	Click Edit in the Equipment area to open the Edit Equipment dialog box.
6	Select OOS from the Primary State drop-down list.
7	Click OK.
8	Click Yes in the warning dialog box. ***Note:*** Once you place a 2xGigE/FC-P2P circuit pack out of service, the related GE/FC SFP equipment is automatically placed out of service.

—end—

Procedure 2-7
Putting circuit pack equipment in service (IS)

Note 1: For 2xGigE/FC-P2P circuit packs, you must first place the 2xGigE/FC-P2P equipment in service first. The associated GE/FC small form factor pluggable (SFP) equipment is then automatically placed in service.

Note 2: Once the GE/FC SFP equipment is automatically placed in service, the GE/FC SFP facilities remain out of service. To provision the GE/FC SFP facilities, see Adding a facility on page 2-20.

Step	Action
1	Retrieve the equipment and facilities details for the circuit pack. See Retrieving equipment and facility details on page 2-2.
2	Ensure that the circuit pack is selected in the Equipment area.
3	Click Edit in the Equipment area to open the Edit Equipment dialog box.
4	Select IS from the Primary State drop-down list.
5	Click OK.

—end—

Procedure 2-8
Deleting a circuit pack

Use this procedure to delete circuit pack equipment from the list of provisioned equipment in the Equipment and Facility provisioning window.

Note 1: You cannot delete the PSC or PSX circuit packs if any DS1 equipment or facilities are in service.

Note 2: You cannot delete a DS1 protection mapper when it is carrying traffic for a working mapper.

Note 3: You cannot delete an STX or VTX module.

Note 4: You cannot delete a DSM DS1x84TM from slot 1 of a DS1 Service Module (DSM), if the DSM DS1x84TM in slot 2 within the same DSM has not been deleted.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	In the Equipment area, select the equipment you want to delete.
3	Ensure you have deleted all cross-connects to the circuit pack. See: • 323-1059-320, Deleting a cross-connect on page 6-4 • 323-1059-320, Deleting an RPR cross-connect on page 6-6
4	Ensure you have deleted all facilities on the circuit pack. See Deleting a facility on page 2-22. ***Note 1:*** You cannot delete an OC-3 facility of a DSM DS1x84TM, but you must put it out of service (OOS-MA or OOS-AUMA). ***Note 2:*** When you want to delete an OC-3 or OC-3x4 circuit pack that is associated with a DSM, ensure that its DSM DS1x84TM equipment and facilities are deleted. ***Note 3:*** You must delete all GE/FC SFP facilities before you can delete the GE/FC SFP equipment.

—continued—

Procedure 2-8 (continued)
Deleting a circuit pack

Step	Action
5	Ensure the circuit pack is OOS. See Putting circuit pack equipment out of service (OOS) on page 2-15.
6	Click Delete in the Equipment area. ***Note:*** You must delete the associated GE/FC SFP equipment before you can delete the 2xGigE/FC-P2P circuit pack.

CAUTION
Risk of service interruption
If you delete equipment, you can cause a loss of traffic.

7	Click Yes in the warning dialog box.

—end—

Procedure 2-9
Modifying the SS bits mode

Use this procedure to set the SS bits mode of an optical interface circuit pack facility.

Requirements

To perform this procedure, you must

- use an account with a level 3 user privilege code (UPC)
- ensure you have all the documentation referenced in this procedure

Step	Action
1	Open the Equipment and Facility Provisioning window for the facility. See Retrieving equipment and facility details on page 2-2.
2	Ensure the facility is out of service (OOS). See Changing a facility state to Out of Service (OOS) on page 2-25.
3	Click Edit in the Facility area to open the Edit Facility dialog box.
4	Select SONET in the signal mode field.
5	Click OK.
6	Put the facility back in-service (IS). See Changing a facility state to In Service (IS) on page 2-26.

—end—

Procedure 2-10
Adding a facility

Use this procedure only to add a facility that was manually deleted or that was not automatically provisioned when the circuit pack was provisioned.

Note 1: As soon as you insert a circuit pack and the shelf powers up, the network element automatically adds relevant facilities and puts them in service.

Note 2: If a DS3 facility on a DS3VTx12 circuit pack is provisioned for C-bit framing but the received signal uses M23 framing, then the channelized DS3 signal cannot be demultiplexed into 28 DS1 signals. In this case, 28 DS1 AIS are transmitted toward the optics. If a DS3 facility on a DS3VTx12 circuit pack is not provisioned for C-bit framing but the received signal uses C-bit framing, then only the third DS2 (DS1s 9, 10, 11, and 12) cannot be demultiplexed. In this case, 4 DS1 AIS are transmitted toward the optics for the paths that correspond to DS1s 9, 10, 11, and 12.

Note 3: The WAN facility on a 2x100BT-P2P circuit pack is created automatically when its corresponding ETH facility is created. The WAN facility on the GE/FC SFP of a 2xGigE/FC-P2P circuit pack is created automatically when its corresponding ETH or FC facility is created.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	In the Equipment area, select the circuit pack that will support the facility. ***Note 1:*** If the circuit pack is not listed in the Equipment area, you must provision it. See Provisioning a circuit pack manually on page 2-9. ***Note 2:*** Select the GE/FC SFP equipment only to add facilities to a 2xGigE/FC-P2P circuit pack. ***Note 3:*** If the circuit pack does not have any provisioned facilities, the Facility area is blank.
3	Click Add in the Facility area to open the Add facility dialog box. The dialog box displays the first facility that is not provisioned and is available.
4	If applicable, select a port from the Port drop-down list.

—continued—

Procedure 2-10 (continued)
Adding a facility

Step	Action
5	Select the required parameters from the drop-down lists. ***Note:*** See the following for facility attribute descriptions: • DS1 facility signal attributes on page 2-30 • DS3 facility signal attributes on page 2-33 • EC-1 facility signal attributes on page 2-33 • 2x100BT-P2P ETH port facility signal attributes on page 2-34 • GE/FC SFP ETH port facility signal attributes on page 2-36 • GE/FC SFP FC port facility signal attributes on page 2-37
6	Do one of the following: • Click Apply to add the facility and keep the Add facility dialog box open so that you can add more facilities • Click OK to add the facility and close the Add facility dialog box ***Note:*** If the circuit pack is in-service, the new facility is in-service. If the circuit pack is out-of-service, the new facility is out-of-service. **—end—**

Procedure 2-11
Deleting a facility

Use this procedure to delete an optical, DS1, DS3, EC-1, 2x100BT-P2P ETH facility or a GE/FC ETH, FC or WAN facility on a 2xGigE/FC-P2P circuit pack.

Note 1: To delete a DS1 facility associated with a DS1 service module (DSM), see Deleting a facility on a DSM DS1x84TM on page 2-24.

Note 2: To delete an OC-3 facility on a shelf, ensure that there is not a DS1 service module (DSM) associated with it.

Note 3: To delete a GE/FC ETH or FC facility on a 2xGigE/FC-P2P circuit pack, you must first delete any cross-connects on the WAN facility associated with this ETH or FC facility. The WAN facility is automatically deleted when you delete the associated ETH or FC facility.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Ensure: • there are no cross-connects provisioned on this facility. See 323-1059-320, Procedures for nodal cross-connect management on page 6-1. • the SDCC link is deleted on this facility. See Enabling or disabling the lower layer SDCC parameters on page 2-39. • the timing reference is deleted for this facility. See 323-1051-310, Procedures for provisioning system synchronization on page 1-1. • there is no test access session on this facility. See 323-1059-520, Procedures for test access on page 7-1. • there is no optical loopback on this facility. See 323-1059-222, Releasing a software loopback on page 2-58. • that if the facility is an optical facility, that the protection scheme is provisioned as UPSR protected. See 323-1059-311, Procedures for protection provisioning on page 1-1.
2	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
3	In the Equipment area of the Equipment & Facility Provisioning window, select the circuit pack whose facilities you want to delete.

—continued—

Procedure 2-11 (continued)
Deleting a facility

Step	Action
4	In the Facility area, select the facility you want to delete.
5	Ensure the Primary state of the selected facility or facilities is out of service - manually (OOS-MA or OOS-AUMA). See Changing a facility state to Out of Service (OOS) on page 2-25.
6	Click Delete in the Facility area.

CAUTION
Risk of service interruption
If you delete a facility, you can cause a loss of traffic.

7	Click Yes in the warning dialog box.

—end—

Procedure 2-12
Deleting a facility on a DSM DS1x84TM

Use this procedure to delete a DS1 facility on a working DSM DS1x84 termination module (DSM DS1x84TM).

Note 1: The protection DSM DS1x84TM does not support any of its own DS1 facilities.

Note 2: You cannot delete the OC-3 facility on a working or protection DSM DS1x84TM.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Ensure there are no cross-connects provisioned on this facility. See 323-1059-320, Procedures for nodal cross-connect management on page 6-1.
2	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
3	In the Equipment area of the Equipment & Facility Provisioning window, select a working DSM DS1x84TM (DS1TM-1).
4	Select DS1 from the Facility Type drop-down list in the Facility area.
5	Select the DS1 facility you wish to delete in the Facility area.
6	Place the DS1 facility out of service. See Changing a facility state to Out of Service (OOS) on page 2-25.
7	Click Delete in the Facility area.

CAUTION
Risk of service interruption
If you delete a facility, you can cause a loss of traffic.

8	Click Yes in the warning dialog box.

—end—

Procedure 2-13
Changing a facility state to Out of Service (OOS)

Note: You cannot change the facility state of protection equipment to out-of-service if the working facilities are still in service.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	In the Equipment area of the Equipment & Facility Provisioning window, select the circuit pack whose facility state you want to change.
3	In the Facility area, select the facility whose state you want to change.
4	Click Edit in the Facility area to open the Edit facility dialog box.
5	Select OOS from the Primary state drop-down list.

CAUTION
Risk of service interruption
If you place a facility out of service, you can cause a loss of traffic.

6	Click OK.
7	Click Yes in the warning dialog box.

—end—

Procedure 2-14
Changing a facility state to In Service (IS)

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	In the Equipment area of the Equipment & Facility Provisioning window, select the circuit pack whose facility state you want to change.
3	Ensure that the circuit pack is in service. See Putting circuit pack equipment in service (IS) on page 2-16. ***Note:*** If you are putting DS1 facilities in-service for a DSM DS1x84TM circuit pack, ensure you select the host OC-3 facilities first and put them in-service, then select the DSM DS1x84TM circuit pack and put the DS1 facilities in-service as instructed in step 4 through to step 8.
4	In the Facility area, select the facility whose state you want to change.
5	Click Edit in the Facility area to open the Edit facility dialog box.
6	Select IS from the Primary state drop-down list.
7	Click OK.

—end—

Procedure 2-15
Provisioning AINS for a DS1 or DS3 facility

Use this procedure to enable the auto-in-service (AINS) secondary state for a DS1 or DS3 facility and to set the AINS startup time. When the secondary state is set to AINS, no alarms are raised against that facility. The default secondary state for DS1 and DS3 facility on a DS1 or DS3 mapper is auto-in-service (AINS) deactivated.

When a working DSM DS1x84 termination module (DSM DS1x84TM) is provisioned in the in-service state, the auto-in-service (AINS) secondary state for its DS1 facilities is automatically turned on with the host shelf-wide default duration value. If a DS1 facility associated with a DS1 service module (DSM) is deleted and then added again, its AINS is off and must be manually enabled.

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	In the Equipment area of the Equipment & Facility Provisioning window, select the DS1 or DS3 mapper whose facilities you want to edit. ***Note:*** If you want to edit DS1 facilities associated with a DSM DS1x84TM, select the working DSM DS1x84TM (DS1TM-1) in the Equipment area. Then, select DS1 from the Facility Type drop-down box in the Facility area.
3	Do one of the following: • Select the Single radio button in the Facility area if you want to provision the AINS for one facility. Then, go to step 3. • Select the All radio button in the Facility area if you want to provision the AINS for all facilities related to the selected mapper. Then, go to step 4.
4	In the Facility area, select the facility whose AINS you want to provision.
5	Click Edit in the Facility area to open the Edit facility dialog box.
6	Select Auto in service from the Secondary state drop-down list.
7	If required, enter the new startup period (Days, Hrs, Mins) in the AINS time fields. ***Note:*** If you leave the startup period fields blank, the shelf AINS interval is applied to the facility.
8	Click OK. The new AINS interval is displayed in the Facility area of the Equipment & Facility Provisioning window.

—end—

Procedure 2-16
Editing DS1, DS3, EC-1, 2x100BT-P2P or GE/FC SFP facility signal attributes

Note: If a DS3 facility on a DS3VTx12 circuit pack is provisioned for C-bit framing but the received signal uses M23 framing, then the channelized DS3 signal cannot be demultiplexed into 28 DS1 signals. In this case, 28 DS1 AIS are transmitted toward the optics. If a DS3 facility on a DS3VTx12 circuit pack is not provisioned for C-bit framing but the received signal uses C-bit framing, then only the third DS2 (DS1s 9, 10, 11, and 12) cannot be demultiplexed. In this case, 4 DS1 AIS are transmitted toward the optics for the paths that correspond to DS1s 9, 10, 11, and 12.

Requirements

Before you perform this procedure, ensure that you have all the documentation referenced in this procedure.

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	In the Equipment area of the Equipment & Facility Provisioning window, select the circuit pack whose facilities you want to edit. ***Note:*** If you want to edit DS1 facilities associated with a DSM DS1x84 termination module (DSM DS1x84TM), select the working DSM DS1x84TM (DS1TM-1) in the Equipment area. Then, select DS1 from the Facility Type drop-down box in the Facility area.
3	In the Facility area, select the facility whose signal attributes you want to edit.
4	Ensure the Primary state of the selected facility or facilities is out of service (OOS). See Changing a facility state to Out of Service (OOS) on page 2-25.
5	Click Edit in the Facility area to open the Edit facility dialog box.

—continued—

Procedure 2-16 (continued)
Editing DS1, DS3, EC-1, 2x100BT-P2P or GE/FC SFP facility signal attributes

Step	Action
6	Modify the facility signal attributes as required. ***Note:*** For facility attribute description, see the following: • DS1 facility signal attributes on page 2-30 • DS3 facility signal attributes on page 2-33 • EC-1 facility signal attributes on page 2-33 • 2x100BT-P2P ETH port facility signal attributes on page 2-34 • 2x100BT-P2P WAN port facility signal attributes on page 2-35 • GE/FC SFP ETH port facility signal attributes on page 2-36 • GE/FC SFP FC port facility signal attributes on page 2-37 • GE/FC SFP WAN port facility signal attributes on page 2-37
7	Click OK.
8	Click Yes in the warning dialog box.
9	If required, return the facility to the in-service state. For instructions, see Changing a facility state to In Service (IS) on page 2-26.

—end—

DS1 facility signal attributes

Signal attribute	Attribute description	Values	Value description
Equalization	Cable length connecting T1 to DS1 cross-connect. If the cables for the incoming and outgoing streams are different, add TX or RX to the domain, for example Short RX or Medium TX. Short, Medium and Long set the values for both TX and RX cables.	Short	0 to 220 ft both directions (default)
		Short transmit	0 to 220 ft transmit
		Short receive	0 to 220 ft receive
		Medium	220 to 430 ft both directions
		Medium Transmit	220 to 430 ft transmit
		Medium Receive	220 to 430 ft receive
		Long	430 to 655 ft both directions
		Long transmit	430 to 655 ft transmit
		Long receive	430 to 655 ft receive
Far end NE	Far-end network element	ANSI	Far-end network element supports ANSI standards (default)
		Not ANSI	ANSI standards are not supported
Fault locate mode	Checks for faults in the frame format. Use N if DS1 data is unframed.	Both	Both incoming and outgoing data streams will have the frame format, as specified by FMT, checked (default)
		Incoming	Only check incoming data (outgoing can be unframed)
		Outgoing	Only check outgoing data
		No checking	Do not check the frame format (the DS1 facility can be unframed or used as a clear channel facility)

Signal attribute	Attribute description	Values	Value description
Format	Frame format	Superframe	Superframe format (default)
		Extended Superframe	Extended superframe format
		TR08 Superframe	Superframe with TR08 extensions
Line code	If the incoming and outgoing streams are different, add TX or RX to the domain.	Bipolar	A type of coding that represents binary ones with alternating positive and negative voltages.
		Bipolar transmit	Bipolar coding in the transmit direction
		Bipolar receive	Bipolar coding in the receive direction
		Bipolar zero sup.	Bipolar with zero substitution in both directions
		Bipolar transmit zero sup.	Bipolar with zero substitution in the transmit direction
		Bipolar 8-zero sub.	Bipolar with 8-zero substitution, both directions
		Bipolar 8-zero sub. transmit	Bipolar with 8-zero substitution, transmit direction
		Bipolar 8-zero sub. receive	Bipolar with 8-zero substitution, receive direction

Signal attribute	Attribute description	Values	Value description
Mapping	Maps DS1 payloads into VT1.5s.	VT1.5 bit async.	VT1.5 bit asynchronous mapping (default)
		VT1.5 byte sync.	VT1.5 byte synchronous mapping
		VT1.5 bit sync.	VT1.5 bit synchronous mapping
		If using VT1.5 byte mapping, one or both of the following mappings can also be specified:	
		Robbed bit signaling	Robbed bit signaling bits are transported
		Out slot signaling	Out slot (S1-S4) signaling bits are transported
Output stream coding	Output mode	Normal	The outgoing stream is a regular DS1 (default)
		Idle	The outgoing stream is set to an idle code: repeating 00010111
		AIS to zero	The outgoing stream has any AIS code changed to all zeroes

DS3 facility signal attributes

Signal attribute	Description	Values
Line build out	A configurable transmitter attenuation parameter for various cable lengths, based on the T1 Access Module's distance to the T1 service.	• 0 to 224 ft (default) • 225 to 450 ft
Format	Frame format	• M13, multiplex framed (default) • Unframed clear channel • C-bit parity

EC-1 facility signal attributes

Signal attribute	Description	Values
Line build out	A configurable transmitter attenuation parameter for various cable lengths, based on the T1 Access Module's distance to the T1 service. The possible values are 1 (short) or 2 (long).	• 0 to 224 ft (default) (short) • 225 to 450 ft (long)

2x100BT-P2P ETH port facility signal attributes

Signal attribute	Description
Advertise duplex operation	Set the duplex mode of the port to Half, Full, or Both. Full is the default setting for this attribute. Make sure the device connected to the port has the same duplex setting. Note that, with auto-negotiation disabled, Both is equivalent to Full.
Advertised link speed	Set the speed of the port to 10, 100, or 10/100 Mbit/s. 100 is the default setting for this attribute. Make sure the device connected to the port has the same speed. Note that, with auto-negotiation disabled, 10/100 is equivalent to 100.
Pass control frames	Set the Ethernet control frames so that pause frames received at the port are discarded (Disable) or allowed to transparently pass through (Enable). This attribute is disabled by default. Note that this attribute applies to Ethernet control frame of type 0x8808 only (PAUSE is the only defined control frame). Other Ethernet control frames (for example, type 0x8809) are not affected by this attribute, and will always be transparently passed through.

2x100BT-P2P WAN port facility signal attributes

Signal attribute	Description
Magic number	Enable or disable the use of a magic number. The magic number is used during PPP negotiation only. When enabled, the magic number field is four octets and helps in detecting looped back links. A random string is sent across the link and if the same value is returned, then the circuit pack determines that the link is looped back and the negotiation fails. If this occurs, a "Link Down" alarm is raised against the WAN port. When disabled, the magic number is always transmitted as zero and is always ignored on reception. This attribute is disabled by default.
Frame check size	Set the frame check size (FCS) to 16 or 32 bits. Make sure the port at the other end of the connection has the same frame check size.
Link connectivity monitor	Enable or disable link connectivity monitoring. This attribute is disabled by default. Note that if you enable link connectivity monitoring, the “Link Down” alarm is raised against the WAN port during a software load or FPGA upgrade or when the port at the other end of the connection does not support link connectivity monitoring. The recommended configuration is to have link connectivity monitoring disabled at both ends of the connection.
Note: To edit the parameters of a WAN port, the corresponding ETH port must be in an out-of-service (OOS) state. See Changing a facility state to Out of Service (OOS) on page 2-25.	

GE/FC SFP ETH port facility signal attributes

Signal attribute	Description
Pass control frames	Set the Ethernet control frames so that pause frames received at the port are discarded (Disable) or allowed to transparently pass through (Enable). This attribute is disabled by default. Note that this attribute applies to Ethernet control frame of type 0x8808 only (PAUSE is the only defined control frame). Other Ethernet control frames (for example, type 0x8809) are not affected by this attribute, and will always be transparently passed through.
Auto negotiation	Set the auto negotiation mode of the port to Enable or Disable. This attribute is enabled by default.
Advertised flow control	Set the flow control capability that is used by auto negotiation. Auto negotiation sets the actual flow control between two devices. Possible values are Asym (default), Sym or None. Note that if auto negotiation is disabled, this attribute is ignored.
Pause transmission	Enable or disable the control pause transmission of the port. This attribute is enabled by default. Note that this attribute can only be enabled if auto negotiation is disabled. If auto negotiation is enabled, this attribute is ignored.
Maximum transfer unit	The maximum frame size (in bits) that this port can transmit. This size includes all the overhead bytes such as MAC addresses, length and CRCs. Possible values are 1600 (default) or 9600.
Note 1: The GE/FC SFP ETH facility on the 2xGigE/FC-P2P circuit pack only supports Full duplex mode. ***Note 2:*** The GE/FC SFP ETH facility on the 2xGigE/FC-P2P circuit pack only supports a port speed of 1000.	

GE/FC SFP FC port facility signal attributes

Signal attribute	Description
Subrate	Enable or disable the ability of the service to be carried over sub-rate bandwidth. This attribute is disabled by default.
Extreach	Enable or disable the extended reach mode of operation. This attribute is disabled by default.
Service	Set the type of service of the port to FC100 (default) or FICON.
BBC override	Set the buffer-to-buffer credit (BBC) override to 0 (no override), 1, 2, 4, 8, 16, 32, 64, 128 or 256. The default value is 0. Note that if Extreach is disabled, this attribute and the selected value are ignored.
Note 1: If the Subrate and Extreach attributes are both disabled, the FC facility is transparently mapped to GFP-T, which requires full-rate WAN bandwidth. This mode is referred to as the "FC full-rate mode". ***Note 2:*** If the Subrate and Extreach attributes are both enabled, the FC facility is transparently mapped to GFP-T, which does not requires full-rate WAN bandwidth . This mode is referred to as the "FC extended reach mode", and is supported for both FC100 and FICON. ***Note 3:*** Both the Subrate and Extreach attributes must have the same values. Both attributes must be either enabled or disabled. If these values are not identical for both of these attributes, the "Client Service Mismatch" alarm is raised.	

GE/FC SFP WAN port facility signal attributes

Signal attribute	Description
Virtual concatenation	Enable or disable the virtual concatenation for this port. This attribute is disabled by default. Note that you can only edit this attribute if there are no cross-connections present on the specified facility.
Frame check sum size	Set the frame check sum size for this port. If the mapping protocol is set to GFP-F, possible values are 0 (disabled) or 32. If the mapping protocol is set to GFP-T, the only possible value is 0 (disabled). This parameter is only available for the GE/FC SFP WAN facility if the WAN facility was created in association with the ETH port. Note that the port at the other end of the connection must have the same frame check size as this port.
Note: To edit the parameters of a WAN port, the corresponding ETH or FC port must be in an out-of-service (OOS) state. See Changing a facility state to Out of Service (OOS) on page 2-25.	

Procedure 2-17
Editing the line SDTH of an optical facility

Use this procedure to edit the line signal degrade threshold (SDTH) of an optical facility.

The line SDTH determines the bit error ratio (BER) at which

- an autonomous protection switch occurs between two protected optical interface lines in a 1+1 protected linear or bidirectional line-switched ring (BLSR) configuration
- alarm reporting occurs

Note: The line SDTH does not propagate to the VT1.5, STS-1, STS-3c, or STS-12c, STS-24c or STS-48c paths. To set the VT1.5, STS-1, STS-3c, STS-12c, STS-24c or STS-48c path SDTH, see 323-1059-311, Editing the path SDTH of a signal on page 1-39.

Requirements

To perform this procedure, you must:

- ensure you have all the documentation referenced in this procedure
- use an account with a level 3 or higher user privilege code (UPC)

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	Select the optical circuit pack under Equipment.
3	Select the facility you want to edit under Facility.
4	Click Edit under Facility to open the Edit Facility dialog box.
5	Select the required SDTH from the Signal degrade threshold drop-down list.
6	Click OK.
7	Repeat step 2 through step 6 to set the line SDTH of each optical interface circuit pack (both working and protection circuit packs) in the network element. ***Note:*** Provision each optical interface circuit pack in a network element with identical SDTH.

—end—

Procedure 2-18
Enabling or disabling the lower layer SDCC parameters

Use this procedure to enable or disable the lower layer section data communications channel (SDCC) parameters of an EC-1x3 or an optical interface circuit pack.

Note 1: On each EC-1x3 circuit pack, you can provision only one EC-1 port for SDCC.

Note 2: SDCC is not supported on the EC-1x12 circuit pack.

Requirements

To perform this procedure, you must:

- use an account with a user privilege code (UPC) level 3 or higher
- ensure that you have all the documentation referenced in this procedure

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	Select the circuit pack whose facility you want to edit in the Equipment area of the Equipment & Facility Provisioning window.
3	Select a facility to edit in the Facility area.
4	Click SDCC to open the Lower Layer SDCC dialog box for the selected facility.
5	Do one of the following: • Select Active from the Change Status drop-down list, and click Apply to enable all attributes for editing. • Select Inactive from the Change Status drop-down list, and click Apply to disable all attributes.
6	Click OK. ***Note:*** For information about editing the SDCC, see Editing the lower layer SDCC on page 2-40.

—end—

Procedure 2-19
Editing the lower layer SDCC

Use this procedure to edit the lower layer section data communications channel (SDCC) parameters of an EC-1x3 or an optical interface circuit pack.

Note 1: You cannot edit the SDCC for an OC-3 circuit pack associated with a DS1 service module (DSM).

Note 2: On each EC-1x3 circuit pack, you can provision only one EC-1 port for SDCC.

Note 3: SDCC is not supported on the EC-1x12 circuit pack.

Requirements

To perform this procedure, you must:

- use an account with a user privilege code (UPC) level 3 or higher
- ensure that you have all the documentation referenced in this procedure

Step	Action
1	Retrieve the shelf equipment details. See Retrieving equipment and facility details on page 2-2.
2	In the Equipment area of the Equipment & Facility Provisioning window, select the circuit pack whose facility you want to edit.
3	In the Facility area, select a facility to edit.
4	Click SDCC to open the Lower Layer SDCC dialog box for the selected facility.
5	Select Active from the Change Status drop-down list and click Apply to enable all attributes for editing.
6	Modify the lower layer SDCC attributes as required. See Lower Layer SDCC attributes on page 2-41.
7	Click OK.

—end—

Lower Layer SDCC attributes

Parameter	Description
Frame size (512-1492)	Enter the required frame size value. The default value is 1304.
Retransmission count (2-16)	Enter the required retransmission count value. The default value is 3.
Wait acknowledgement timer (2-200, in tenths of a second)	Enter the required wait acknowledgement timer value. The default value is 2 (tenths of a second).
No activity timer (4-120 seconds)	Enter the required no activity timer value. The default value is 10 seconds.
Outstanding I-Frame count (1-27)	Enter the required outstanding I-frame count value. The default value is 7.
Terminal endpoint identifier (0-127)	Enter the required Terminal endpoint identifier value. The default value is 0.
Service access point identifier (0-63)	Enter the required service access point identifier value. The default value is 62.
Transfer type	Select the transfer type from the drop-down list: • acknowledged information transfer service (default) • unacknowledged information transfer service
Local node role	The local node attempts to establish a connection with the far end by toggling its role between Network and User in a random pattern. When set to Auto, the nodes establish which node is user and which is network. Select the local node role: • User • Network • Auto The default value is Auto.

Procedure 2-20
Editing the upper layer SDCC

Use this procedure to edit the upper layer section data communications channel (SDCC). The upper layer SDCC is also known as the manual area address. The manual area address identifies the network to which the network element or the network processor belongs. You can provision up to three manual area addresses on the shelf processor or the network processor. When the shelf processor or network processor is provisioned, manual area address number 1 has a default setting of 490000 (Nortel network address).

The manual area address is a string of 6 through 26 hexadecimal characters:

- numbers zero through nine
- letters A through F

You must have at least one manual area address provisioned. For example, if you want to delete the address in manual area address number 1 and it is the only address provisioned, you must first provision an address in manual area address number 2 or 3. Ensure that all other nodes in the network share the same manual area address before deleting the address in manual area address number 1.

CAUTION
Risk of traffic loss
This procedure can affect traffic carried by the network element. Do not edit a manual area address if it is the only manual area address shared with the network element(s) with which it is communicating.

Note: OSI routing requires that entities required to communicate with each other (for example, a shelf processor and a network processor) share a common area address. A network processor and its co-located shelf processor must always have a common area address for proper operation.

Requirements

To perform this procedure, you must:

- use an account with a level 3 user privilege code (UPC) or higher
- ensure that you have all the documentation referenced in this procedure

—continued—

Procedure 2-20 (continued)
Editing the upper layer SDCC

Step	Action
1	Open the Node Information window for the selected network element. See Displaying node information on page 1-2.
2	Click Upper Layer SDCC to open the Upper Layer SDCC dialog box.
3	Do one of the following: • Select a blank row to add a manual area address. • Select an existing manual area address to edit it. ***Note:*** You cannot edit a manual area address if it is the only one in the Upper Layer SDCC dialog box.
4	Click Edit to open the Edit Manual Area Address dialog box.
5	Enter either the whole area address or the area address components. See Manual Area Address components on page 2-44. ***Note:*** If you enter the area address components, and after you have completed the Domain field, you see that four zeros pop up in the Area address field (in between the organization ID and the domain), do not delete the four zeros.
6	Click OK. ***Note:*** The list of area addresses is updated in the Upper Layer SDCC dialog box.
7	Click Cancel to close the dialog box.

—end—

Manual Area Address components

Address component	Range
Address format ID	Maximum 2 hexadecimal characters
Initial domain ID	Maximum 4 hexadecimal characters
DSP format ID	Maximum 2 hexadecimal characters
Organization ID	Maximum 6 hexadecimal characters
Domain	Maximum 4 hexadecimal characters
Area	Maximum 4 hexadecimal characters
Note: Contact your system administrator if you do not know the area address components for your network.	

Nortel Networks

OPTera Metro 3500 Multiservice Platform

Equipment and Facility Provisioning

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